

**Connecticut Mandated
Health Insurance Benefits
Reviews
2010
Volume III**



University of Connecticut

Center for Public Health and Health Policy



The Center for Public Health and Health Policy, a research and programmatic center founded in 2004, integrates public health knowledge across the University of Connecticut campuses and leads initiatives in public health research, health policy research, health data analysis, health information technology, community engagement, service learning, and selected referral services.

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Connecticut Mandated Health Insurance Benefit Reviews

Volume III. Introduction

Volume III contains ten of the forty-five comprehensive reviews of existing health insurance required benefits (mandates) completed by the University of Connecticut Center for Public Health and Health Policy pursuant to Public Act 09-179. (P.A. 09-179 is attached to this report as Appendix I.)

The mandates in Volume III are found in Title 38a of the Connecticut General Statutes Annotated and apply to certain individual and group health insurance policies delivered, issued for delivery, renewed or continued in this state after the effective date of the respective statute. The types of policies to which health insurance mandates may apply as described in CGSA § 38a-469 include:

- Basic hospital expense coverage (Subsection 1)
- Basic medical-surgical expense coverage (Subsection 2)
- Hospital confinement indemnity coverage (Subsection 3)
- Major medical expense coverage (Subsection 4)
- Disability income protection coverage (Subsection 5)
- Accident only coverage (Subsection 6)
- Long term care coverage (Subsection 7)
- Specified accident coverage (Subsection 8)
- Medicare supplement coverage (Subsection 9)
- Limited benefit health coverage (Subsection 10)
- Hospital or medical service plan contract (Subsection 11)
- Hospital and medical coverage provided to subscribers of a health care center (Subsection 12)
- Specified disease coverage (Subsection 13).

Volume III is intended to be read in conjunction with the General Overview and actuarial report for these mandates prepared by Ingenix Consulting. The Ingenix Consulting report for this set of mandates is attached to this Volume as Appendix II.

The following table lists the mandates covered in this volume and the chapter in which each is reviewed; their statutory references (from CGSA Title 38a); and the applicable policy types. The order in which they are listed coincides with the order in which they are reviewed in the Ingenix Consulting report.

Index of Mandates: Volume III				
Chapter	Description	Individual policy statute	Group plan statute	Policy Types Applicable (Subsection)
1	Psychotropic Drug Availability	§ 476b	§ 476b	1,2,4,11,12
2	Mental or Nervous Conditions	§ 488a	§ 514	1,2,4,11,12
3	Accidental Ingestion or Consumption of Controlled Drugs	§ 492	§ 518	1,2,4,6,11,12
4	Denial of Coverage Prohibited for Health Care Services to Persons with an Elevated Blood Alcohol Content	§ 498c	§ 525c	1,2,4,11,12
5	Treatment of Medical Complications of Alcoholism	N/A	§ 533	1,2,4,11,12
6	Occupational Therapy	§ 496	§ 524	1,2,4,6,11,12
7	Services of Physician Assistants and Certain Nurses	§ 499	§ 526	1,2,4,6,11,12
8	Services Provided by the Veterans' Home	§ 502	§ 509	Not indicated
9	Direct Access to OB/GYNs	§ 503b	§ 530b	1,2,4,6,11,12
10	Chiropractic Services	§ 507	§ 534	1,2,4,6,11,12

Each chapter reviews a single mandate and includes five sections: Overview, Background, Methods, Social Impact, and Financial Impact. The Overview includes the statutory references and the language of the mandate, the effective date, the premium impact, and the extent to which the mandated benefit is included in self-funded plans. The Background describes the disease, condition, treatment or provider to which the mandate applies, provides information on the current research and other pertinent information for each mandate. The Methods section documents the research methods followed by the mandate review team. The Social Impact section addresses the sixteen criteria contained in section 1(d)(1) of P.A. 09-179. The Financial Impact section addresses the nine criteria contained in section 1(d)(2) of P.A. 09-179.

The following table summarizes the expected medical costs of each mandate in this volume for group plans. Medical cost is the primary component of health insurance premiums. See the Ingenix Consulting report (Appendix II) for further details.

Summary of Estimated Medical Costs of Mandates in 2010: Volume III

Group Plans		
Mandate	Per Member Per Month (PMPM)	Percent of Premium
Psychotropic Drug Availability	\$7.50	2.50%
Mental or Nervous Conditions	\$8.50	2.80%
Accidental Ingestion or Consumption of Controlled Drug	\$0.03	0.01%
Denial of Coverage Prohibited for Health Care Services to Persons with an Elevated Blood Alcohol Content	\$0.03	0.01%
Treatment of Medical Complications of Alcoholism	\$0.37	0.10%
Occupational Therapy	\$0.86	0.30%
Services of Physician Assistants and Certain Nurses	\$0.00	0.00%
Services Provided by the Veterans' Home	\$0.33	0.10%
Direct Access to OB/GYNs	\$0.00	0.00%
Chiropractic Services	\$2.53	0.80%
TOTAL	\$20.15	6.62%

Volume III. Table of Contents

Chapter I. Psychotropic Drug Availability	7
Overview.....	9
Background.....	10
Methods.....	15
Social Impact.....	16
Financial Impact.....	22
Chapter 2. Diagnosis and Treatment of Mental or Nervous Conditions	27
Overview.....	29
Background.....	32
Methods.....	37
Social Impact.....	38
Financial Impact.....	49
Chapter 3. Accidental Ingestion or Consumption of Controlled Drugs	53
Overview.....	55
Background.....	56
Methods.....	61
Social Impact.....	61
Financial Impact.....	68
Chapter 4. Denial of Coverage Prohibited for Health Care Services to Persons with an Elevated Blood Alcohol Content	73
Overview.....	75
Background.....	76
Methods.....	81
Social Impact.....	82
Financial Impact.....	88
Chapter 5. Treatment of Medical Complications of Alcoholism	93
Overview.....	95
Background.....	96
Methods.....	99
Social Impact.....	100
Financial Impact.....	107
Chapter 6. Occupational Therapy	111
Overview.....	113
Background.....	114
Methods.....	116
Social Impact.....	117
Financial Impact.....	127

Chapter 7. Services of Physician Assistants and Certain Nurses	131
Overview.....	133
Background.....	133
Methods.....	135
Social Impact.....	136
Financial Impact.....	143
Chapter 8. Services Provided by the Veterans' Home.....	147
Overview.....	149
Background.....	150
Methods.....	150
Social Impact.....	151
Financial Impact.....	154
Chapter 9. Direct Access to OB/GYNs.....	157
Overview.....	159
Background.....	160
Methods.....	161
Social Impact.....	161
Financial Impact.....	165
Chapter 10. Chiropractic Services	167
Overview.....	169
Background.....	170
Methods.....	172
Social Impact.....	173
Financial Impact.....	182

Appendix I. Public Act No. 09-179

Appendix II. Ingenix Consulting Actuarial and Economic Report

Appendix III. Index of Mandates

Volume III

Chapter 1

Psychotropic Drug Availability in Health Plans

Review and Evaluation of Connecticut Statute

Chapter 700, § 38a-476b

Standards Regarding Psychotropic Drug Availability in Health Plans

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Chapter 1. Table of Contents

- I. Overview.....9
- II. Background..... 10
- III. Methods..... 15
- IV. Social Impact..... 16
- V. Financial Impact..... 22

I. Overview

In Public Act 09-179, An Act Concerning Reviews of Health Insurance Benefits Mandated in this State, the Connecticut General Assembly directed the Connecticut Insurance Department (CID) to review statutorily mandated health benefits existing on or effective on July 1, 2009. This report is part of that review and was conducted following the requirements stipulated under Public Act 09-179. This review was a collaborative effort of Connecticut Insurance Department and the University of Connecticut Center for Public Health and Health Policy (CPHHP).

Connecticut General Statutes, Chapter 700, § 38a-476b requires coverage for psychotropic drugs that are the most effective for the treatment of a health problem and have the least probability of harmful effects. Health insurers cannot limit access to these drugs, nor do they have the authority to require patients to take psychotropic drugs that are not the most effective with the least probability of side effects. This mandate ensures the authority of the physician to prescribe the drug that is most effective, regardless of how recent the treatment may have been developed.

Specifically, CGSA § 38a-476b provides that...

...Notwithstanding any provision of the general statutes or the regulations of Connecticut state agencies, no mental health care benefit provided under state law, or with state funds or to state employees may, through the use of a drug formulary, list of covered drugs or any other means: (1) Limit the availability of psychotropic drugs that are the most effective therapeutically indicated pharmaceutical treatment with the least probability of adverse side effects; or (2) require utilization of psychotropic drugs that are not the most effective therapeutically indicated pharmaceutical treatment with the least probability of adverse side effects. Nothing in this section shall be construed to limit the authority of a physician to prescribe a drug that is not the most recent pharmaceutical treatment. Nothing in this section shall be construed to prohibit differential co-pays among pharmaceutical treatments or to prohibit utilization review.

In April 2010, CPHHP and Ingenix Consulting (IC) requested and received 2007 and 2008 psychotropic drug claims data from six insurers and managed care organizations (MCOs) domiciled in Connecticut that cover approximately 90 percent of the population in fully insured group and individual health insurance plans in Connecticut (1.25 million persons). Based on that claims data, a review of the legislative history, reviews of pertinent literature and the Ingenix Consulting report, this review found the following:

Current coverage

This mandate has been in effect since October 2001 (P.A. 01-171, S. 17).

Premium impact

Group plans: On a 2010 basis, the medical cost of this mandate is estimated to be \$7.50 per member per month (PMPM). Estimated total cost (insurance premium, administrative fees, and profit) of the mandated services on a 2010 basis in group plans is \$9.00 PMPM, which is 2.5 percent of estimated total premium costs in group plans. Estimated cost sharing on a 2010 basis in group plans is \$2.15 PMPM.

Individual policies: Four of the six insurers/MCOs provided claims data for individual health insurance policies. On a 2010 basis, medical cost is estimated to be \$3.98 PMPM. Estimated total cost (insurance premium, administrative fees, and profit) of the mandated services in 2010 in individual policies is \$5.16 PMPM which is 1.9 percent of estimated total premiums in individual policies. Estimated cost sharing in

2010 in individual policies is \$2.56 PMPM. Individual data is less credible than group data primarily due to small sample size.

Self-funded plans

Five health insurers/MCOs domiciled in Connecticut provided information about their self-funded plans, which represents an estimated 47 percent of the total population in self-funded plans in Connecticut. These five insurers/MCOs report that 71 percent of enrollees in their self-funded plans have coverage for the mandated services.

This report is intended to be read in conjunction with the General Introduction to this volume and the Ingenix Consulting Actuarial and Economic Report which is included as Appendix II.

II. Background

An estimated 26.2 percent of Americans ages 18 and older have a diagnosable mental disorder in a 12 month period.¹ This translates to an estimated 57.7 million Americans who have a mental disorder in a given year. Lifetime prevalence rates are higher (an estimated 46.4 percent). Of Connecticut's approximately 3.5 million residents, close to 109,000 adults live with a serious mental illness and about 39,000 children live with serious mental health conditions.²

Psychotropic drugs can be a valuable treatment option to address mental illness. The primary function of many psychotropic drugs is to affect mental processes by altering neurotransmitter systems to help regulate mood, thinking, and behaviors.³ Medications that act in similar ways are grouped together in broad classes such as: antipsychotics, antidepressants, stimulants, antimanic (mood stabilizers), antianxiety, and cholinesterase inhibitors.

The past decades have seen a surge of new drugs introduced to treat mental disorders. Through advances in neuroscience and molecular biology, the newer drugs generally have fewer side effects and more effective agents that target specific biochemical alterations associated with mental disorders. The prevalence of psychotropic medication use among non-institutionalized U.S. adults significantly increased from 6.1 percent in 1994 to 11.1 percent in 2002.⁴ The increase was due in large part to a more than threefold increase in antidepressants particularly selective serotonin reuptake inhibitors (SSRIs). Use of psychotropic drugs is higher for persons who are over 40 years old, female, and white.⁵

Psychotropic drugs, when used appropriately are generally safe and effective for a variety of mental disorders. For example, an atypical antipsychotic drug (amisulpride) provided significant improvements in subjective well-being, including increased social functioning, integration into the community and autonomy in patients diagnosed with chronic schizophrenia.⁶ In addition, Desvenlafaxine, a serotonin–norepinephrine reuptake inhibitors (SNRIs) has demonstrated efficacy, safety, and tolerability for the treatment of major

¹ Kessler RC, Chiu WT, Demler O, *et al.* 2005. Prevalence, severity, and comorbidity of 12-month DSMIV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry* 62: 617-709.

² Holzer CE III, Nguyen HT. 2009. (see psy.utmb.edu for more information) and data submitted to NAMI by state mental health agencies for Grading the States: A Report Card on America's Health Care System for Adults with Serious Mental Illnesses.

³ Berns GS, Nemeroff CB. 2003. The neurobiology of bipolar disorder. *American Journal of Medical Genetics, Part C, Seminars in Medical Genetics* 123C(1): 76-84.

⁴ Paulose-Ram R, Safran MA, Jonas BS, *et al.* 2007. Trends in psychotropic medication use among U.S. adults. *Pharmacoepidemiology and Drug Safety* 16: 560-570.

⁵ *Ibid.*

⁶ Nuss P, Tessier C. 2010. Antipsychotic medication, functional outcome and quality of life in schizophrenia: focus on amisulpride. *Current Medical Research and Opinion* 26(4): 787-801.

depressive disorder in two placebo-controlled trials.⁷

Safeguards such as treatment guidelines by governmental institutes and professional medical organizations are in place to reduce risks associated with psychotropic drugs. For example, the FDA must review and approve psychotropic drugs before they are introduced into the U.S. market to ensure their safety and efficacy. The FDA works with drug sponsors during product development, and reviews the safety and efficacy data, proposed label, and advertising.⁸ In addition, a prescription from a medical provider licensed to prescribe medications is required in order to obtain a psychotropic drug.

However, the use of psychotropic drugs poses possible serious side effects, toxicity, and drug interactions. For example, many atypical antipsychotic medications can cause significant weight gain and changes in metabolism increasing the risk of diabetes, high cholesterol, high lipids, and cardiovascular and cerebrovascular adverse events.^{9, 10, 11} Antipsychotics have been associated with disruption in physical movement resulting in rigidity, muscle spasms, tremors, and restlessness.¹² Severe side effects require a FDA “Black Box” warning label which is the most serious type of warning. All antidepressants have this warning due to the increased risk of suicidal behavior in children, adolescents, and young adults up to age 24. The warning also states that patients of all ages taking antidepressants should be watched closely, especially in the first few weeks of treatment.¹³ In addition, the FDA has placed a Black Box warning label on stimulant medication used to treat Attention Deficit Hyperactivity Disorder. The Black Box warning cautions patients and physicians of the increased risk of stroke, heart attack or sudden cardiac related death especially in patients with pre-existing cardiovascular issues.^{14, 15} Furthermore, psychotropic drugs have a potential for misuse and dependency. A recent report by the National Institute on Drug Abuse identified certain psychotropic drugs among the most commonly abused prescription medications in the United States.¹⁶

Adverse consequences associated with psychotropic drugs are of great concern when treating vulnerable populations. For example, data to support the use of psychotropic drugs to treat mental illness of pregnant or lactating mothers is inconclusive. Research has found an association between mothers taking benzodiazepines in the first trimester of pregnancy and their children being born with orofacial clefts. Expectant mothers who take mood stabilizers such as lithium have an increased risk of fetal malformation.¹⁷ Psychotropic drug use can cause sedation, confusion, vision changes, and neuromuscular incoordination

⁷ Reddy S, Kane C, Pitrosky B, *et al.* 2010. Clinical utility of desvenlafaxine 50 mg/d for treating MDD: a review of two randomized placebo-controlled trials for the practicing physician. *Current Medical Research and Opinion* 25(1): 139-50.

⁸ Laughren TP. 2010. What's next after 50 years of psychiatric drug development: An FDA perspective. *Journal of Clinical Psychiatry* 71(9): 1196-1204.

⁹ Lieberman JA, Stroup TS, McEvoy JP, *et al.* 2005. Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE). Effectiveness of antipsychotic drugs in patients with chronic schizophrenia. *New England Journal of Medicine* 353(12): 1209-1223.

¹⁰ Newcomer, J.W. 2007. Antipsychotic medications: metabolic and cardiovascular risk. *Journal of Clinical Psychiatry*, 68,(4), 8-13.

¹¹ Mehta, S., Johnson, M.L., Chen, H., and Aparasu, R.R. 2010. Risk of cerebrovascular adverse events in older adults using antipsychotic agents: a propensity-matched retrospective cohort study. *Journal of Clinical Psychiatry*, 71(6), 689-98.

¹² National Institute of Mental Health. U.S. Department of Health and Human Services. National Institutes of Health. Mental Health Medications. NIH Publication No. 08-3929. Revised 2008. Mental Health Medications.

¹³ Food and Drug Administration. Questions and Answers on Antidepressants Use. Available at: <http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm096321.htm#6>. Accessed December 23, 2010.

¹⁴ Food and Drug Administration. Questions and Answers on Antidepressants Use. Available at: <http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm096321.htm#6>. Accessed December 23, 2010.

¹⁵ Elia, J., and Vetter, V.L. 2010. Cardiovascular effects of medications for the treatment of attention-deficit hyperactivity disorder: what is known and how should it influence prescribing in children? *Paediatric Drugs*, 12(3), 165-75.

¹⁶ National Institute of Drug Abuse. 2001. Prescription drugs: abuse and addiction. NIH publication no. 01-4881.

¹⁷ Eberhard-Gran M, Eskild A, Opjordsmoen S. 2005. Treating mood disorders during pregnancy: safety considerations. *Drug Safety* 28(8): 695-706.

associated with increased risk of falls, hospitalizations and cognitive impairment among the elderly.^{18,19} Children and adolescents with mental illness pose decidedly challenging prescribing decisions. First, assessing and diagnosing young patients is difficult since their symptoms and course differ from adults. Additionally, co-occurring disorders are common in this population, which can complicate medication selection.²⁰ For safe and effective treatment of mental illness in this age group, the various aspects of drug absorption, distribution, metabolism, and elimination during growth and development must be taken into consideration.²¹ Possible adverse effects of psychotropic drugs in vulnerable populations must be balanced against the benefits of treatment.

The prevailing patterns of mental health care indicate that certain segments of society are much more likely to have untreated or under-treated needs. African American, the elderly and Medicaid recipients are particularly vulnerable to under-treatment of mental disorders. African Americans are more likely to be over-diagnosed for schizophrenia and under-diagnosed for depression when compared to Caucasians.²² To compound this problem, physicians are less likely to prescribe newer generation antidepressant or antipsychotic medications to African American consumers who need them.²³ Elderly persons are much less likely to receive a diagnosis of depression, and as many as one-half to three-quarters of elderly persons receive no antidepressant treatment. Of those who do receive antidepressants with depression, less than one-third receive adequate treatment.^{24, 25} Medicaid patients are less likely to receive selective serotonin reuptake inhibitors when compared to privately insured patients.^{26, 27}

Homeless persons have higher rates (25 to 33 percent) of serious mental illness such as schizophrenia, bipolar disorder, or major depression than the general population (6 percent).^{28, 29, 30} Complicating their debilitating mental illness is their limited access to mental health services.³¹ As a result, homeless persons with serious mental illness tend to have higher levels of psychiatric hospital use, and higher mental health treatment costs, and more inpatient and emergency type services than their non-homeless counterparts.^{32, 33}

¹⁸ Bloch F, Thibaud M, Dugue B, *et al.* 2010. Psychotropic drugs and falls in the elderly people: Updated literature review and meta-analysis. *Journal of Aging Health* [Epub ahead of print]: 1-18.

¹⁹ Howland RH. 2009. Prescribing psychotropic medications for elderly patients. *Journal of Psychosocial Nursing and Mental Health Services* 47: 17-20.

²⁰ Hamrin V, Pachler M. 2007. Pediatric bipolar disorder: evidence-based psychopharmacological treatments. *Journal of Children and Adolescents Psychiatric Nursing* 20(1): 40-58.

²¹ Vanden Anker JN. 2010. Developmental pharmacology. *Developmental Disabilities Research Reviews* 16: 233-238.

²² United States Public Health Service Office of the Surgeon General. 2001. Mental Health: Culture, Race, and Ethnicity: A Supplement to Mental Health: A Report of the Surgeon General. Rockville, MD: Department of Health and Human Services, U.S. Public Health Service.

²³ Melfi CA, Croghan TW, Hanna MP, *et al.* 2000. Racial variation in antidepressant treatment in a Medicaid population. *Journal of Clinical Psychiatry* 61: 16-21.

²⁴ Callahan CM. 2001. Quality improvement research on late-life depression in primary care. *Medical Care* 39: 772-784.

²⁵ Harman JS, Schulberg HC, Mulsant BH, *et al.* Effect of patient and visit characteristics on diagnosis of depression in primary care. *Journal of Family Practice* 50: 1068.

²⁶ Melfi C, Croghan T, Hannah M. 1999. Access to treatment for depression in a Medicaid population. *Journal of Health Care for the Poor and Underserved* 10: 201-215.

²⁷ Melfi C, Groghan T, Hanna M, *et al.* 2000. Racial variation in antidepressant treatment in a Medicaid population. *Journal of Clinical Psychiatry* 61: 16-21.

²⁸ Sullivan G, Burnam A, Koegel P, Hollenberg J. 2000. Quality of life of homeless persons with mental illness: results from the course-of-homelessness study. *Psychiatry Services* 51: 1135-1141.

²⁹ Folsom D, Jest DV. 2002. Schizophrenia in homeless persons: systematic review of the literature. *Acta Psychiatrica Scandinavica* 104: 1-10.

³⁰ Kessler RC, Chiu WT, Demler O, *et al.* 2005. Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry* 62: 617-709.

³¹ Gelberg L, Gallagher TC, Anderson RM, *et al.* 1997. Competing priorities as a barrier to medical care among homeless adults in Los Angeles. *American Journal of Public Health* 87: 217-220.

³² Rosenheck R, Seibyl CL. 1998. Homelessness: health service use and related costs. *Medical Care* 36: 1121-1122.

³³ North CS, Smith EM. 1993. A systematic study of mental health services utilization by homeless men and women. *Social Psychiatry and Psychiatric Epidemiology* 28: 77-83.

Incarcerated adults are at higher risk than the general population for psychiatric illnesses.^{34,35} For example, studies using standardized psychometric assessments in jails and prisons suggest lifetime prevalence of psychiatric disorders ranging from 62 to 81 percent.^{36,37} In addition, high levels of co-morbid psychiatric disorders (Axis I and II) are common in incarcerated individuals and contribute to the complex nature of proper diagnosis and treatment for this population.³⁸ The primary method of treatment for the vast majority of incarcerated persons with mental illness is pharmacotherapy.³⁹ However, pharmacotherapy is only effective when high levels of medication adherence are maintained. Inmates tend to have low adherence rates to psychotropic drugs, resulting in increased rates of violence toward others, greater frequency of hospitalizations, longer prison sentences and convictions of serious felonies.⁴⁰

Returning soldiers report high rates (78 – 86 percent) of mental health symptoms.⁴¹ However, only 43-45 percent express an interest in receiving treatment, and only 21-27 percent received treatment from a mental health professional in the past year. The most common diagnoses among returning soldiers and veterans are post-traumatic stress disorder, depression, anxiety, and increased alcohol intake. Prevalence rates for these disorders increase over time.⁴² Veterans with diagnoses of mental disorders have an increased risk of suicide. The vast majority of veterans who died by suicide (70 percent) used violent means such as firearms, hanging, strangulation, jumping from height or into traffic, or auto accident.⁴³

Psychotropic drugs cannot cure a mental disorder but they can reduce symptoms enough to help individuals improve functioning. Unfortunately, there are many barriers to psychotropic use several of which are related to patients and their access to treatment. For example, most people with mental disorders do not seek treatment and fewer with serious mental disorders receive treatment.⁴⁴ The lag between onset of mental illness symptoms and treatment can be more than a decade despite the availability of effective treatments.⁴⁵ Demographic factors play a role in accessing effective treatment. For example, African Americans, Hispanics and Asian Americans with mental disorders are less likely to seek treatment or use psychotropic drugs than Whites often due to patient perception that the service system neglects the special needs of racial and ethnic minorities.⁴⁶ Other patient related barriers include: cognitive impairment and paranoia, substance abuse, not having time, fear of hospitalization, and stigma.⁴⁷

³⁴ Shelton D, Ehret MJ, Wakai S, *et al.* 2010. Psychotropic medication adherence in correctional facilities: a review of the literature. *Journal of Psychiatric and Mental Health Nursing* 17(7): 603-613.

³⁵ Fazel S, Danesh J. 2002. Serious mental disorder in 23,000 prisoners: a systematic review of 62 surveys. *The Lancet* 359: 545-550.

³⁶ Teplin LA. 1994 Psychiatric and substance abuse disorders among male urban jail detainees. *American Journal of Public Health* 84: 290-293.

³⁷ Teplin LA, Abram KM, McClelland GM. 1996. Prevalence of psychiatric disorders among incarcerated women: I. Pretrial jail detainees. *Archives of General Psychiatry* 53: 5005-5012.

³⁸ Trestman RL, Ford JD, Zhang W, *et al.* 2007. Current and lifetime psychiatric illness among inmates not identified as acutely mentally ill at intake in Connecticut's jails. *Journal of the American Academy of Psychiatry and the Law* 35: 490-500.

³⁹ Thorburn KM. 1995. Health care in correctional facilities. *Western Journal of Medicine* 163: 560-564.

⁴⁰ Smith LD. 1989. Medication refusal and the rehospitalized mentally ill inmate. *Hospital community Psychiatry* 40: 491-496.

⁴¹ Seal KH, Metzler TJ, Gima KS, *et al.* 2010. Trends and risk factors for mental health diagnosis among Iraq and Afghanistan veterans using Department of Veterans Affairs health care, 2002-2008. *American Journal of Public Health* 99(9): 1651-8.

⁴² Stecker T, Fortney J, Owen R, *et al.* 2010. Co-occurring medical, psychiatric, and alcohol-related disorders among veterans returning from Iraq and Afghanistan. *Psychosomatics* 51: 503-507.

⁴³ Ilgen MA, Conner KR, Valenstein M, *et al.* 2010. *Journal of Studies of Alcohol and Drugs* [Epub ahead of print]: 473-479.

⁴⁴ Kessler RC, Demler O, Frank RG, *et al.* 2005. Prevalence and Treatment of Mental Disorders, 1990 to 2003. *The New England Journal of Medicine* 352(24): 1515-2523.

⁴⁵ Wang P, Berglund P, *et al.* 2005. Failure and delay in initial treatment contact after first onset of mental disorders in the National Comorbidity Survey Replication (NCS-R). *General Psychiatry* 62: 603-613.

⁴⁶ Han E, Liu G. 2005. Racial disparities in prescription drug use for mental illness among population in U.S. *Journal of Mental Health Policy and Economics* 8(3): 131-143.

⁴⁷ U.S. Department of Health and Human Services. 1999. Mental Health: A Report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health.

Clinicians have a significant influence on patients' psychotropic drug use. The therapeutic alliance between prescriber and patient can impact a patient's attitude toward accepting diagnosis and medication. As noted above, clinicians' prescribing patterns play a role in patients' access to medication. Clinicians are more likely to diagnose African Americans with schizophrenia than for depression when compared to Caucasians.⁴⁸ In addition, clinicians are less likely to prescribe African Americans with the newer generation antidepressant or antipsychotic medications.⁴⁹ In the case of elderly patients, as many as one-half to three-quarters do not receive antidepressant treatment for their depression.^{50, 51} Medicaid patients are less likely to receive selective serotonin reuptake inhibitors when compared to privately insured patients.^{52, 53}

Adverse side effects of psychotropic drugs can impact patients' willingness to take the medication as prescribed. As described earlier, many atypical antipsychotic medications can cause significant weight gain and changes in metabolism increasing the risk of diabetes, high cholesterol, high lipids, and cardiovascular and cerebrovascular adverse events.^{54, 55, 56} Psychotropic drugs to address bipolar disorder have been associated with adverse consequences such as weight gain, sedation, sexual dysfunction, and cognitive problems.⁵⁷ Side effects such as these can lead to low rates of medication adherence resulting in unnecessary increases in dosage, unwarranted polypharmacy, and increases in relapse and hospitalization.

Factors related to service delivery can also function as barriers. Insufficient information about illness or treatment, cost of treatment even for people with health insurance, fragmentation of services and lack of access or availability of services can reduce psychotropic drug use.⁵⁸

According to the National Association of Insurance Commissioners, no states have a mandated insurance benefit similar to Connecticut's that require policies in fully insured plans to cover psychotropic drugs.⁵⁹ The Council for Affordable Health Insurance (CAHI) identifies three states that have mandates for psychotropic drugs, including Minnesota, New York, and Wisconsin.⁶⁰ CAHI does not list Connecticut as a state with a mandate for psychotropic drugs.

The American Psychiatric Association has developed practice guidelines that provide evidence-based

⁴⁸ United States Public Health Service Office of the Surgeon General. 2001. *Mental Health: Culture, Race, and Ethnicity: A Supplement to Mental Health: A Report of the Surgeon General*. Rockville, MD: Department of Health and Human Services, U.S. Public Health Service.

⁴⁹ Melfi CA, Croghan TW, Hanna MP, *et al.* 2000. Racial variation in antidepressant treatment in a Medicaid population. *Journal of Clinical Psychiatry* 61: 16-21.

⁵⁰ Callahan CM. 2001. Quality improvement research on late-life depression in primary care. *Medical Care* 39: 772-784.

⁵¹ Harman JS, Schulberg HC, Mulsant BH, *et al.* 2001. Effect of patient and visit characteristics on diagnosis of depression in primary care. *Journal of Family Practice* 50: 1068.

⁵² Melfi C, Croghan T, Hannah M. 1999. Access to treatment for depression in a Medicaid population. *Journal of Health Care for the Poor and Underserved* 10: 201-215.

⁵³ Melfi CA, Croghan TW, Hanna MP, *et al.* 2000. Racial variation in antidepressant treatment in a Medicaid population. *Journal of Clinical Psychiatry* 61: 16-21.

⁵⁴ Lieberman JA, Stroup TS, McEvoy JP, *et al.* 2005. Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE). Effectiveness of antipsychotic drugs in patients with chronic schizophrenia. *New England Journal of Medicine* 353(12): 1209-1223.

⁵⁵ Newcomer, J.W. 2007. Antipsychotic medications: metabolic and cardiovascular risk. *Journal of Clinical Psychiatry*, 68,(4), 8-13.

⁵⁶ Mehta, S., Johnson, M.L., Chen, H., and Aparasu, R.R. 2010. Risk of cerebrovascular adverse events in older adults using antipsychotic agents: a propensity-matched retrospective cohort study. *Journal of Clinical Psychiatry*, 71(6), 689-98.

⁵⁷ Johnson FR, Ozdemir S, Manjunath R, *et al.* 2007. Factors that affect adherence to bipolar disorder treatments: A stated preference approach. *Medical Care* 45: 545-552.

⁵⁸ U.S. Department of Health and Human Services. 1999. *Mental Health: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health.

⁵⁹ National Association of Insurance Commissioners. 2008. *NAIC Compendium of State Laws on Insurance Topics*.

⁶⁰ Bunce VC, Wieske JP. 2009. Health insurance mandates in the states 2009. Council for Affordable Health Insurance. Available at: http://www.cahi.org/cahi_contents/resources/pdf/HealthInsuranceMandates2009.pdf. Accessed May 6, 2010.

recommendations for the assessment and treatment of specific psychiatric disorders for children, adolescents, and adults.⁶¹

III. Methods

Under the direction of CPHHP, medical librarians at the Lyman Maynard Stowe Library at the University of Connecticut Health Center (UCHC) gathered published articles and other information related to medical, social, economic, and financial aspects of the required benefit. Medical librarians conducted literature searches using PubMed. Search terms included: antianxiety agents, antidepressive agents/economics, anti-manic agents/adverse effects, antipsychotic agents/therapeutic use, anxiety disorders/drug therapy, attitude of health personnel, benzodiazepines, benzodiazepines/therapeutic use, bipolar disorder/drug therapy, demography, depression/economics, depressive disorder/drug therapy, drug prescriptions/statistics and numerical data, drug prescriptions/statistics and numerical data, drug utilization/statistics and numerical data, infant, newborn, diseases/chemically induced, insurance coverage/statistics and numerical data, lithium compounds/therapeutic use, medication adherence, mental disorders/drug therapy, mental health services, mood disorders/drug therapy, norepinephrine, pregnancy, psychotropic drugs/administration and dosage, psychotropic drugs/adverse effects, psychotropic drugs/therapeutic use, quality of life, recurrence/prevention and control, schizophrenia/drug therapy, serotonin uptake inhibitors, severity of illness index, social behavior, and treatment outcome.

CPHHP staff conducted independent literature searches using the Cochrane Review, Pubmed, Google, PsychInfo, and Google Scholar using similar search terms used by the UCHC medical librarians. Where available, articles published in peer-reviewed journals are cited to support the analysis. Other sources of information may also be cited in the absence of peer-reviewed journal articles. Content from such sources may or may not be based on scientific evidence.

CPHHP staff consulted with clinical faculty from the University of Connecticut School of Medicine on matters pertaining to medical standards of care, traditional, current and emerging practices, and evidence-based medicine related to the benefit.

Staff gathered additional information through telephone and e-mail inquiries to appropriate state, federal, municipal, and non-profit entities and from internet sources such as the State of Connecticut website, Centers for Medicare and Medicaid (CMS) website, other states' websites, professional organizations' websites, and non-profit and community-based organization websites.

With the assistance of the Connecticut Insurance Department (CID), CPHHP and Ingenix Consulting (IC) requested and received 2007 and 2008 claims data from insurance companies and MCOs domiciled in Connecticut. Six insurers/MCOs provided claims data for their fully insured group and individual plan participants. Five insurers/MCOs also provided information on the self-funded plans they administer.

CPHHP and the CID contracted with Ingenix Consulting (IC) to provide actuarial and economic analyses of the mandated benefit. Further details regarding the insurer/MCO claims data and actuarial methods used to estimate the cost of the benefit and economic methods used to estimate financial burden may be found in Appendix II.

⁶¹ American Psychiatric Association. Practice Guidelines. Available at: http://www.psych.org/psych_pract/treatg/pg/prac_guide.cfm. Accessed December 23, 2010.

IV. Social Impact

1. The extent to which the service is utilized by a significant portion of the population.

An estimated 26.2 percent of Americans ages 18 and older have a diagnosable mental disorder in a 12 month period.⁶² This translates to an estimated 57.7 million Americans who have a mental disorder in a given year. Lifetime prevalence rates are higher (an estimated 46.4 percent). Of Connecticut's approximately 3.5 million residents, close to 109,000 adults live with a serious mental illness and about 39,000 children live with serious mental health conditions.⁶³

The past decades have seen a surge of new drugs introduced to treat mental disorders. Through advances in neuroscience and molecular biology, the newer drugs generally have fewer side effects and more effective agents that target specific biochemical alterations associated with mental disorders. The prevalence of psychotropic medication use among non-institutionalized U.S. adults significantly increased from 6.1 percent in 1994 to 11.1 percent in 2002.⁶⁴ The increase is due in large part to a more than threefold increase in antidepressant particularly selective serotonin reuptake inhibitors (SSRIs). Prevalence rates are higher for persons who are over 40 years old, female, and white.⁶⁵

2. The extent to which the service is available to the population, including, but not limited to, coverage under Medicare, or through public programs administered by charities, public schools, the Department of Public Health, municipal health departments or health districts or the Department of Social Services.

Medicare

Under the Medicare Modernization, Improvement, and Prescription Drug Act of 2003, prescription drug plans must cover a minimum of two drugs in each therapeutic class.⁶⁶ However, the Centers for Medicare and Medicaid Services (CMS) extended special protections to three common psychotropic drug classes: antidepressants, antipsychotics, and anticonvulsants. For these three 'protected' classes, plans must cover 'all or substantially all' molecules (distinct drugs). Such plans are only required to cover generic or the brand version of a drug, not both. Similarly, plans are only required to cover one formulation of the drug; for example, under CMS guidelines, plans need not cover extended release formulations. Part D enrollees can appeal for coverage of specific medications not covered under their plan.⁶⁷

Public Programs Administered by Charities

The Mental Health Association (MHA) of Connecticut provides assistance to persons having difficulty paying for their medications in applying for state and federal programs to cover their costs.⁶⁸ The National Alliance of Mental Illness of Connecticut (NAMI-CT) provides a similar service.

In addition, most major pharmaceutical manufacturers offer limited drug assistance programs that may provide free psychotropic medications through physician offices and community health centers.

⁶² Kessler RC, Demler O, Frank RG, *et al.* 2005. Prevalence and Treatment of Mental Disorders, 1990 to 2003. *The New England Journal of Medicine* 352(24): 1515-2523.

⁶³ Holzer CE III, Nguyen HT. 2009. (see psy.utmb.edu for more information) and data submitted to NAMI by state mental health agencies for Grading the States: A Report Card on America's Health Care System for Adults with Serious Mental Illnesses.

⁶⁴ Paulose-Ram R, Safran MA, Jonas BS, *et al.* 2007. Trends in psychotropic medication use among U.S. adults. *Pharmacoepidemiology and Drug Safety* 16: 560-570.

⁶⁵ *Ibid.*

⁶⁶ Huskamp HA, Stevenson DG, Donohue JM, *et al.* 2007. Coverage and prior authorization of psychotropic drugs under Medicare part D. *Psychiatric Services* 58(3): 308-310.

⁶⁷ *Ibid.*

⁶⁸ Personal Communication. Meghan Maxwell, Mental Health Association of Connecticut. November 30, 2010.

Pharmaceutical manufacturers' websites advertise programs for the unemployed, uninsured, and underinsured who qualify, as well as for insured individuals during appeals processes if their plans deny coverage of the medications they need. However, there are significant barriers to accessing free medications. Guidelines for qualifications can be onerous and time-consuming; individuals need a "medical home" and an established relationship with a provider; paperwork may be burdensome; patients may need to activate a coupon prior to going to the pharmacy and coupons may be only valid for a one month supply. Examples of pharmaceutical manufacturers with drug assistance programs include Pfizer, Bristol-Myers Squibb, Eli Lilly and Company, Wyeth-Ayerst Laboratories, SmithKline Pharmaceuticals, Inc., Ortho-McNeil Pharmaceutical, Abbott Laboratories, Roche Laboratories, Inc., Novartis Pharmaceuticals, and Glaxo Wellcome Inc.^{69, 70}

Public Programs Administered by Public Schools

While school nurses and other designated professionals assist in administering a child's prescription drugs, no information was found that would indicate public schools provide prescription psychotropic drugs. The State of Connecticut has also adopted provisions that prohibit school personnel from recommending psychotropic drugs.⁷¹

The Department of Public Health (DPH)

No information was found that would indicate the availability of psychotropic drugs through Department of Public Health.

Municipal Health Departments

No information was found that would indicate municipal health departments/health districts provide services for prescription psychotropic drugs.

The Department of Social Services (DSS)

Connecticut Medicaid follows the federal mandate of each medication being available so long as there is a valid drug rebate agreement in effect on the date of service.⁷² All of the "most effective therapeutically indicated" drugs are available through DSS.⁷³ Medications on the DSS Preferred Drug List⁷⁴ are available without prior authorization, whereas drugs not included on the Preferred Drug List require prior authorization before being reimbursable.⁷⁵

3. The extent to which insurance coverage is already available for the service.

State of Connecticut law requires coverage for the cost of psychotropic drugs in fully insured group and individual health insurance plans as of October 1, 2001.⁷⁶ 2007 and 2008 claims data from six insurers/MCOs that cover 90 percent of the population in fully insured group and individual insurance plans in Connecticut showed evidence that claims are paid for the mandated services. Information received from five insurers/MCOs domiciled in Connecticut shows that 71 percent of members in self-funded plans have

⁶⁹ Pfizer. 2010. Helpful Answers Program website. Available at:

<http://www.pfizerhelpfulanswers.com/pages/Programs/medicines.aspx?p=2>. Accessed: November 16, 2010.

⁷⁰ Pheil P. 2010. Mental Health Today (online newsletter). Patient Assistance Programs Listed by Psychotropic Medication. Available at: <http://www.mental-health-today.com/medsassist.htm>. Accessed: November 16, 2010.

⁷¹ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. §10-212B.

⁷² Personal communication. James Zakszewski, RPh, DSS Pharmacy Consultant. July 9, 2010.

⁷³ *Ibid.*

⁷⁴ *Ibid.* (citing the DSS Pharmaceutical and Therapeutics Committee, which creates the list of drugs. The Pharmaceutical and Therapeutics Committee is authorized under C.G.S. §17b-274d).

⁷⁵ Personal communication. James Zakszewski, RPh, DSS Pharmacy Consultant. July 9, 2010.

⁷⁶ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. §38A-476B.

coverage for the benefit.

4. If the coverage is not generally available, the extent to which such lack of coverage results in persons being unable to obtain necessary health care treatment.

Coverage is required and generally available for persons enrolled in fully insured group and individual health insurance plans. Coverage is also available to 71 percent of persons enrolled in self-funded plans; persons enrolled in fully insured and self-funded group plans represent the majority of insured population under age 65 in Connecticut. Medicare and Medicaid generally cover psychotropic drugs.

5. If the coverage is not generally available, the extent to which such a lack of coverage results in unreasonable financial hardships on those persons needing treatment.

As noted above, coverage for psychotropic drugs is required to be included in fully insured group and individual policies issued in Connecticut. Depending on the level of cost-sharing and personal financial resources available, that coverage may or may not be sufficient for the insured's family to avoid unreasonable financial hardship. Due to the high cost of the mandated services, in the absence of an insurance mandate, it is likely that there would be substantial cost burdens on affected patients and families.

Mental illness carries significant costs for individuals and their families, even for those with comprehensive health benefits. The economic toll of treating mental disorders has profound direct costs such as medications, clinic visits, hospitalization, and emergency room care.⁷⁷ Indirect costs include lower educational attainment, reduced income, job termination, incarceration, homelessness, severe personal distress, and profound family burden.⁷⁸

Further discussion of financial and socioeconomic effects of the mandated benefit may be found in Appendix II: Ingenix Consulting Actuarial and Economic Report, pages 39-41.

6. The level of public demand and the level of demand from providers for the service.

The level of demand for psychotropic drugs to treat mental disorders has been well established. The American Psychiatric Association has developed practice guidelines that provide evidence-based recommendations for the assessment and treatment of specific psychiatric disorders for children, adolescents, and adults. Organizations such as the National Alliance on Mental Illness (NAMI) and Mental Health America provide information on support, education and advocacy for improved treatment (including psychotropic drugs) and services for individuals with mental illness.

7. The level of public demand and the level of demand from providers for insurance coverage for the service.

Organizations such as NAMI and Mental Health America provide information on a variety of ways to advocate for insurance coverage related to psychotropic drugs. These organizations host websites, trainings and other forums to disseminate information on pending federal and state legislation, and ways to contact U.S. and State elected officials.

8. The likelihood of achieving the objectives of meeting a consumer need as evidenced by the experience of other states.

According to the National Association of Insurance Commissioners, no states have a mandated insurance

⁷⁷ Insel TR. 2008. Assessing the economic costs of serious mental illness. *American Journal of Psychiatry* 165: 663-665.

⁷⁸ Kessler RC, Heeringa S, Lakoma MD, et al. 2008. Individual and societal effects of mental disorders on earnings in the United States: Results from the National Comorbidity Survey Replication. *American Journal of Psychiatry* 165(6): 703-711.

benefit similar to Connecticut's that require policies in fully insured plans to cover psychotropic drugs.⁷⁹ The Council for Affordable Health Insurance (CAHI) identifies three states that have mandates for psychotropic drugs, including Minnesota, New York, and Wisconsin.⁸⁰ CAHI does not list Connecticut as a state with a mandate for psychotropic drugs.

9. *The relevant findings of state agencies or other appropriate public organizations relating to the social impact of the mandated health benefit.*

Internet searches and telephone inquiries found no studies from state agencies and public organizations related to the social impact of mandated insurance coverage for psychotropic drugs. States searched for which no evidence of a review was found include California, Colorado, Maryland, Maine, Massachusetts, Virginia, Wisconsin, Louisiana, New Jersey, Pennsylvania, Washington and Texas.

10. *The alternatives to meeting the identified need, including but not limited to, other treatments, methods or procedures.*

There are many treatment alternatives to psychotropic drugs to address mental illness. Psychotherapy is a prominent therapeutic approach with numerous orientations. Psychotherapy focuses on the learning process accomplished primarily by the exchange of verbal and nonverbal communication between patient and therapist, hence it is sometimes referred to as “talk therapy.” Psychotherapy can be used to treat individuals, couples, families or groups. Patients can range in age and severity of disorder. In a meta-analysis of controlled trials of manual-guided psychodynamic psychotherapy the therapy was found to be superior to control condition (treatment-as-usual or wait list) and as effective as established treatments such as cognitive-behavioral therapy.⁸¹ Not surprisingly, long-term psychodynamic psychotherapy (LTPP) was found to be more effective than shorter forms of psychotherapy especially for patients with complex mental disorders.⁸² Another often used therapy, Dialectical Behavior Therapy (DBT), is a cognitive-behavioral treatment approach that promotes two opposing goals: change and acceptance. DBT was developed for the treatment of patients with suicidal behavior, and has been adapted to treat patients with Borderline Personality Disorder. Across studies, DBT seems to reduce severe dysfunctional behaviors that are targeted for intervention (e.g., parasuicide, substance abuse, and binge eating), enhance treatment retention, and reduce psychiatric hospitalization.⁸³

Research suggests that using medication and psychotherapy, referred to as multi-modal therapy, is more effective than either treatment method used independently. For example, in a study of patients with early stage schizophrenia, those receiving medication and psychosocial intervention had lower rates of treatment discontinuation, lower risk of relapse, and improved insight, quality of life and social functioning than patients receiving medication only.⁸⁴

A significant proportion of people with mental disorders use complementary and alternative medicine (CAM) including acupuncture, yoga, biofeedback, guided imagery, self-help groups, diet and nutrition,

⁷⁹ National Association of Insurance Commissioners. 2008. NAIC Compendium of State Laws on Insurance Topics.

⁸⁰ Bunce VC, Wieske JP. 2009. Health insurance mandates in the states 2009. Council for Affordable Health Insurance. Available at: http://www.cahi.org/cahi_contents/resources/pdf/HealthInsuranceMandates2009.pdf. Accessed May 6, 2010.

⁸¹ Leichsenring F, Leibing E. 2007. Psychodynamic psychotherapy: A systematic review of techniques, indications and empirical evidence. *The British Psychological Society* 80: 217-228.

⁸² Leichsenring F, Rabung S. 2008. Effectiveness of long-term psychodynamic psychotherapy: A meta-analysis. *Journal of the American Medical Association* 300(13): 1551-1565.

⁸³ Koerner K, Linehan MM. 2000. Research on dialectical behavioral therapy for patients with borderline personality disorder. *Psychiatric Clinics of North America* 23(1): 152-167.

⁸⁴ Guo X, Zhai J, Liu Z, et al. 2010. Effect of antipsychotic medication alone vs combined with psychosocial intervention on outcomes of early state schizophrenia. *Archives of General Psychiatry* 67(9): 895-904.

pastoral counseling, animal therapies, and expressive therapies (art, dance, and music therapy). The National Center for Complementary and Alternative Medicine (NCCAM) at the National Institutes of Health has evaluated the use of St. John's wort, Valerian, and omega-3 fatty acids.⁸⁵ However, the effectiveness of most CAM treatments has not been established reliably enough for medical providers to employ them in place of psychotropic medications.⁸⁶

11. Whether the benefit is a medical or broader social need and whether it is consistent with the role of health insurance and the concept of managed care.

Coverage for psychotropic drugs fulfills a mental health need since the appropriate use of psychotropic drugs can reduce or avert medical complications such as increased use of high rates of emergency room care, high prevalence of pulmonary disease (persons with serious mental illness smoke 44 percent of all cigarettes in the United States), increased risk of suicide, and early mortality (a loss of 13 to 32 years).⁸⁷ Provisions of the mandated services may positively impact broader social needs as well, since untreated mental disorders can lead to personal distress, prolonged family burden, reduced educational attainment, greater need for social services and costs associated with other consequences such as incarceration or homelessness.⁸⁸

Required insurance coverage for psychotropic drugs ensures that at least persons covered by fully insured and individual insurance plans have access to the service. The statute also is consistent with the concept of managed care as it does not prohibit insurers/MCOs from using utilization review or other managed care tools at their disposal.

12. The potential social implications of the coverage with respect to the direct or specific creation of a comparable mandated benefit for similar diseases, illnesses, or conditions.

This mandated insurance benefit is different from the other mandates since it is a pharmaceutical benefit rather than a medical one. It is therefore difficult to anticipate any comparable mandated benefit for similar diseases, illnesses or conditions. However, it is conceivable that some beneficiaries and providers may demand insurance coverage for complementary and alternative medicine (CAM) such as acupuncture or herbal remedies (e.g., St. John's wort).

13. The impact of the benefit on the availability of other benefits currently offered.

Insurers and MCOs may cut costs by eliminating or restricting access to, or placing limits on other benefits currently offered. However, the availability of any benefits to be restricted may be limited. Existing benefits may be administratively costly to restrict and insurers may be contractually obligated to provide them. Additionally, many of the benefits that could be targets for elimination are included in plans for competitive advantage.

14. The impact of the benefit as it relates to employers shifting to self-insured plans and the extent to which the benefit is currently being offered by employers with self-insured plans.

Five of the six carriers provided data on their self-funded plans for this mandate, representing 47 percent of the self-funded population in Connecticut. For these five carriers, 71 percent of members in their self-funded plans have benefits at least equal to this mandate. Because coverage for psychotropic drugs are

⁸⁵ National Center for Complementary and Alternative Medicine. Mental Health. Available at <http://nccam.nih.gov/health/mentalhealth.htm>. Accessed November 17, 2010.

⁸⁶ National Center for Complementary and Alternative Medicine. 2010. Research results by date: 2010. Available at: <http://nccam.nih.gov/research/results/sportlight/>. Accessed on November 19, 2010.

⁸⁷ Insel TR. 2008. Assessing the economic costs of serious mental illness. *American Journal of Psychiatry* 165: 663-665.

⁸⁸ Kessler RC, Heeringa S, Lakoma MD, et al. 2008. Individual and societal effects of mental disorders on earnings in the United States: Results from the National Comorbidity Survey Replication. *American Journal of Psychiatry* 165(6): 703-711.

typically included in self-funded plans not subject to state health insurance mandates, it is expected that the required benefit has little to no effect of employer decisions to shift to self-funded plans.

There are several reasons for health insurance premium increases, including medical cost inflation, an aging population, and required benefits or “mandates.” Employers considering a shift to self-funded plans are likely to weigh these and other factors. Employers also may shift to plans with higher coinsurance amounts to keep premiums at a more affordable level (“benefit buy down”). Benefit buy down can result in employees not taking coverage and thus being uninsured or not accessing care when it is needed because of high deductibles.

15. The impact of making the benefit applicable to the state employee health insurance or health benefits plan.

The psychotropic drug mandate is a current benefit that has been included in the state employee health insurance and health benefits plans at least in part since 2001. Thus the social impact of the benefit for the approximately 134,344 covered lives in state employee plans and 30,000 state retirees not enrolled in Medicare is expected to be the same or similar to the social impact for persons covered in non-state employee health insurance plans as discussed throughout Section IV of this report.⁸⁹

State employee claims are included in the 2007 and 2008 claims data provided by insurers/MCOs for their fully insured group insurance enrollees. Because the state shifted to self-funded status on July 1, 2010 (during the time this report was being written), utilization under self-funded status is unknown. All self-funded plans, including those that provide coverage for state employees, are not regulated by the state insurance department and are exempt from state health insurance required benefit statutes.

In terms of financial impact, if the state employee health insurance/benefit plans continue to provide coverage for the required benefit, the IC actuarial analysis estimates the medical cost to the state employee health insurance plan will total \$103,311,535 in 2010.⁹⁰

16. The extent to which credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community determines the service to be safe and effective.

Psychotropic drugs, when used appropriately are generally safe and effective for a variety of mental disorders. Safeguards such as treatment guidelines by governmental institutes and professional medical organizations are in place to reduce risks. For example, the FDA must review and approve psychotropic drugs before they are introduced into the U.S. market to ensure their safety and efficacy. The FDA works with drug sponsors during product development, and reviews the safety and efficacy data, proposed label, and advertising.⁹¹ In addition, a prescription from a medical provider licensed to prescribe medications is required in order to obtain a psychotropic drug.

However, the use of psychotropic drugs poses possible serious side effects, toxicity, and drug interactions.

⁸⁹ Personal communication. Scott Anderson, State of Connecticut Comptroller’s Office. September 14, 2010.

⁹⁰ The estimate is calculated by multiplying the estimated 2010 weighted average PMPM medical cost in fully insured plans in Connecticut by 12 to get an annual cost per insured life, and then multiplying that product by 163,334 covered lives, as reported by the State Comptroller’s office. The actual cost of this mandate to the State plans may be higher or lower, based on the actual benefit design of the State plans and the demographics of the covered lives (e.g., level of cost-sharing, average age of members, etc.). Retention costs are not included in this estimate because the State is now self-funded and the traditional elements of retention do not apply. State costs for administration of this mandated benefit would be in addition to the above amount. See Appendix II, Ingenix Consulting Actuarial and Economic Report, for further discussion.

⁹¹ Laughren TP. 2010. What’s next after 50 years of psychiatric drug development: An FDA perspective. *Journal of Clinical Psychiatry* 71(9): 1196-1204.

Furthermore, psychotropic drugs have a potential for misuse and dependency. A recent report by the National Institute on Drug Abuse identified certain psychotropic drugs among the most commonly abused prescription medications in the United States.⁹²

IV. Financial Impact

1. The extent to which the mandated health benefit may increase or decrease the cost of the service over the next five years.

The mandate is not expected to materially alter the availability or cost of psychotropic drugs over the next five years. Psychotropic drugs are a high-volume, high-cost service and the presence of the insurance mandate is not expected to have any additional effect on its cost. Additionally, inclusion of mandated services in nearly all self-funded plans further dilutes any effect the existence of a mandate may have on the cost of the service. The cost of the service is likely to increase (or decrease) at the same rate as any other medical service.

2. The extent to which the mandated health benefit may increase the appropriate or inappropriate use of the service over the next five years.

For those persons for whom psychotropic drugs are recommended and whose insurance plans would not otherwise cover the expenses, the mandated health benefit may increase appropriate use. For the uninsured, those covered by self-funded plans and those who use out-of-pocket funds or medications from other sources, the mandated benefit may not increase appropriate use. Inappropriate use is not expected to be occurring due to well-established guidelines that are closely followed by providers. For example, health insurers are required to cover costs for psychotropic drugs that are the most effective for the treatment of a health problem and have the least probability of harmful effects. Health insurers cannot limit access to these drugs, nor do they have the authority to require patients to take psychotropic drugs that are not the most effective with the least probability of side effects. This mandate ensures the authority of the physician to prescribe the drug that is most effective, regardless of how recent the treatment may have been developed. Additionally, the mandate does not prohibit differential co-pays among pharmaceutical treatments or utilization review.

3. The extent to which the mandated health benefit may serve as an alternative for more expensive or less expensive treatment, service or drug(s).

In addition to psychotropic drugs, there is a wide array of treatments to address mental illness including psychotherapy, electroconvulsive therapy (ECT), light therapy, and complementary and alternative medicine (CAM). The relative cost of each of these approaches is influenced by the intensity and duration of the treatment. Frequently the alternative to psychotropic drugs is no mental health care at all leading to complications and more extensive (i.e. expensive) treatment than the care forgone at the earlier treatment opportunity.

4. The methods that will be implemented to manage the utilization and costs of the mandated health benefit.

It is anticipated that insurers and MCOs utilize the same utilization management methods and cost controls that are used for other covered benefits. The legislation does not prohibit insurers and MCOs from employing utilization management, prior authorization, or other utilization tools at their discretion

⁹² National Institute of Drug Abuse. Prescription drugs: abuse and addiction. NIH publication no. 01-4881. Bethesda: NIDA, NIH, DHHS, 2001.

5. *The extent to which insurance coverage for the service may be reasonably expected to increase or decrease the insurance premiums and administrative expenses for policyholders.*

Insurance premiums include medical cost and retention costs. Medical cost accounts for medical services. Retention costs include administrative cost and profit (for for-profit insurers/MCOs) or contribution to surplus (for not-for-profit insurers/MCOs). (For further discussion, please see Appendix II, Ingenix Consulting Actuarial and Economic Report, pages 13-14).

Group plans: When the medical cost of the mandate is spread to all insureds in group plans, medical costs are estimated to be \$7.50 PMPM and retention costs are estimated to be \$1.50 PMPM in 2010. Thus the total effect on insurance premiums is estimated at \$9.00 PMPM in 2010. Insurance coverage for the mandated benefit may be reasonably expected to increase group health insurance premiums accordingly, that is, \$108.00 per year per insured.

Individual policies: When the medical cost of the mandate is spread to all insureds in individual policies, medical costs are estimated to be \$3.98 PMPM and retention costs are estimated to be \$1.19 PMPM in 2010. Thus the total effect on insurance premiums is estimated at \$5.16 PMPM in 2010. Insurance coverage for the mandated benefit may be reasonably expected to increase individual health insurance premiums accordingly, that is, \$61.92 per year per insured.

For further information, please see the Appendix II: Ingenix Consulting Actuarial and Economic Report.

6. *The extent to which the service is more or less expensive than an existing treatment, service or drug(s), that is determined to be equally safe and effective by credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community.*

There is a wide array of treatments available to address mental disorders and in most cases there are several effective options. Treatments typically fall into two categories: psychotherapy and psychotropic drugs. Psychotherapy is a learning process accomplished primarily by the exchange of verbal and nonverbal communication between patient and therapist, hence it is sometimes referred to as “talk therapy.” Patients present their problems and work with the therapist to develop a more effective means of understanding and handling their problems. Psychotropic drugs have been used increasingly over the past several decades to treat mental disorders. Through advances in neuroscience and molecular biology, the newer drugs tend to have fewer side effects and more effective agents that target specific biochemical alterations associated with mental disorders. Research suggests that using medication and psychotherapy, referred to as multimodal therapy, is more effective than the sole use of either treatment method.⁹³

Additional therapeutic approaches include electroconvulsive therapy (ECT) which has been shown to be effective for severe depression, schizophrenia, catatonia and mania.⁹⁴ Light therapy is also used to treat depression typically a specific form known as seasonal affective disorder (SAD).⁹⁵ Although a significant proportion of people with mental disorders use complementary and alternative medicine (CAM), the effectiveness of most CAM treatments has not been established reliably enough for medical providers to employ them in place of psychotropic medications.⁹⁶

⁹³ Guo X, Zhai J, Liu Z, *et al.* 2010. Effect of antipsychotic medication alone versus combined with psychosocial intervention on outcomes of early state schizophrenia. *Archives of General Psychiatry* 67(9): 895-904.

⁹⁴ Greenhalgh J, Knight C, Hind D, *et al.* 2005. Clinical and cost-effectiveness of electroconvulsive therapy for depressive illness, schizophrenia, catatonia and mania: systematic reviews and economic modeling studies. *Health Technology Assessment* 9(9): 1-156.

⁹⁵ Privitera MR, Moynihan J, Tang W, *et al.* 2010. Light therapy for seasonal affective disorder in a clinical office setting. *Journal of Psychiatric Practice* 16(6): 387-93.

⁹⁶ National Center for Complementary and Alternative Medicine. 2010. Research results by date: 2010. Available at: <http://nccam.nih.gov/research/results/sportlight/>. Accessed on November 19, 2010.

The relative cost of psychotropic drugs when compared to other treatments is difficult to calculate since various therapies work differently based on an individual's characteristics, needs and circumstances. Some people utilize a therapy to help them cope with a particularly difficult time in their lives and discontinue after a relatively brief period. Others with disorders like schizophrenia, bipolar disorder, or major depression disorder may need some form of treatment for a lifetime. The treatments vary by type and degree and need to be tailored to the individual.

7. *The impact of insurance coverage for the service on the total cost of health care, including potential benefits or savings to insurers and employers resulting from prevention or early detection of disease or illness related to such coverage.*

The total cost of health care is understood to be the funds flowing into the medical system, which are the medical costs of insurance premiums and cost sharing. Actuarial analysis of claims data received from insurers/MCOs in Connecticut shows an expected cost in 2010 of \$154,945,785 for psychotropic drugs for Connecticut residents covered by fully insured group and individual health insurance plans.

Mental illness has an enormous economic impact for insurers and employers. It has been cited as the second leading cause of disease burden in the United States.⁹⁷ Depression, on its own, has an estimated total cost of \$83 billion with 31 percent of costs related to treatment and 62 percent of costs attributed to lost productivity in the work place.⁹⁸ The economic toll of treating mental disorders has profound direct costs such as medications, clinic visits, and hospitalization.⁹⁹ Medical complications associated with serious mental illness include increased use of high rates of emergency room care, high prevalence of pulmonary disease (persons with serious mental illness smoke 44 percent of all cigarettes in the United States), increased risk of suicide, and early mortality (a loss of 13 to 32 years).¹⁰⁰ The economic toll of untreated or under-treated mental disorders has profound costs to employers including decreased workplace productivity due to absenteeism and presenteeism (low productivity while at work), reduced labor supply, job termination, and training of new employees.¹⁰¹

Early detection and effective treatment can avert medical costs such as general health services, worsened symptoms, increased hospitalization, and emergency room care.¹⁰² In addition, untreated mental illness can lead to social costs including reduced educational attainment, greater need for social services, personal distress, prolonged family burden, and costs associated with other consequences such as incarceration or homelessness.¹⁰³

8. *The impact of the mandated health care benefit on the cost of health care for small employers, as defined in § 38a-564 of the general statutes, and for employers other than small employers.*

No published literature was found regarding the effect of mandated coverage for psychotropic drugs on the cost of health care for small employers. Small employers may be more sensitive to premium increases than other employers and the estimated cost of the mandate (\$9.00 PMPM) suggests potential differences in

⁹⁷ Murray CJ, Lopez AD. 2003. *The Global Burden of Disease*. Cambridge: Harvard University Press.

⁹⁸ Greenberg PE, Kessler RA, Birnbaum HG, *et al.* 2003. The economic burden of depression in the United States: How did it change between 1990 and 2000? *Journal of Clinical Psychiatry* 64: 1465-1475.

⁹⁹ Insel TR. 2008. Assessing the economic costs of serious mental illness. *American Journal of Psychiatry* 165: 663-665.

¹⁰⁰ *Ibid.*

¹⁰¹ Keck PE, Kessler RC, Ross R. 2008. Clinical and economic effects of unrecognized or inadequately treated bipolar disorder. *Journal of Psychiatric Practices* 14(2): 31-38.

¹⁰² Hirschfeld RM, Lewis L, Vornik LA. 2003. Perceptions and impact of bipolar disorder: How far have we really come? Results of the national depressive and manic-depressive association 2000 survey of individuals with bipolar disorder. *Journal of Clinical Psychiatry* 64: 161-74.

¹⁰³ Kessler RC, Heeringa S, Lakoma MD, *et al.* 2008. Individual and societal effects of mental disorders on earnings in the United States: Results from the National Comorbidity Survey Replication. *American Journal of Psychiatry* 165(6): 703-711.

effects may occur among different types of employers.

For further information regarding the differential effect of the mandates on small group versus large group insurance, please see Appendix II: Ingenix Consulting Actuarial and Economic Report, pages 29-30.

9. The impact of the mandated health benefit on cost-shifting between private and public payers of health care coverage and on the overall cost of the health care delivery system in the state.

Cost-shifting between private and public payers of health care coverage generally occurs when formerly privately insured persons, after enrolling in a public program or becoming un- or underinsured, require and are provided health care services. Cost-shifting also occurs when a formerly publicly-funded service becomes the responsibility of private payers, which can result following enactment of a health insurance mandate.

Most persons formerly covered under private payers lose such coverage due to a change in employer, change in employment status, or when private payers discontinue offering health care coverage as an employee benefit or require employee contributions to premiums that are not affordable. Because this required benefit became effective on October 1, 2001, it is unlikely that the mandate, taken individually, has any impact on cost-shifting between private and public payers of health care coverage at present.

The overall cost of the health delivery system in the state is understood to include total insurance premiums (medical costs and retention) and cost sharing. Actuarial analysis of claims data received from insurers/MCOs in Connecticut shows an expected cost in 2010 of \$179,380,357 for psychotropic drugs for Connecticut residents covered by fully insured group and individual health insurance plans.

For further information, please see Appendix II, Ingenix Consulting Actuarial and Economic Report.

Volume III

Chapter 2

Diagnosis and Treatment of Mental or Nervous Conditions

Review and Evaluation of Connecticut Statute

Chapter 700, §§ 38a-514 and §§ 38a-488a

Mandatory Coverage for the Diagnosis and Treatment of Mental or Nervous
Conditions

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Chapter 1. Table of Contents

- I. Overview.....29
- II. Background.....32
- III. Methods.....37
- IV. Social Impact.....38
 - Table III.2.1. Mental Illness Treatment.....42
- V. Financial Impact.....49

I. Overview

In Public Act 09-179, An Act Concerning Reviews of Health Insurance Benefits Mandated in this State, the Connecticut General Assembly directed the Connecticut Insurance Department (CID) to review statutorily mandated health benefits existing on or effective on July 1, 2009. This report is part of that review and was conducted following the requirements stipulated under Public Act 09-179. This review was a collaborative effort of Connecticut Insurance Department and the University of Connecticut Center for Public Health and Health Policy (CPHHP).

Connecticut General Statutes, Chapter 700, §§ 38a-514 and 38a-488a mandate that group and individual health insurance policies issued, renewed or continued in this state provide coverage for the diagnosis and treatment of mental or nervous conditions. The legislation defines mental or nervous conditions as mental disorders according to the most recent edition of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders. The legislation does not include (1) mental retardation, (2) learning disorders, (3) motor skills disorders, (4) communication disorders, (5) caffeine-related disorders, (6) relational problems, and (7) additional conditions that may be a focus of clinical attention.

Specifically, Connecticut General Statutes, Chapter 700, §§ 38a-514 and 38a-488a state that each group or individual health insurance policy...

...shall provide benefits for the diagnosis and treatment of mental or nervous conditions.

For the purposes of this section, "mental or nervous conditions" means mental disorders, as defined in the most recent edition of the American Psychiatric Association's "Diagnostic and Statistical Manual of Mental Disorders." "Mental or nervous conditions" does not include (1) mental retardation, (2) learning disorders, (3) motor skills disorders, (4) communication disorders, (5) caffeine-related disorders, (6) relational problems, and (7) additional conditions that may be a focus of clinical attention, that are not otherwise defined as mental disorders in the most recent edition of the American Psychiatric Association's "Diagnostic and Statistical Manual of Mental Disorders.

(b) No such group policy shall establish any terms, conditions or benefits that place a greater financial burden on an insured for access to diagnosis or treatment of mental or nervous conditions than for diagnosis or treatment of medical, surgical or other physical health conditions.

(c) In the case of benefits payable for the services of a licensed physician, such benefits shall be payable for the same services when such services are lawfully rendered by a psychologist licensed under the provisions of chapter 383 or by such a licensed psychologist in a licensed hospital or clinic.

(d) In the case of benefits payable for the services of a licensed physician or psychologist, such benefits shall be payable for the same services when such services are rendered by:

(1) A clinical social worker who is licensed under the provisions of chapter 383b and who has passed the clinical examination of the American Association of State Social Work Boards and has completed at least two thousand hours of post-master's social work experience in a nonprofit agency qualifying as a tax-exempt organization under Section 501(c) of the Internal Revenue Code of 1986 or any subsequent corresponding internal revenue code of the United States, as from time to time

amended, in a municipal, state or federal agency or in an institution licensed by the Department of Public Health under § 19a-490;

- (2) A social worker who was certified as an independent social worker under the provisions of chapter 383b prior to October 1, 1990;
 - (3) A licensed marital and family therapist who has completed at least two thousand hours of post-master's marriage and family therapy work experience in a nonprofit agency qualifying as a tax-exempt organization under Section 501(c) of the Internal Revenue Code of 1986 or any subsequent corresponding internal revenue code of the United States, as from time to time amended, in a municipal, state or federal agency or in an institution licensed by the Department of Public Health under § 19a-490;
 - (4) A marital and family therapist who was certified under the provisions of chapter 383a prior to October 1, 1992;
 - (5) A licensed alcohol and drug counselor, as defined in § 20-74s, or a certified alcohol and drug counselor, as defined in § 20-74s; or
 - (6) A licensed professional counselor.
- (e) For purposes of this section, the term "covered expenses" means the usual, customary and reasonable charges for treatment deemed necessary under generally accepted medical standards, except that in the case of a managed care plan, as defined in § 38a-478, "covered expenses" means the payments agreed upon in the contract between a managed care organization, as defined in § 38a-478, and a provider, as defined in § 38a-478.
- (f) (1) In the case of benefits payable for the services of a licensed physician, such benefits shall be payable for (A) services rendered in a child guidance clinic or residential treatment facility by a person with a master's degree in social work or by a person with a master's degree in marriage and family therapy under the supervision of a psychiatrist, physician, licensed marital and family therapist or licensed clinical social worker who is eligible for reimbursement under subdivisions (1) to (4), inclusive, of subsection (d) of this section; (B) services rendered in a residential treatment facility by a licensed or certified alcohol and drug counselor who is eligible for reimbursement under subdivision (5) of subsection (d) of this section; or (C) services rendered in a residential treatment facility by a licensed professional counselor who is eligible for reimbursement under subdivision (6) of subsection (d) of this section.
- (2) In the case of benefits payable for the services of a licensed psychologist under subsection (d) of this section, such benefits shall be payable for (A) services rendered in a child guidance clinic or residential treatment facility by a person with a master's degree in social work or by a person with a master's degree in marriage and family therapy under the supervision of such licensed psychologist, licensed marital and family therapist or licensed clinical social worker who is eligible for reimbursement under subdivisions (1) to (4), inclusive, of subsection (d) of this section; (B) services rendered in a residential treatment facility by a licensed or certified alcohol and drug counselor who is eligible for reimbursement under subdivision (5) of subsection (d) of this section; or (C) services rendered in a residential treatment facility by a licensed

professional counselor who is eligible for reimbursement under subdivision (6) of subsection (d) of this section.

- (g) In the case of benefits payable for the service of a licensed physician practicing as a psychiatrist or a licensed psychologist, under subsection (d) of this section, such benefits shall be payable for outpatient services rendered (1) in a nonprofit community mental health center, as defined by the Department of Mental Health and Addiction Services, in a nonprofit licensed adult psychiatric clinic operated by an accredited hospital or in a residential treatment facility; (2) under the supervision of a licensed physician practicing as a psychiatrist, a licensed psychologist, a licensed marital and family therapist, a licensed clinical social worker, a licensed or certified alcohol and drug counselor, or a licensed professional counselor who is eligible for reimbursement under subdivisions (1) to (6), inclusive, of subsection (d) of this section; and (3) within the scope of the license issued to the center or clinic by the Department of Public Health or to the residential treatment facility by the Department of Children and Families.
- (h) Except in the case of emergency services or in the case of services for which an individual has been referred by a physician affiliated with a health care center, nothing in this section shall be construed to require a health care center to provide benefits under this section through facilities that are not affiliated with the health care center.
- (i) In the case of any person admitted to a state institution or facility administered by the Department of Mental Health and Addiction Services, Department of Public Health, Department of Children and Families or the Department of Developmental Services, the state shall have a lien upon the proceeds of any coverage available to such person or a legally liable relative of such person under the terms of this section, to the extent of the per capita cost of such person's care. Except in the case of emergency services the provisions of this subsection shall not apply to coverage provided under a managed care plan, as defined in § 38a-478.
- (j) A group health insurance policy may exclude the benefits required by this section if such benefits are included in a separate policy issued to the same group by an insurance company, health care center, hospital service corporation, medical service corporation or fraternal benefit society. Such separate policy, which shall include the benefits required by this section and the benefits required by § 38a-533, shall not be required to include any other benefits mandated by this title.
- (k) In the case of benefits based upon confinement in a residential treatment facility, such benefits shall be payable in situations in which the insured has a serious mental or nervous condition that substantially impairs the insured's thoughts, perception of reality, emotional process or judgment or grossly impairs the behavior of the insured, and, upon an assessment of the insured by a physician, psychiatrist, psychologist or clinical social worker, cannot appropriately, safely or effectively be treated in an acute care, partial hospitalization, intensive outpatient or outpatient setting.
- (l) The services rendered for which benefits are to be paid for confinement in a residential treatment facility must be based on an individual treatment plan. For purposes of this section, the term "individual treatment plan" means a treatment plan prescribed by a physician with specific attainable goals and objectives appropriate to both the patient and

the treatment modality of the program.

In April 2010, CPHHP and Ingenix Consulting (IC) requested and received 2007 and 2008 claims data related to the mandated benefit from six insurers and managed care organizations (MCOs) domiciled in Connecticut that cover approximately 90 percent of the population in fully insured group and individual health insurance plans in Connecticut (1.25 million persons). Based on that claims data, a review of the legislative history, reviews of pertinent literature and the Ingenix Consulting report, this review found the following:

Current coverage

This mandate has been in effect since January 1, 2000. (P.A. 99-284, S. 28, 60).

Premium impact

Group plans: On a 2010 basis, medical cost is estimated to be \$8.50 PMPM. Estimated total cost to insurers (insurance premium, administrative fees, and profit) of the mandated services on a 2010 basis in group plans \$10.20 PMPM, which is approximately 2.8 percent of estimated total premium costs in group plans. Estimated cost sharing on a 2010 basis in group plans is \$2.05 PMPM.

Individual policies: Four of the six insurers/MCOs provided claims data for individual health insurance policies. On a 2010 basis, medical cost is estimated to be \$5.60 PMPM. Estimated total cost (insurance premium, administrative fees, and profit) of the mandated services in 2010 in individual policies is \$7.27 PMPM, which is approximately 2.7 percent of estimated total premiums in individual policies. Estimated cost sharing in 2010 in individual policies is \$1.93 PMPM. Individual policies data is less credible than group data primarily due to small sample size.

Self-funded plans

Five health insurers/MCOs domiciled in Connecticut provided information about their self-funded plans, which represents an estimated 47 percent of the total population in self-funded plans in Connecticut. These five insurers/MCOs report that 90 percent of enrollees in their self-funded plans have coverage for the mandated services.

This report is intended to be read in conjunction with the General Introduction to this volume and the Ingenix Consulting Actuarial and Economic Report which is included as Appendix II.

II. Background

As stated in the mandated health benefit noted above, “mental or nervous conditions” refer to mental disorders, as defined in the most recent edition of the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders (DSM IV-TR). The DSM IV-TR defines a mental disorder as “a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (e.g., a painful symptom) or disability (i.e. impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom. In addition, this syndrome or pattern must not be merely an expectable and culturally sanctioned response to a particular event, for example, the death of a loved one.”¹⁰⁴ According to the mandate, mental or nervous conditions do not include (1) mental retardation, (2) learning disorders, (3) motor skills disorders, (4) communication disorders, (5) caffeine-related disorders, (6) relational problems, and (7) additional conditions that may be a focus of clinical attention.

¹⁰⁴ American Psychiatric Association. 2000. Diagnostic and statistical manual of mental disorders (4th ed., text rev.). Washington, DC: Author. Page XXXI.

An estimated 26.2 percent of Americans ages 18 and older have a diagnosable mental disorder in a 12 month period.¹⁰⁵ This translates to an estimated 57.7 million Americans who have a mental disorder in a given year. Twelve month prevalence estimates by class of disorder are anxiety disorders (18.1 percent), followed by mood disorders (9.5 percent), impulse control disorders (8.9 percent), and substance disorders (3.8 percent). Lifetime prevalence rates are higher: any disorder (46.4 percent), anxiety (28.8 percent), mood disorders (20.8 percent), impulse control disorders (24.8 percent), and substance disorders (14.6 percent). The median age of onset varies by disorder. For example, onset for anxiety and impulse-control disorders is 11 years, 20 years for substance use, and 30 years for mood disorders. Half of the lifetime cases start by age 14 years, and three-fourths start by age 24 years.¹⁰⁶ About 12 percent of American adults have two or more disorders. The main burden of mental illness is concentrated among the six percent of individuals whose diagnoses can be classified as serious. Severity of a mental disorder is strongly related to comorbidity.¹⁰⁷

Of Connecticut's approximately 3.5 million residents, close to 109,000 adults live with serious mental illnesses and about 39,000 children live with serious mental health conditions.¹⁰⁸

There is a wide array of treatments available to address mental disorders and in most cases there are several effective options. Treatments typically fall into two categories: psychotherapy and pharmacotherapy (medications). Psychotherapy is a learning process accomplished primarily by the exchange of verbal and nonverbal communication between patient and therapist, hence it is sometimes referred to as "talk therapy." Patients present their problems and work with the therapist to develop a more effective means of understanding and handling their problems. Psychotherapy can be used to treat individuals, couples, families or groups. Patients can range in age and severity of disorder. There are three major orientations of therapy – psychodynamic, behavioral, and humanistic.

The other major category of treatment is pharmacotherapy. The past decades have seen a surge of new drugs introduced to treat mental disorders. Through advances in neuroscience and molecular biology, the newer drugs generally tend to have fewer side effects and more effective agents that target specific biochemical alterations associated with mental disorders. Medications that act in similar ways are grouped together in broad classes such as: antipsychotics, antidepressants, stimulants, antimanic (mood stabilizers), antianxiety, and cholinesterase inhibitors. The primary function of many psychotropic medications is to alter neurotransmitter systems to help regulate mood, thinking, and behaviors¹⁰⁹

Additional therapeutic approaches include electroconvulsive therapy (ECT) which has been shown to be effective for severe depression, schizophrenia, catatonia and mania.¹¹⁰ Light therapy is also used to treat depression typically a specific form known as seasonal affective disorder (SAD).¹¹¹ A significant proportion of people with mental disorders use complementary and alternative medicine (CAM) including acupuncture, yoga, biofeedback, guided imagery, self-help groups, diet and nutrition, pastoral counseling, animal therapies, and expressive therapies (art, dance, and music therapy). The National Center for Complementary and Alternative Medicine (NCCAM) at the National Institutes of Health has evaluated the use of St. John's

¹⁰⁵ Kessler RC, Chiu WT, Demler O, *et al.* 2005. Prevalence, severity, and comorbidity of 12-month DSMIV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry* 62: 617-709.

¹⁰⁶ *Ibid.*

¹⁰⁷ *Ibid.*

¹⁰⁸ Holzer CE III, Nguyen HT. 2009. (see psy.utmb.edu for more information) and data submitted to NAMI by state mental health agencies for Grading the States: A Report Card on America's Health Care System for Adults with Serious Mental Illnesses.

¹⁰⁹ Berns GS, Nemeroff CB. 2003. The neurobiology of bipolar disorder. *American Journal of Medical Genetics, Part C, Seminars in Medical Genetics* 123C(1): 76-84.

¹¹⁰ Greenhalgh J, Knight C, Hind D, *et al.* 2005. Clinical and cost-effectiveness of electroconvulsive therapy for depressive illness, schizophrenia, catatonia and mania: systematic reviews and economic modeling studies. *Health Technology Assessment* 9(9): 1-156.

¹¹¹ Privitera MR, Moynihan J, Tang W, *et al.* 2010. Light therapy for seasonal affective disorder in a clinical office setting. *Journal of Psychiatric Practice* 16(6): 387-93.

wort, Valerian, and omega-3 fatty acids.¹¹² However, the effectiveness of most CAM treatments has not been established reliably enough for medical providers to employ them in place of psychotropic medications.¹¹³

Nearly one-quarter (22.8 percent) of individuals who seek help for a mental disorder are treated by a general medical provider, 16.0 percent are treated by a non-psychiatrist mental health specialist, 12.3 percent are treated by a psychiatrist, 8.1 percent are treated by a human services provider, and 6.8 percent are treated by a complementary and alternative medical provider. Individuals with a diagnosis of dysthymia are most likely to seek treatment and those with intermittent explosive disorder are least likely. The median number of visits in a 12 month period is 2.9 compared with the mean of 14.7. The higher mean than median number implies that comparatively few patients receive a disproportionately high share of all visits.¹¹⁴

In accordance with Connecticut's mandated insurance benefit, mental health services are payable when rendered by a licensed physician, licensed psychologist, licensed clinical social worker, certified social worker, licensed marital and family therapist, certified marital and family therapist, licensed alcohol and drug counselor, or licensed professional counselor. In Connecticut physicians, including psychiatrists, and psychiatric advanced practice registered nurses (APRNs) may prescribe psychotropic medications.

There are many therapeutic options to treat mental disorders. Therapies work differently based on the individual's characteristics, needs and circumstances. Some people utilize a therapy to help them cope with a particularly difficult time in their lives and discontinue after a relatively brief period. Others with disorders like schizophrenia, bipolar disorder, or major depression disorder may need some form of treatment for a lifetime. The treatments vary by type and degree and need to be tailored to the individual.

A variety of psychotropic drugs are used to treat the symptoms of mental disorders. Although medications do not cure the disorder, they can reduce symptoms allowing people to function. In most cases, medication adherence is essential and patients must take the medication as prescribed even if the patient does not feel it is necessary. All medications have some side effects. Actual side effects vary by medication, dose, drug interaction and individual characteristics. For example, many atypical antipsychotic medications can cause significant weight gain and changes in metabolism increasing the risk of diabetes, high cholesterol, high lipids, and cardiovascular and cerebrovascular adverse events.^{115, 116, 117} Antipsychotics have been associated with disruption in physical movement resulting in rigidity, muscle spasms, tremors, and restlessness.¹¹⁸ Severe side effects require a FDA "Black Box" warning label which is the most serious type of warning. All antidepressants have this warning due to the increased risk of suicidal behavior in children, adolescents, and young adults up to age 24. The warning also states that patients of all ages taking antidepressants should be watched closely, especially in the first few weeks of treatment.¹¹⁹ In addition, the FDA has placed a Black Box warning label on stimulant medication used to treat Attention Deficit Hyperactivity Disorder. The

¹¹² National Center for Complementary and Alternative Medicine. Mental Health. Available at <http://nccam.nih.gov/health/mentalhealth.htm>. Accessed November 17, 2010.

¹¹³ National Center for Complementary and Alternative Medicine. 2010. Research results by date: 2010. Available at: <http://nccam.nih.gov/research/results/sportlight/>. Accessed on November 19, 2010.

¹¹⁴ Wang PS, Lane M, Olfson M, *et al.* 2005. Twelve-month use of mental health services in the United States: Results from the National Comorbidity Survey Replication. *Archives of General Psychiatry* 62: 629-640.

¹¹⁵ Lieberman JA, Stroup TS, McEvoy JP, *et al.* 2005. Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE). Effectiveness of antipsychotic drugs in patients with chronic schizophrenia. *New England Journal of Medicine* 353(12): 1209-1223.

¹¹⁶ Newcomer, J.W. 2007. Antipsychotic medications: metabolic and cardiovascular risk. *Journal of Clinical Psychiatry*, 68,(4), 8-13.

¹¹⁷ Mehta, S., Johnson, M.L., Chen, H., and Aparasu, R.R. 2010. Risk of cerebrovascular adverse events in older adults using antipsychotic agents: a propensity-matched retrospective cohort study. *Journal of Clinical Psychiatry*, 71(6), 689-98.

¹¹⁸ National Institute of Mental Health. U.S. Department of Health and Human Services. National Institutes of Health. Mental Health Medications. NIH Publication No. 08-3929. Revised 2008. Mental Health Medications.

¹¹⁹ Food and Drug Administration. Questions and Answers on Antidepressants Use. Available at: <http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm096321.htm#6>. Accessed December 23, 2010.

Black Box warning cautions patients and physicians of the increased risk of stroke, heart attack or sudden cardiac related death especially in patients with pre-existing cardiovascular issues.^{120, 121}

Many individuals seek treatment for mental disorders through psychotherapy. In a meta-analysis of controlled trials of manual-guided psychodynamic psychotherapy the therapy was found to be superior to control condition (treatment-as-usual or wait list) and as effective as established treatments such as cognitive-behavioral therapy.¹²² Not surprisingly, long-term psychodynamic psychotherapy (LTPP) was found to be more effective than shorter forms of psychotherapy especially for patients with complex mental disorders.¹²³ Another often used therapy, Dialectical Behavior Therapy (DBT), is a cognitive-behavioral treatment approach that promotes two opposing goals: change and acceptance. DBT was developed for the treatment of patients with suicidal behavior, and has been adapted to treat patients with Borderline Personality Disorder. Across studies, DBT seems to reduce severe dysfunctional behaviors that are targeted for intervention (e.g., parasuicide, substance abuse, and binge eating), enhance treatment retention, and reduce psychiatric hospitalization.¹²⁴

Research suggests that using medication and psychotherapy, referred to as multimodal therapy, is more effective than sole use of either treatment method. For example, in a study of patients with early stage schizophrenia, those receiving medication and psychosocial intervention had lower rates of treatment discontinuation, lower risk of relapse, and improved insight, quality of life and social functioning than patients receiving medication only.¹²⁵

When examining the effectiveness of treatments for mental disorders a few caveats should be noted. Treatment decisions for mental disorders based on valid evidence provide quality care and positive long term outcomes. However, studies examining safety and efficacy typically are conducted under highly structured clinical conditions and enroll only participants who meet specific inclusion criteria (e.g., age ranges, no co-occurring medical conditions).¹²⁶ These safeguards are necessary and federally-regulated protections for vulnerable populations (e.g., children, elderly, pregnant women, homeless individuals, etc.) but may limit research to practice generalizability.¹²⁷

The prevailing patterns of mental health care indicate that certain segments of society are much more likely to have untreated or under-treated needs. African American, the elderly and Medicaid recipients are particularly vulnerable to under-treatment of mental disorders. African Americans are more likely to be over diagnosed for schizophrenia and under-diagnosed for depression when compared to Caucasians.¹²⁸ To compound this problem, physicians are less likely to prescribe newer generation antidepressant or

¹²⁰ *Ibid.*

¹²¹ Elia, J., and Vetter, V.L. 2010. Cardiovascular effects of medications for the treatment of attention-deficit hyperactivity disorder: what is known and how should it influence prescribing in children? *Paediatric Drugs*, 12(3): 165-75.

¹²² Leichsenring F, Leibing E. 2007. Psychodynamic psychotherapy: A systematic review of techniques, indications and empirical evidence. *The British Psychological Society* 80: 217-228.

¹²³ Leichsenring F, Rabung S. 2008. Effectiveness of long-term psychodynamic psychotherapy: A meta-analysis. *Journal of the American Medical Association* 300(13): 1551-1565.

¹²⁴ Koerner K, Linehan MM. 2000. Research on dialectical behavioral therapy for patients with borderline personality disorder. *Psychiatric Clinics of North America* 23(1): 152-167.

¹²⁵ Guo X, Zhai J, Liu Z, et al. 2010. Effect of antipsychotic medication alone vs combined with psychosocial intervention on outcomes of early state schizophrenia. *Archives of General Psychiatry* 67(9): 895-904.

¹²⁶ Wang PS, Ulbricht CM, Schoenbaum M. 2009. Improving mental health treatments through comparative effectiveness research. *Health Affairs* 28(3): 783-791.

¹²⁷ Office for Human Research Protections (OHRP). <http://www.hhs.gov/ohrp/index.html>. Accessed January 4, 2011.

¹²⁸ United States Public Health Service Office of the Surgeon General. 2001. Mental Health: Culture, Race, and Ethnicity: A Supplement to Mental Health: A Report of the Surgeon General. Rockville, MD: Department of Health and Human Services, U.S. Public Health Service.

antipsychotic medications to African American consumers who need them.¹²⁹ Elderly persons are much less likely to receive a diagnosis of depression, and as many as half to three-quarters receive no antidepressant treatment for their depression; of those who do receive antidepressants, less than one-third receive adequate treatment.^{130, 131} Elderly patients also have lower rates of psychotherapy than non-elderly patients.¹³² Medicaid patients are less likely to receive selective serotonin reuptake inhibitors, or psychotherapy, and have lower rates of continuous therapy when compared to privately insured patients.^{133, 134}

Homeless persons have higher rates (25 to 33 percent) of serious mental illness such as schizophrenia, bipolar disorder, or major depression than the general population (6 percent).^{135,136,137} Complicating their debilitating mental illness is their limited access to mental health services.¹³⁸ As a result, homeless persons with serious mental illness tend to have higher levels of psychiatric hospital use, and higher mental health treatment costs, and more inpatient and emergency type services than their non-homeless counterparts.^{139,140}

Incarcerated adults are at a higher risk than the general population for a number of psychiatric illnesses.^{141,142} For example, studies using standardized psychometric assessments in jails and prisons suggest lifetime prevalence of psychiatric disorders ranging from 62 to 81 percent.^{143, 144} In addition, high levels of co-morbid psychiatric disorders (Axis I and II) common in incarcerated individuals contribute to the complex nature of proper diagnosis and treatment for this population.¹⁴⁵

Returning soldiers report high rates (78 – 86 percent) of mental health symptoms.¹⁴⁶ However, only 43 – 45 percent express an interest in receiving treatment, and only 21 – 27 percent received treatment from a mental health professional in the past year. The most common diagnoses among returning soldiers and

¹²⁹ Melfi C, Groghan T, Hanna M, *et al.* 2000. Racial variation in antidepressant treatment in a Medicaid population. *Journal of Clinical Psychiatry* 61: 16-21.

¹³⁰ Callahan CM. 2001. Quality improvement research on late-life depression in primary care. *Medical Care* 39: 772-784.

¹³¹ Harman JS, Schulberg HC, Mulsant BH, *et al.* Effect of patient and visit characteristics on diagnosis of depression in primary care. *Journal of Family Practice* 50: 1068.

¹³² Olfson M, Pincus H. 1994. Outpatient psychotherapy in the United States: I. Volume, costs, and user characteristics. *American Journal of Psychiatry* 151: 1281-1288.

¹³³ Melfi C, Groghan T, Hannah M. 1999. Access to treatment for depression in a Medicaid population. *Journal of Health Care for the Poor and Underserved* 10: 201-215.

¹³⁴ Melfi C, Groghan T, Hanna M, *et al.* 2000. Racial variation in antidepressant treatment in a Medicaid population. *Journal of Clinical Psychiatry* 61: 16-21.

¹³⁵ Sullivan G, Burnam A, Koegel P, Hollenberg J. 2000. Quality of life of homeless persons with mental illness: results from the course-of-homelessness study. *Psychiatry Services* 51: 1135-1141.

¹³⁶ Folsom D, Jest DV. 2002. Schizophrenia in homeless persons: systematic review of the literature. *Acta Psychiatrica Scandinavica* 104: 1-10.

¹³⁷ Kessler RC, Chiu WT, Demler O, *et al.* 2005. Prevalence, severity, and comorbidity of 12-month DSMIV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry* 62: 617-709.

¹³⁸ Gelberg L, Gallagher TC, Anderson RM, *et al.* 1997. Competing priorities as a barrier to medical care among homeless adults in Los Angeles. *American Journal of Public Health* 87: 217-220.

¹³⁹ Rosenheck R, Seibyl CL. 1998. Homelessness: health service use and related costs. *Medical Care* 36: 1121-1122.

¹⁴⁰ North CS, Smith EM. 1993. A systematic study of mental health services utilization by homeless men and women. *Social Psychiatry and Psychiatric Epidemiology* 28: 77-83.

¹⁴¹ Shelton D, Ehret MJ, Wakai S, *et al.* 2010. Psychotropic medication adherence in correctional facilities: a review of the literature. *Journal of Psychiatric and Mental Health Nursing* 17(7): 603-613.

¹⁴² Fazel S, Danesh J. 2002. Serious mental disorder in 23,000 prisoners: a systematic review of 62 surveys. *The Lancet* 359: 545-550.

¹⁴³ Teplin LA. 1994 Psychiatric and substance abuse disorders among male urban jail detainees. *American Journal of Public Health* 84: 290-293.

¹⁴⁴ Teplin LA, Abram KM, McClelland GM. 1996. Prevalence of psychiatric disorders among incarcerated women: I. Pretrial jail detainees. *Archives of General Psychiatry* 53: 5005-5012.

¹⁴⁵ Trestman RL, Ford JD, Zhang W, *et al.* 2007. Current and lifetime psychiatric illness among inmates not identified as acutely mentally ill at intake in Connecticut's jails. *Journal of the American Academy of Psychiatry and the Law* 35: 490-500.

¹⁴⁶ Seal KH, Metzler TJ, Gima KS, *et al.* 2010. Trends and risk factors for mental health diagnosis among Iraq and Afghanistan veterans using Department of Veterans Affairs health care, 2002-2008. *American Journal of Public Health* 99(9): 1651-8.

veterans are post-traumatic stress disorder, depression, anxiety, and increased alcohol intake. Prevalence rates for these disorders increase over time.¹⁴⁷ Veterans with diagnoses of mental disorders have an increased risk of suicide. The vast majority of veterans who died by suicide (70 percent) used violent means such as firearms, hanging, strangulation, jumping from height or into traffic, or auto accident.¹⁴⁸

Most people with mental disorders do not seek treatment and fewer with a serious mental disorder receive treatment.¹⁴⁹ The lag between onset of mental illness symptoms and treatment can be more than a decade despite the availability of effective treatments.¹⁵⁰ Barriers to treatment include: demographic factors, patient attitudes toward a service system that often neglects the special needs of racial and ethnic minorities, financial and organizational. African Americans, Hispanics and poor women are less likely to seek treatment. Not having time, fear of hospitalization, personal fortitude, resignation, stigma, cost of treatment even with people with health insurance, fragmentation of services and lack of availability of services often function as barriers to pursuing mental health treatment.¹⁵¹

The National Association of Insurance Commissioners lists all 50 states including Connecticut, and the District of Columbia, with statutes regarding mandatory coverage for treatment of mental illness.

The American Psychiatric Association has developed practice guidelines that provide evidence-based recommendations for the assessment and treatment of specific psychiatric disorders for children, adolescents, and adults.¹⁵²

III. Methods

Under the direction of CPHHP, medical librarians at the Lyman Maynard Stowe Library at the University of Connecticut Health Center (UCHC) gathered published articles and other information related to medical, social, economic, and financial aspects of the required benefit. Medical librarians conducted literature searches using PubMed, Google, and PsycLit. Search terms included: health policy, health services, research methods, statistics and numerical data, insurance, psychiatric legislation and jurisprudence, utilization, mental health services, mental, nervous or psychiatric conditions, illnesses or diagnosis, mental disorders/ complications, drug therapy, prevention, epidemiology, etiology, substance abuse, parity, treatment, cost, cost sharing, economics, health services accessibility, risk and safety, rehabilitation, and standards.

CPHHP staff conducted independent literature searches using the Cochrane Review, Pubmed, PsycInfo and Google Scholar using similar search terms used by the UCHC medical librarians. Where available, articles published in peer-reviewed journals are cited to support the analysis. Other sources of information may also be cited in the absence of peer-reviewed journal articles. Content from such sources may or may not be based on scientific evidence.

CPHHP staff consulted with clinical faculty from the University of Connecticut School of Medicine on

¹⁴⁷ Stecker T, Fortney J, Owen R, *et al.* 2010. Co-occurring medical, psychiatric, and alcohol-related disorders among veterans returning from Iraq and Afghanistan. *Psychosomatics* 51: 503-507.

¹⁴⁸ Ilgen MA, Conner KR, Valenstein M, *et al.* 2010. *Journal of Studies of Alcohol and Drugs* [Epub ahead of print]: 473-479.

¹⁴⁹ Kessler RC, Demler O, Frank RG, *et al.* 2005. Prevalence and Treatment of Mental Disorders, 1990 to 2003. *The New England Journal of Medicine* 352(24): 1515-2523.

¹⁵⁰ Wang P, Berglund P, *et al.* 2005. Failure and delay in initial treatment contact after first onset of mental disorders in the National Comorbidity Survey Replication (NCS-R). *General Psychiatry* 62: 603-613.

¹⁵¹ U.S. Department of Health and Human Services. 1999. Mental Health: A Report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health.

¹⁵² American Psychiatric Association. Practice Guidelines. Available at: http://www.psych.org/psych_pract/treatg/pg/prac_guide.cfm. Accessed December 23, 2010.

matters pertaining to medical standards of care, traditional, current and emerging practices, and evidence-based medicine related to the benefit.

Staff gathered additional information through telephone and e-mail inquiries to appropriate state, federal, municipal, and non-profit entities and from internet sources such as the State of Connecticut website, Centers for Medicare and Medicaid (CMS) website, other states' websites, professional organizations' websites, and non-profit and community-based organization websites.

With the assistance of the Connecticut Insurance Department (CID), CPHHP and Ingenix Consulting (IC) requested and received 2007 and 2008 claims data from insurance companies and MCOs domiciled in Connecticut. Six insurers/MCOs provided claims data for their fully insured group and individual plan participants. Five insurers/MCOs also provided information on the self-funded plans they administer.

CPHHP and the CID contracted with Ingenix Consulting (IC) to provide actuarial and economic analyses of the mandated benefit. Further details regarding the insurer/MCO claims data and actuarial methods used to estimate the cost of the benefit and economic methods used to estimate financial burden may be found in Appendix II.

IV. Social Impact

1. The extent to which the service is utilized by a significant portion of the population.

An estimated 26.2 percent of Americans ages 18 and older have a diagnosable mental disorder in a 12 month period.¹⁵³ This translates to an estimated 57.7 million Americans who have a mental disorder in a given year. Twelve month prevalence estimates by class of disorders are anxiety disorders (18.1 percent), followed by mood disorders (9.5 percent), impulse control disorders (8.9 percent), and substance disorders (3.8 percent). Lifetime prevalence rates are higher: any disorder (46.4 percent), anxiety (28.8 percent), mood disorders (20.8 percent), impulse control disorders (24.8 percent), and substance disorders (14.6 percent). The median age of onset for anxiety and impulse-control disorders is 11 years, 20 years for substance use; and 30 years for mood disorders. Half of the lifetime cases start by age 14 years and three fourths start by age 24 years.¹⁵⁴ About 12 percent of American adults have two or more disorders. The main burden of mental illness is concentrated among the 6 percent of individuals whose diagnoses can be classified as serious. Severity of a mental disorder is strongly related to comorbidity.¹⁵⁵ Of Connecticut's approximately 3.5 million residents, close to 109,000 adults live with serious mental illnesses and about 39,000 children live with serious mental health conditions.¹⁵⁶

2. The extent to which the service is available to the population, including, but not limited to, coverage under Medicare, or through public programs administered by charities, public schools, the Department of Public Health, municipal health departments or health districts or the Department of Social Services.

¹⁵³ Kessler RC, Chiu WT, Demler O, *et al.* 2005. Prevalence, severity, and comorbidity of 12-month DSMIV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry* 62: 617-709.

¹⁵⁴ Kessler R, Berglund P, Demier O, *et al.* 2005. Lifetime prevalence and age of onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication (NCSR). *General Psychiatry* 62: 593-602.

¹⁵⁵ Kessler RC, Chiu WT, Demler O, *et al.* 2005. Prevalence, severity, and comorbidity of 12-month DSMIV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry* 62: 617-709.

¹⁵⁶ Holzer CE III, Nguyen HT. 2009. (see psy.utmb.edu for more information) and data submitted to NAMI by state mental health agencies for Grading the States: A Report Card on America's Health Care System for Adults with Serious Mental Illnesses.

Medicare

Medicare Part A covers inpatient mental health care rendered in general hospitals and specialty psychiatric hospitals by qualified mental health professionals, such as doctors, psychologists and social workers.¹⁵⁷ Medicare pays for inpatient mental health services in the same way that it pays for all other inpatient hospital care. However, Medicare imposes a lifetime limit of 190 days of inpatient care in a specialty psychiatric hospital.¹⁵⁸

Medicare Part B covers outpatient mental health care rendered in office settings, clinics and hospital outpatient departments by qualified mental health professionals, such as doctors, clinical psychologists, clinical social workers, clinical nurse specialists and physician assistants. Further, Medicare covers outpatient substance abuse treatment.¹⁵⁹ Patients must pay 50 percent of the Medicare-approved amount for outpatient mental health care. Additionally, there is a separate co-payment for the “facility service,” and the regular \$155 annual deductible for Medicare Part B services.¹⁶⁰

Medicare Part B also covers partial hospitalization for mental health care rendered by a doctor or qualified mental health professional if the patient’s physician attests that the patient would otherwise need inpatient treatment.¹⁶¹ Patients are responsible for a set co-payment amount for each day of service. This is all in addition to the \$155 annual deductible for Medicare Part B services.¹⁶²

Under the Medicare Modernization, Improvement, and Prescription Drug Act of 2003, prescription drug plans must cover a minimum of two drugs in each therapeutic class.¹⁶³ However, the Centers for Medicare and Medicaid Services (CMS) extended special protections to three common psychotropic drug classes: antidepressants, antipsychotics, and anticonvulsants. For these three ‘protected’ classes, plans must cover ‘all or substantially all’ molecules (distinct drugs). Such plans are only required to cover generic or the brand version of a drug, not both. Similarly, plans are only required to cover one formulation of the drug; for example, under CMS guidelines, plans need not cover extended release formulations. Part D enrollees can appeal for coverage of specific medications not covered under their plan.¹⁶⁴

Public Programs Administered by Charities

Catholic Charities of Connecticut provides mental health services. Psychiatrists and other licensed professionals are on staff to diagnose and treat mental illness, as well as prescribe any medication that may be required. Costs of these services are on a sliding scale depending on the income of the individual, if they are enrolled in any state welfare programs, and whether they have insurance. The organization also administers family counseling and child behavioral services at several locations around the state.¹⁶⁵ Treatment facilities are licensed by the Department of Public Health as Adult Outpatient Mental Health Clinics.

The National Alliance of Mental Illness of Connecticut (NAMI-CT) is an advocacy organization that offers support programs for those afflicted by mental illness. Their programs include a support helpline, support groups, and assistance in finding treatment options; however, do not provide any clinical services. Most of

¹⁵⁷ Medicare Coverage Guidelines for Mental Health Care (Inpatient) (State of Connecticut). Retrieved 2010-07-20.

¹⁵⁸ *Ibid.*

¹⁵⁹ Medicare Coverage Guidelines for Mental Health Care (Outpatient) (State of Connecticut). Retrieved 2010-07-20.

¹⁶⁰ *Ibid.*

¹⁶¹ Medicare Coverage Guidelines for Mental Health Care (Partial Hospitalization) (State of Connecticut). Retrieved 2010-07-20.

¹⁶² *Ibid.*

¹⁶³ Huskamp HA, Stevenson DG, Donohue JM, *et al.* 2007. Coverage and prior authorization of psychotropic drugs under Medicare part D. *Psychiatric Services* 58(3): 308-310.

¹⁶⁴ *Ibid.*

¹⁶⁵ Personal Communication. Shirley, Catholic Charities, Archdiocese of Hartford. December 1, 2010.

their services are provided to the community without cost.¹⁶⁶

The Mental Health Association (MHA) of Connecticut offer resources to those seeking treatment for mental illness. While they do not provide clinical treatment, they offer home care assistance free of charge and support groups for people with mental illness. The organization operates on a referral basis and assists those with mental illness in finding the care they need.¹⁶⁷

Public Programs Administered by Public Schools

Public schools provide a number of screening services to students within the public school setting. Based on a 2008-2009 survey by the state's Department of Education it was noted that schools may provide optional mental health consultations.¹⁶⁸ While public schools may offer guidance or counseling programs for students, these programs are not intended as substitute treatments for mental or nervous conditions by a licensed and accredited professional.¹⁶⁹

School Based Health Centers (SBHCs) are located at schools and offer medical, mental and oral health services to students pre-K through 12th grade. SBHCs are licensed as outpatient facilities or hospital satellite clinics and are staffed by multidisciplinary teams of professionals. In 2006-2007, there were 68 state-funded SBHC sites in 19 communities serving 20,000 students with over 100,000 clinic visits.¹⁷⁰ During this same period 45 percent of the SBHC users were covered by Medicaid, 26 percent had private insurance, and 28 percent had no insurance coverage.¹⁷¹ Mental health was the most common reason for visits to a DPH-funded SBHC clinic accounting for 32 percent of the visits and included counseling, crisis intervention, substance abuse prevention, outreach to students at risk, advocacy and referral for services not provided in the SBHC.¹⁷²

The Department of Public Health (DPH)

The study found no information regarding the availability of services to diagnose and treat mental or nervous conditions through the Connecticut Department of Public Health. The DPH website includes information about the availability of mental health and substance abuse services in Connecticut.

Municipal Health Departments

No information was found that would indicate municipal health departments would be a source of diagnoses or treatment of mental or nervous conditions or provide funding for such services.

The Department of Social Services (DSS)

Medicaid provides a wide range of inpatient and outpatient mental health services for clients, including substance abuse treatment.^{173, 174} There is no out-of-pocket cost to clients for Medicaid services (medical,

¹⁶⁶ National Alliance of Mental Illness, Connecticut. Roster of Programs. Available at: http://www.nami.org/MSTemplate.cfm?Section=ABOUT_THE_ORGANIZATION&Site=NAMI_of_Connecticut,_Inc&Template=/ContentManagement/HTMLDisplay.cfm&ContentID=110105. Accessed 29 November 2010.

¹⁶⁷ Personal Communication. Meghan Maxwell, Mental Health Association of Connecticut. November 30, 2010.

¹⁶⁸ Newsom-Stewart M. November 2009. State of Connecticut Department of Education. Health Services Program Information Survey Report.

¹⁶⁹ Connecticut Department of Education. 2008. A Guide to Comprehensive School Counseling Program Development.

¹⁷⁰ Connecticut Department of Public Health. 2009. School based health centers.

Available at: http://www.ct.gov/dph/cwp/view.asp?a=3138&q=387698&dphNav_GID=1601. Accessed December 23, 2010.

¹⁷¹ *Ibid.*

¹⁷² *Ibid.*

¹⁷³ DSS Provider Fee Schedules for Behavioral Health Partnership, Clinic- Mental Health and Psychologist.

¹⁷⁴ DSS Provider Fee Schedules for Alcohol Treatment, Behavioral Health Partnership and Clinic- Substance Abuse.

surgical and/or mental health).¹⁷⁵ Medicaid covers mental health services rendered by psychiatrists and psychologists. Alternatively, Medicaid does not cover services rendered by social workers, LMFTs or LADCs.¹⁷⁶ However, the Connecticut Behavioral Health Partnership (the mental health services arm of HUSKY A, HUSKY B, PCCM and Charter Oak) covers a much wider variety of mental health care providers, including MDs, DOs, APRNs, LCSWs, LMFTs, LPCs, LADCs, psychiatrists, psychiatric APRNs and psychologists.¹⁷⁷

Federally-Qualified Community Health Centers

Federal statutes and regulations require that community health centers provide a comprehensive array of services either directly, or through contracts or cooperative agreements.¹⁷⁸ Mental health and substance abuse services are required to be included. Mental health services include treatment, counseling, developmental screening and 24-hour crisis intervention provided by a mental health professional. Substance abuse services include treatment for alcohol and/or drug abuse and may use a variety of treatment modalities such as detoxification, residential treatment and case management and counseling support in the community. In 2006, 12 percent of visits to Connecticut Community Health Centers addressed mental health and substance abuse needs.¹⁷⁹

3. The extent to which insurance coverage is already available for the service.

State of Connecticut law requires coverage for the diagnosis and treatment of mental or nervous conditions in fully insured group and individual health insurance plans as of January 1, 2000. 2007 and 2008 claims data from six insurers/MCOs that cover 90 percent of the population in fully insured group and individual insurance plans in Connecticut showed evidence that claims are paid for the mandated services. Information received from five insurers/MCOs domiciled in Connecticut shows that 90 percent of members in self-funded plans have coverage for the benefit.

4. If the coverage is not generally available, the extent to which such lack of coverage results in persons being unable to obtain necessary health care treatment.

Coverage is required and generally available for persons enrolled in fully insured group and individual health insurance plans. Available information suggests that coverage is available to 90 percent of persons enrolled in self-funded plans. Persons enrolled in fully insured group and self-funded plans represent the vast majority of the insured population under age 65 in Connecticut. Medicare and Medicaid generally cover the diagnosis and treatment of mental and nervous conditions. Diagnosis and treatment is also available to varying degrees from Community Health Centers, SBHC clinics and Catholic Charities.

5. If the coverage is not generally available, the extent to which such a lack of coverage results in unreasonable financial hardships on those persons needing treatment.

As noted above, coverage for diagnosis and treatment of mental or nervous conditions is required to be included in fully insured group and individual policies issued in Connecticut. Depending on the level of cost-sharing and personal financial resources available, that coverage may or may not be sufficient for the insured's family to avoid unreasonable financial hardship. Due to the high cost of the mandated services, in the absence of an insurance mandate, it is likely that there would be substantial cost burdens on affected

¹⁷⁵ Personal Communication. Nina Holmes, DSS Medical Policy Unit. July 16, 2010; see also Husky Health.

Available at: <http://www.huskyhealth.com/hh/cwp/view.asp?a=3573&q=421554&hhNav=1>. Accessed July 20, 2010.

¹⁷⁶ Personal Communication. Nina Holmes, DSS Medical Policy Unit. July 16, 2010.

¹⁷⁷ *Ibid.*; see also DSS Provider Fee Schedule- Behavioral Health Partnership.

¹⁷⁸ Connecticut Department of Public Health. 2009. Community Health Centers Programs and Services.

Available at: <http://www.ct.gov/dph/cwp/view.asp?a=3138&q=405340#healthservices>. Accessed December 23, 2010.

¹⁷⁹ *Ibid.*

patients and families.

Mental illness carries significant health consequences and economic costs for the individual and their family, even for those with comprehensive health benefits. Health consequences can lead to severe personal distress, profound family burden, incarceration and homelessness. The economic toll of untreated or under-treated mental disorders has profound direct costs such as medications, clinic visits, and hospitalization, and emergency room care.¹⁸⁰ Indirect costs include lower education attainment, reduced income, job termination, and greater need for social services.¹⁸¹

Further discussion of financial and socioeconomic effects of the mandated benefit may be found in Appendix II: Ingenix Consulting Actuarial and Economic Report, pages 36-39, and 48-49.

6. *The level of public demand and the level of demand from providers for the service.*

The level of demand for appropriate diagnosis and treatment for mental disorders is well established. American Psychiatric Association practice guidelines provide evidence-based recommendations for the assessment and treatment of specific psychiatric disorders for children, adolescents, and adults. Organizations such as the National Alliance on Mental Illness (NAMI) and Mental Health America provide information on support, education and advocacy for improved treatment and services for individuals with mental illness.

7. *The level of public demand and the level of demand from providers for insurance coverage for the service.*

Organizations such as the NAMI and Mental Health America provide information on a variety of ways to advocate for insurance coverage related to the diagnosis and treatment of mental illness. These organizations host websites, trainings and other forums to disseminate information on pending federal and state legislation, and ways to contact U.S. and State elected officials.

8. *The likelihood of achieving the objectives of meeting a consumer need as evidenced by the experience of other states.*

The National Association of Insurance Commissioners lists all 50 states¹⁸² including Connecticut, and the District of Columbia, with statutes regarding mandatory coverage for treatment of mental illness.

Table III.2.1. Mental Illness Treatment	
State	Summary
AL	Plans must include minimum benefits for the following illnesses diagnosed by an appropriately licensed provider.
AR	Benefits for diagnosis and treatment of mental health and developmental disorders shall be provided under same terms and conditions as for treatment of other medical illnesses and conditions. Mandatory for groups, mandatory offer for individual policies and small groups. Does not apply to any plan where application would result in an 1.5% increase in the cost of coverage.
CA	Plans must include in-patient and outpatient care and prescription drugs for serious mental illness.

¹⁸⁰ Insel TR. 2008. Assessing the economic costs of serious mental illness. *American Journal of Psychiatry* 165: 663-665.

¹⁸¹ Kessler RC, Heeringa S, Lakoma MD, et al. 2008. Individual and societal effects of mental disorders on earnings in the United States: Results from the National Comorbidity Survey Replication. *American Journal of Psychiatry* 165(6): 703-711.

¹⁸² National Association of Insurance Commissioners. 2010 Compendium of State Laws on Insurance Topics.

Table III.2.1. Mental Illness Treatment	
State	Summary
CO	Mandated coverage with at least specified minimum benefits in every group contract. Cover “biologically based” mental illness under the same terms and conditions as for other types of health care for physical illness.
CT	Mandated coverage with at least specified minimum benefits in every group contract. Does not include mental retardation, learning disorders, communication disorders, relational disorders, motor skills disorder, caffeine-related disorders, etc. May not have greater coinsurance and deductible, etc. than for physical illness. Provides for coverage for biologically-based mental illness at least equal to coverage provided any other illness.
DE	Cover serious mental illnesses the same as other illness. Carriers may not place greater burden on policyholder by means of higher deductibles, limits in number of visits, etc.
DC	Mandated mental health coverage with at least specified minimum benefits. No policy of group health insurance can restrict access to psychologist.
FL	Every group or prepaid contract must offer coverage for mental illness to levels specified.
GA	Mandated offering of coverage for treatment of mental disorders to the same extent as treatment for physical illnesses.
HI	Every policy must include coverage with at least specified minimum benefit for mental health, and may not treat serious mental illness differently than other conditions in terms of service limits and terms.
IL	Every group or prepaid contract must offer coverage for mental illness to same level as for other coverage.
IN	May not impose treatment limitations or financial requirements different than for other medical coverage.
IA	Group plan covering more than 50 employers must cover biologically based mental illness. May not impose a greater aggregate limit than on other types of illness.
KS	Every policy must include coverage with at least specified minimum benefits.
KY	Mandated offering of coverage at least that offered for physical illness. A health benefit plan that provides coverage for treatment of a mental health condition shall provide coverage under the same terms and conditions as for treatment of a physical illness. Small group and individual plan exempt.
LA	Group plans must include coverage for severe mental illness and other mental disorders.
ME	Mandated coverage with at least specified minimum benefits in every group contract at same levels as treatment for physical disease. Does not apply to employer groups of 20 or less. May coordinate benefits with Medicare.
MD	Every policy must include coverage with at least specified minimum benefit. Provide coverage for medically necessary residential crisis services.
MA	Every policy must include coverage with at least specified minimum benefit for biologically-based mental disorders as described by the American Psychiatric Association’s Diagnostic and Statistical Manual.
MS	Group plans shall provide coverage; plans covering 100 or fewer employees may offer on optional basis. Does not apply if it raises costs at least 1%. Formula included to measure. Must cover minimum of 30 days per year inpatient, 60 days per year partial hospitalization and 52 outpatient visits per year.

Table III.2.1. Mental Illness Treatment	
State	Summary
MO	Mandated offer of coverage for list of disorders defined as “mental illness.” May not establish rate and rules for payments that places a greater burden on insured for treatment of mental health than treatment of physical health.
MT	Mandated coverage with at least specified minimum benefits in every group contract. Does not apply if raises cost at least 1%. A policy must provide the same level of benefits for treatment of severe mental illness as for any other physical illness.
NE	Group policy must cover biologically-based serious mental illness same as for other illnesses. Means any mental health condition that medical science affirms is caused by a biological disorder of the brain.
NV	Must provide at least 40 days hospitalization each year and 40 visits of outpatient care each year for severe mental illness.
NH	Mandated coverage with at least specified minimum benefits in every group contract. Cover “biologically based” mental illness under the same terms and conditions as for other types of health care for physical illness.
NJ	Provide coverage for biologically-based mental illness under the same terms and conditions as for other illness.
NM	Provides group policy must not impose treatment limitations or financial requirements on the provision of mental health benefits if identical limitations or requirements are not imposed on coverage of benefits for other conditions. Does not apply to benefits for treatment of substance abuse, chemical dependency or gambling addiction.
NY	Every group or prepaid contract must offer coverage for mental illness to levels specified.
NC	Policy that covers both physical and mental illness may not impose a lesser lifetime or annual dollar limit on mental health benefits than on physical illness benefits. Several exceptions noted.
ND	Mandated coverage with at least specified minimum benefits in every group contract.
OK	Cover severe mental illness same as group coverage provided for other illness and disease. Must include same duration of coverage, amount limits, deductibles and coinsurance amounts. A health plan that experiences a greater than 2% increase in costs pursuant to providing treatment for severe mental illness is exempt from requirement.
OR	Mandated coverage with at least specified minimum benefits in every group contract. Group policy may make coverage subject to the same provisions as for other types of health coverage. Must have same deductible and coinsurance amounts as for other illness.
PA	Coverage for serious mental illness must include a minimum of 30 inpatient and 60 outpatient days annually. No difference in annual or lifetime limits from other illnesses.
RI	Cover mental illness same as coverage provided for other illness and disease. Must include same duration of coverage, amount limits, deductibles and coinsurance amounts. Does not cover mental retardation, motor skills disorders or communication disorders. Must provide coverage for counselors in mental health.
SC	Group policy must have been offered rider for psychiatric benefits with minimum of \$2000 coverage per member per benefit year. Mandated coverage for treatment of a mental health condition and may not establish a rate, term, or condition that places a greater financial burden on an insured for access to treatment for a physical health condition in similar settings and treatment modalities.

Table III.2.1. Mental Illness Treatment	
State	Summary
SD	Mandated coverage for treatment and diagnosis of biologically-based mental illness, with same dollar limits, deductibles, coinsurance factors and restrictions as for other illnesses.
TN	Coverage with specified minimum benefits in all group policies unless refused by insured. Coverage to either aggregate lifetime benefits or annual benefits.
TX	Must offer specified benefits and same amount limits, deductibles and coinsurance factors for serious mental illness as for physical illness for group policies.
UT	At time of purchase and renewal, an insurer shall offer both small and large employers a choice between catastrophic mental health coverage and 50/50 mental health coverage. The insurer shall offer catastrophic mental health coverage as part of a health maintenance organization contract. This section will be repealed effective July 1, 2011.
VT	Each health insurance plan shall provide coverage for treatment of a mental condition and shall not establish any rate, term or condition that places a greater financial burden on an insured for access to treatment for a mental health condition than for access to treatment for a physical health condition. This condition is met if at least one choice provided to the insured does not place a greater financial burden on the insured than treatment for physical conditions for group policies.
VA	Mandated coverage same as other illness except may be limited to 30 days per policy year. Coverage for biologically based mental illness must be the same as for any other illness or condition.
WA	Mandated offering of coverage in group policies at least equal to minimums specified, except for small employers with between two and 50 employees. Parity required between payments for claims for physical and mental services, including the amount of coinsurance and deductibles, prescription drug coverage, etc. Optional for plans renewed after 1/1/06; mandatory for plans renewed after 1/1/08 for groups of 50+; coverage for groups of 50 after 1/1/10.
WV	Cover expenses to treat serious mental illness. Costs need not exceed 2% of anticipated total cost of plan. Sunset 3/31/07.
WI	Mandated coverage with at least specified minimum benefits in every group contract.

9. The relevant findings of state agencies or other appropriate public organizations relating to the social impact of the mandated health benefit.

Internet searches and telephone inquiries found several studies from state agencies and public organizations related to the social impact of mandated insurance coverage for the diagnosis and treatment of mental or nervous conditions.

California: In April 2005, the California Health Benefits Review Program (CHBRP) reviewed Senate Bill 572 regarding mental health benefits. Major findings include that 16,798,000 would receive new coverage as a result of the mandate, that the mandate would increase total health care costs by \$118,596,000 per year. The report also notes that it is not possible to quantify the anticipated impact of the mandate on the public health because (1) the numerous approaches for treating mental disorders covered under the mandate on which they may be applied, renders a medical effectiveness analysis of mental health care treatment outside the scope of the analysis, and (2) the literature review found no studies in the peer-reviewed scientific literature that specifically addresses health outcomes related to the implementation of mental health parity laws.¹⁸³

¹⁸³ California Health Benefits Review Program, 2005. Analysis of Senate Bill 572, Mental Health Benefits.

Available at: http://www.chbrp.org/docs/index.php?action=read&bill_id=82&doc_type=3. Accessed December 14, 2010.

Colorado: In March 2007, the Colorado Commission on Mandated Health Insurance Benefits reviewed SB070-36, concerning inclusion of certain additional mental disorders in the mandatory health insurance coverage for mental illness. Major findings of the report include that mental health disorders are the second leading cause of disability and premature death in the U.S., one in five adults will experience a diagnosable mental illness in any given year, and mental health is an increasing component of emergency visits with approximately 85,229 visits in Colorado being related to mental health issues. The Commission recommended that further analysis be conducted as to what the effect of the mandate would be in the context of the three existing mental health care mandates.¹⁸⁴

Maine: In January 2002, the Maine Bureau of Insurance reviewed LD 1627, An Act to Ensure Equality in Mental Health Coverage. The mandate would expand the requirements of Maine's health insurance laws pertaining to coverage for the treatment of mental illness and substance abuse. The report found that increased coverage for treatment of mental illness and substance abuse would undoubtedly benefit insured individuals with these disorders, but would also result in significant premium increases for individual and small group plans.¹⁸⁵

Maryland: In January 2008, the Maryland Health Care Commission reviewed mandates required under Section 15-1502 of the Insurance Article, which includes coverage for mental health care. The report found that mental illness and substance abuse were the most expensive mandates, with a cost ranging from 4.9 percent of premium to 6.6 percent of premium. The report also found that about 50 percent of employers with self-funded plans provide benefits that comply fully with the mandate requirement.¹⁸⁶

Massachusetts: In July 2008, the Division of Health Care Finance and Policy reviewed mandated benefits in Massachusetts, including mental health care. The report found the total estimated required direct cost claims PMPM was \$5.70, with a total PMPM of \$6.63. The report notes that the increase in costs related to mental health services is attributed to the growth in the number of people receiving appropriate treatments for their mental illnesses.¹⁸⁷

New Jersey: In 2005, the New Jersey mandated Health Benefits Advisory Commission reviewed Assembly Bill A-33, regarding among other things increased coverage of mental health services. The report notes that the mandate would likely improve the overall mental health of the covered population by providing greater access to mental health services. It would reduce the costs borne by persons accessing mental health care and could potentially reduce utilization of acute care.¹⁸⁸

Wisconsin: In October 2001, the Officer of the Commissioner of Insurance reviewed Senate Bill 157, regarding mandated coverage for mental health services. The report notes that the mandated benefit could lead to increased access to mental health services and a likely increase in the disparity between insured plans and self-funded plans.¹⁸⁹ In terms of financial impact, the report estimates that the mandate could add approximately \$7 to \$57 million per year to group plan premium costs.

¹⁸⁴ Colorado Commission on Mandated Health Insurance Benefits, 2007. Review of SB070-36.

Available at: <http://www.dora.state.co.us/insurance/meet/MHBC/SB07-36.pdf>. Accessed December 14, 2010.

¹⁸⁵ Maine Bureau of Insurance, 2002. Review and Evaluation of LD 1627, an Act to Ensure Equality in Mental Health Coverage. Available at: <http://www.maine.gov/pfr/legislative/documents/ld1627.pdf>. Accessed December 14, 2010.

¹⁸⁶ Maryland Health Care Commission, 2008. Study of Mandated Health Insurance Services: A Comparative Evaluation. Available at http://mhcc.maryland.gov/health_insurance/mandated_1207.pdf. Accessed December 8, 2010.

¹⁸⁷ Massachusetts Division of Health Care Finance and Policy, 2008. Comprehensive Review of Mandated Health Benefits in Massachusetts. Available at: http://www.mass.gov/Eoohhs2/docs/dhcfp/r/pubs/mandates/comp_rev_mand_benefits.pdf. Accessed December 8, 2010.

¹⁸⁸ New Jersey Mandated Health Benefits Advisory Commission, 2005. A Study of Assembly Bill A-33.

Available at http://www.state.nj.us/dobi/division_insurance/mhbac/a333report.pdf. Accessed December 8, 2010.

¹⁸⁹ State of Wisconsin Office of the Commissioner of Insurance, 2001. Social and Financial Impact Report – Senate Bill 157. Available at: <http://oci.wi.gov/finimpct/sfisb157.pdf>. Accessed December 8, 2010.

States searched for which no evidence of a review was found include Virginia, Louisiana, Pennsylvania, and Texas.

10. The alternatives to meeting the identified need, including but not limited to, other treatments, methods or procedures.

There are many alternative approaches to traditional treatment of mental illness. Alternative approaches often emphasize the interrelationship between mind, body, and spirit such as acupuncture, yoga, biofeedback, and guided imagery. Other alternative treatments include self-help groups, diet and nutrition, pastoral counseling, animal therapies, and expressive therapies (art, dance, and music therapy). Recent interest in the benefits of natural products to treat mental illness has contributed to the growth of herbal remedies. The National Center for Complementary and Alternative Medicine (NCCAM) at the National Institutes of Health has evaluated the use of St. John's wort, Valerian, and omega-3 fatty acids.¹⁹⁰ However, there is limited empirical evidence to support the efficacy of alternative approaches similar to or greater than traditional approaches.

11. Whether the benefit is a medical or broader social need and whether it is consistent with the role of health insurance and the concept of managed care.

Coverage for the diagnosis and treatment of mental or nervous conditions fulfill a mental health need since mental disorders can disrupt an individual's thinking, feeling, mood, and behavior. Proper mental health diagnosis contributes to obtaining appropriate treatment which can reduce or avert medical complications. For example, individuals with untreated mental illness have an increased use of emergency room care, high prevalence of pulmonary disease (persons with serious mental illness smoke 44 percent of all cigarettes in the United States), increased risk of suicide, and early mortality (a loss of 13 to 32 years).¹⁹¹ Provisions of the mandated services may positively impact broader social needs as well, since untreated mental disorders can lead to personal distress, prolonged family burden, reduced educational attainment, greater need for social services and costs associated with other consequences such as incarceration or homelessness.¹⁹²

Required insurance coverage for the diagnosis and treatment of mental or nervous conditions ensures that at least persons covered by fully insured and individual insurance plans have access to the service. The statute is consistent with the concept of managed care as it does not prohibit insurers/MCOs from using utilization review or other managed care tools at their disposal.

12. The potential social implications of the coverage with respect to the direct or specific creation of a comparable mandated benefit for similar diseases, illnesses, or conditions.

This mandated insurance benefit is different from many of the other mandates since it focuses on mental health rather than physical health. It is therefore difficult to anticipate any comparable mandated benefit for similar diseases, illnesses or conditions. However, it is conceivable that some beneficiaries and providers may demand insurance coverage for non-traditional forms of therapy (e.g. acupuncture), non-prescription forms of treatment (e.g. St. John's wort), conditions that are not a DSM-IV-TR diagnosis or are excluded from the mandate (e.g. relational problems), and therapists not designated by the insurance mandate.

13. The impact of the benefit on the availability of other benefits currently offered.

¹⁹⁰ National Center for Complementary and Alternative Medicine. Mental Health. Available at <http://nccam.nih.gov/health/mentalhealth.htm>. Accessed November 17, 2010.

¹⁹¹ Insel TR. 2008. Assessing the economic costs of serious mental illness. *American Journal of Psychiatry* 165: 663-665.

¹⁹² Kessler RC, Heeringa S, Lakoma MD, et al. 2008. Individual and societal effects of mental disorders on earnings in the United States: Results from the National Comorbidity Survey Replication. *American Journal of Psychiatry* 165(6): 703-711.

Insurers and MCOs may cut costs by eliminating or restricting access to, or placing limits on other benefits currently offered. However, the availability of any benefits to be restricted may be limited. Existing benefits may be administratively costly to restrict and insurers may be contractually obligated to provide them. Additionally, many of the benefits that could be targets for elimination are included in plans for competitive advantage.

14. The impact of the benefit as it relates to employers shifting to self-insured plans and the extent to which the benefit is currently being offered by employers with self-insured plans.

Five health insurers/MCOs domiciled in Connecticut provided information about their self-funded plans, which represents an estimated 47 percent of the total population in self-funded plans in Connecticut. These five insurers/MCOs report that 90 percent of enrollees in their self-funded plans have coverage for the mandated services. Because benefits covering the diagnosis and treatment of mental or nervous conditions are typically included in self-funded plans not subject to state health insurance mandates, it is expected that the required benefit has little to no effect of employer decisions to shift to self-funded plans.

There are several reasons for health insurance premium increases, including medical cost inflation, an aging population and an aging workforce, and required benefits or “mandates.” Employers considering a shift to self-funded plans are likely to weigh these and other factors. Employers also may shift to plans with higher coinsurance amounts to keep premiums at a more affordable level (“benefit buy down”). Benefit buy down can result in employees not taking up coverage and thus being uninsured or not accessing care when it is needed because of high deductibles.

15. The impact of making the benefit applicable to the state employee health insurance or health benefits plan.

The diagnosis and treatment of mental or nervous conditions mandate is a current benefit that has been included in the state employee health insurance and health benefits plans at least in part since 2000. Thus the social impact of the benefit for the approximately 134,344 covered lives in state employee plans and 30,000 state retirees not enrolled in Medicare is expected to be the same or similar to the social impact for persons covered in non-state employee health insurance plans.

State employee claims are included in the 2007 and 2008 claims data provided by insurers/MCOs for their fully insured group insurance enrollees. Because the state shifted to self-funded status on July 1, 2010 (during the time this report was being written), utilization under self-funded status is unknown. All self-funded plans, including those that provide coverage for state employees, are not regulated by the state insurance department and are exempt from state health insurance required benefit statutes.

In terms of financial impact, if the state employee health insurance/benefit plans continue to provide coverage for the required benefit, the IC actuarial analysis estimates the medical cost to the state employee health insurance plan will total \$119,352,177 in 2010.¹⁹³

16. The extent to which credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community determines the service to be safe and

¹⁹³ The estimate is calculated by multiplying the estimated 2010 weighted average PMPM medical cost in fully insured plans in Connecticut by 12 to get an annual cost per insured life, and then multiplying that product by 163,334 covered lives, as reported by the State Comptroller’s office. The actual cost of this mandate to the State plans may be higher or lower, based on the actual benefit design of the State plans and the demographics of the covered lives (e.g., level of cost-sharing, average age of members, etc.). Retention costs are not included in this estimate because the State is now self-funded and the traditional elements of retention do not apply. State costs for administration of this mandated benefit would be in addition to the above amount. See Appendix II, Ingenix Consulting Actuarial and Economic Report, for further discussion.

effective.

Psychotropic drugs, when used appropriately are generally safe and effective for a variety of mental disorders. Safeguards such as treatment guidelines by governmental institutes and professional medical organizations are in place to reduce risks. For example, the FDA must review and approve psychotropic drugs before they are introduced into the U.S. market to ensure their safety and efficacy. The FDA works with drug sponsors during product development, and reviews the safety and efficacy data, proposed label, and advertising.¹⁹⁴ In addition, a prescription from a medical provider licensed to prescribe medications is required in order to obtain a psychotropic drug.

A meta-analysis of controlled trials of manual-guided psychodynamic psychotherapy found that the therapy was superior to control condition (treatment-as-usual or wait list) and as effective as established treatments, such as cognitive-behavioral therapy.¹⁹⁵ Not surprisingly, long-term psychodynamic psychotherapy (LTPP) was found to be more effective than shorter forms of psychotherapy especially for patients with complex mental disorders.¹⁹⁶ Another often used therapy, Dialectical Behavior Therapy (DBT), is a cognitive-behavioral treatment approach developed for the treatment of patients with suicidal behavior, and has been adapted to treat patients with Borderline Personality Disorder. Across studies, DBT seems to reduce severe dysfunctional behaviors that are targeted for intervention (e.g., parasuicide, substance abuse, and binge eating), enhance treatment retention, and reduce psychiatric hospitalization.¹⁹⁷

Research suggests that using medication and psychotherapy, referred to as multimodal therapy, is more effective than sole use of either treatment method. For example, in a study of patients with early stage schizophrenia, those receiving medication and psychosocial intervention had lower rates of treatment discontinuation, lower risk of relapse, and improved insight, quality of life and social functioning than patients receiving medication only.¹⁹⁸

IV. Financial Impact

1. The extent to which the mandated health benefit may increase or decrease the cost of the service over the next five years.

The mandate is not expected to materially alter the availability or cost of the diagnosis and treatment of mental or nervous conditions over the next five years. Diagnosis and treatment of mental or nervous conditions is a high utilization, high cost service; however, the presence of the insurance mandate is not expected to have any additional effect on its cost. Additionally, inclusion of mandated services in nearly all self-funded plans further dilutes any effect the existence of a mandate may have on the cost of the service. The cost of the service is likely to increase (or decrease) at the same rate as any other medical service.

¹⁹⁴ Laughren TP. 2010. What's next after 50 years of psychiatric drug development: An FDA perspective. *Journal of Clinical Psychiatry* 71(9): 1196-1204.

¹⁹⁵ Leichsenring F, Leibing E. 2007. Psychodynamic psychotherapy: A systematic review of techniques, indications and empirical evidence. *The British Psychological Society* 80: 217-228.

¹⁹⁶ Leichsenring F, Rabung S. 2008. Effectiveness of long-term psychodynamic psychotherapy: A meta-analysis. *Journal of the American Medical Association* 300(13): 1551-1565.

¹⁹⁷ Koerner K, Linehan MM. 2000. Research on dialectical behavioral therapy for patients with borderline personality disorder. *Psychiatric Clinics of North America* 23(1): 152-167.

¹⁹⁸ Guo X, Zhai J, Liu Z, et al. 2010. Effect of antipsychotic medication alone versus combined with psychosocial intervention on outcomes of early state schizophrenia. *Archives of General Psychiatry* 67(9): 895-904.

2. The extent to which the mandated health benefit may increase the appropriate or inappropriate use of the service over the next five years.

For those persons for whom diagnosis and treatment of mental or nervous conditions is recommended and whose insurance plans would not otherwise cover the services, the mandated health benefit may increase appropriate use of the services. For the uninsured, those covered by self-funded plans and those who use out-of-pocket funds or receive diagnosis and treatment from other sources, the mandated benefit may not increase appropriate use.

The legislation requires coverage of a mental or nervous condition that meets DSM criteria for a mental disorder and excludes mental retardation, learning disorders, motor skills disorders, communication disorders, caffeine-related disorders, relational problems, and additional conditions that may be a focus of clinical attention. Additionally, the legislation specifies that the service be rendered by a licensed or certified clinician. Due to these stipulations, it is unlikely that a significant amount of inappropriate use or over utilization is occurring.

3. The extent to which the mandated health benefit may serve as an alternative for more expensive or less expensive treatment, service or drug(s).

There are many alternative approaches to traditional treatment of mental illness. Alternative approaches often emphasize the interrelationship between mind, body, and spirit such as acupuncture, yoga, biofeedback, and guided imagery. Other alternative treatments include self-help groups, diet and nutrition, pastoral counseling, animal therapies, and expressive therapies (art, dance, and music therapy). Recent interest in the benefits of natural products to treat mental illness has contributed to the growth of herbal remedies. The National Center for Complementary and Alternative Medicine (NCCAM) at the National Institutes of Health (NIH) has evaluated the use of St. John's wort, valerian, and omega-3 fatty acids.¹⁹⁹ The NIH findings indicate limited support for the efficacy of alternative approaches similar to or greater than traditional approaches. All too often, the alternative to traditional treatment is no treatment at all leading to complications and more extensive (i.e. expensive) treatment than the care forgone at the earlier treatment opportunity.

4. The methods that will be implemented to manage the utilization and costs of the mandated health benefit.

It is anticipated that insurers and MCOs employ the same utilization management methods and cost controls that are applied to other covered benefits. The legislation does not prohibit insurers and MCOs from employing utilization management, prior authorization, or other utilization tools at their discretion.

5. The extent to which insurance coverage for the service may be reasonably expected to increase or decrease the insurance premiums and administrative expenses for policyholders.

Insurance premiums include medical cost and retention costs. Medical cost accounts for medical services. Retention costs include administrative cost and profit (for for-profit insurers/MCOs) or contribution to surplus (for not-for-profit insurers/MCOs). (For further discussion, please see Appendix II, Ingenix Consulting Actuarial and Economic Report, pages 13-15).

Group plans: When the medical cost of the mandate is spread to all insureds in group plans, medical costs are estimated to be \$8.50 PMPM and retention costs are estimated to be \$1.70 PMPM in 2010. Thus the total effect on insurance premiums is estimated at \$10.20 PMPM in 2010. Insurance coverage for the

¹⁹⁹ National Center for Complementary and Alternative Medicine. Mental Health. Available at <http://nccam.nih.gov/health/mentalhealth.htm>. Accessed November 17, 2010.

mandated benefit may be reasonably expected to increase group health insurance premiums accordingly, that is, \$122.40 per year per insured.

Individual policies: When the medical cost of the mandate is spread to all insureds in individual policies, medical costs are estimated to be \$5.60 PMPM and retention costs are estimated to be \$1.67 PMPM in 2010. Thus the total effect on insurance premiums is estimated at \$7.27 PMPM in 2010. Insurance coverage for the mandated benefit may be reasonably expected to increase individual health insurance premiums accordingly, that is, \$87.24 per year per insured.

For further information, please see the Appendix II: Ingenix Consulting Actuarial and Economic Report.

6. The extent to which the service is more or less expensive than an existing treatment, service or drug(s), that is determined to be equally safe and effective by credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community.

At present there are limited equally safe and effective alternatives to the diagnosis and treatment of mental disorders. Recent interest in the benefits of complementary and alternative medicine (CAM) including acupuncture, yoga, biofeedback, guided imagery, self-help groups, diet and nutrition, pastoral counseling, animal therapies, and expressive therapies (art, dance, and music therapy) has increased their use. Furthermore, the National Center for Complementary and Alternative Medicine (NCCAM) at the National Institutes of Health has evaluated the use of St. John's wort, Valerian, and omega-3 fatty acids.²⁰⁰ However, the effectiveness of most CAM treatments has not been established reliably enough for medical providers to employ them in place of psychotropic medications.²⁰¹ In addition, in accordance with Connecticut's mandated insurance benefit, mental health services are payable when rendered by specified clinicians who are licensed or certified. Therefore, services offered by individuals who lack the proper license or certification are not covered by this mandate.

7. The impact of insurance coverage for the service on the total cost of health care, including potential benefits or savings to insurers and employers resulting from prevention or early detection of disease or illness related to such coverage.

The total cost of health care is understood to be the funds flowing into the medical system, which are the medical costs of insurance premiums and cost sharing. Actuarial analysis of claims data received from insurers/MCOs in Connecticut shows an expected cost in 2010 of \$170,087,665 for services related to the diagnosis and treatment of mental or nervous conditions for Connecticut residents covered by fully insured group and individual health insurance plans.

In terms of potential benefits and savings to insurers and employers resulting from prevention or early detection of disease or illness, proper diagnosis of mental illness contributes to obtaining appropriate treatment which can reduce or avert debilitating symptoms. Untreated mental disorders can lead to personal distress, prolonged family burden, preventable disability, and premature death.²⁰² Provisions of the mandated services may have a positive economic impact since medical complications are associated with serious mental illness, leading to high rates of emergency room care, high prevalence of pulmonary disease (persons with serious mental illness smoke 44 percent of all cigarettes in the United States), and early mortality (a loss of

²⁰⁰ National Center for Complementary and Alternative Medicine. Mental Health. Available at <http://nccam.nih.gov/health/mentalhealth.htm>. Accessed November 17, 2010.

²⁰¹ National Center for Complementary and Alternative Medicine. 2010. Research results by date: 2010. Available at: <http://nccam.nih.gov/research/results/sportlight/>. Accessed on November 19, 2010.

²⁰² Dhingra S, Zack M, Strine T, et al. 2010. Determining prevalence and correlates of psychiatric treatment with Andersen's Behavioral Model of Health Services Use. *Psychiatric Services* 61(5): 524-528.

13 to 32 years).²⁰³

8. *The impact of the mandated health care benefit on the cost of health care for small employers, as defined in § 38a-564 of the general statutes, and for employers other than small employers.*

No published literature was found regarding the effect of mandated coverage of the diagnosis and treatment of mental or nervous conditions for the designated populations on the cost of health care for small employers. Small employers may be more sensitive to premium increases than other employers, and the estimated cost of the mandate (\$10.20 PMPM) suggests potential difference in effects among different types of employers.

For further information regarding the differential effect of mandates on small group versus large group insurance, please see Appendix II: Ingenix Consulting Actuarial and Economic Report, pages 29-30.

9. *The impact of the mandated health benefit on cost-shifting between private and public payers of health care coverage and on the overall cost of the health care delivery system in the state.*

Cost-shifting between private and public payers of health care coverage generally occurs when formerly privately insured persons, after enrolling in a public program or becoming un- or underinsured, require and are provided health care services. Cost-shifting also occurs when a formerly publicly-funded service becomes the responsibility of private payers, which can result following enactment of a health insurance mandate.

Most persons formerly covered under private payers lose such coverage due to a change in employer, change in employment status, or when private payers discontinue offering health care coverage as an employee benefit or require employee contributions to premiums that are not affordable. Because this required benefit became effective on January 1, 2000, it is unlikely that the mandate, taken individually, has any impact on cost-shifting between private and public payers of health care coverage at present.

The overall cost of the health delivery system in the state is understood to include total insurance premiums (medical costs and retention) and cost sharing. Actuarial analysis of claims data received from insurers/MCOs in Connecticut shows an expected cost in 2010 of \$198,456,968 for the diagnosis and treatment of mental and nervous disorders for Connecticut residents covered by fully insured group and individual health insurance plans.

For further information, please see Appendix II, Ingenix Consulting Actuarial and Economic Report.

²⁰³ Insel TR. 2008. Assessing the economic costs of serious mental illness. *American Journal of Psychiatry* 165: 663-665.

Volume III

Chapter 3

Accidental Ingestion or Consumption of Controlled Drugs

Review and evaluation of Connecticut General Statutes,

Chapter 700, §§ 38a-492 and 38a-518

Coverage for accidental ingestion or consumption of controlled drugs.
Benefits prescribed.

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Chapter 3. Table of Contents

- I. Overview..... 55
- II. Background..... 56
 - Table III.3.1. Drug-Induced Emergency Department Non-Admissions and Hospitalizations, Principal Diagnosis Only-Connecticut Acute Care Hospitals, 2000-2002 60
- III. Methods..... 61
- IV. Social Impact..... 61
 - Table III.3.2. Drug-Related Emergency Department (ED) Visits-- Population under 65.... 62
- V. Financial Impact..... 68

I. Overview

The Connecticut General Assembly directed the Connecticut Insurance Department (CID) to review the health benefits required by Connecticut law to be included in fully insured group and individual health insurance policies. The review was conducted following the requirements stipulated under Public Act 09-179 (Appendix I). This report was a collaborative effort of Connecticut Insurance Department and the University of Connecticut Center for Public Health and Health Policy (CPHHP). The CID and CPHHP contracted with the actuarial firm Ingenix Consulting to conduct a fiscal and economic analysis for each mandate.

This chapter evaluates the financial and social impact of the requirement for fully insured group and individual health insurance policies to cover medical services related to the accidental ingestion or consumption of controlled drugs (CDI) as specified under Connecticut General Statutes, Chapter 700, §§ 38a-492 and 38a-518. The statutory language requires no each group or individual health insurance policy,

...providing coverage of the type specified in subdivisions (1), (2), (4), (6) and (11) of § 38a-469 shall be delivered, issued for delivery or renewed in this state, or amended to substantially alter or change benefits or coverage, on or after July 1, 1975, unless persons covered under such policy will be eligible for benefits for expenses of emergency medical care arising from accidental ingestion or consumption of a controlled drug, as defined by subdivision (8) of § 21a-240, which are at least equal to the following minimum requirements:

- (1) In the case of benefits based upon confinement as an inpatient in a hospital, whether or not operated by the state, the period of confinement for which benefits shall be payable shall be at least thirty days in any calendar year.
- (2) For covered expenses incurred by the insured while other than an inpatient in a hospital, benefits shall be available for such expenses during any calendar year up to a maximum of five hundred dollars. For purposes of this section, the term “covered expenses” means the reasonable charges for treatment deemed necessary under generally accepted medical standards.

To analyze the impact of the CDI mandate, in March 2010, CPHHP and Ingenix Consulting (IC) requested and received 2007 and 2008 claims data related to the mandated benefit from six insurers and managed care organizations (carriers) domiciled in Connecticut that cover approximately 90 percent of the population in fully insured group and individual health insurance plans in Connecticut (1.25 million persons). Six health plan carriers provided data for group plans and four of the six carriers provided claims data for individual policies. Projected costs for 2010 were estimated by IC from the actuarial analysis of carrier claims data from 2007 and 2008. The financial impacts presented likely overstate the impact of the mandate on premiums and the total cost because the claims data reflects all medical services for CDI among the fully insured, rather than the change in utilization and cost of the benefit following implementation of the mandate.

Overall, the projected 2010 cost on Connecticut’s health care system for providing treatment for medical services for CDI among the fully insured population is \$635,632. This amount includes \$489,800 in paid medical claims,²⁰⁴ \$42,898 of cost sharing and \$102,934 of administrative expenses plus profit (referred to as

²⁰⁴ The use of the term “paid medical claims” or “paid medical cost” refers to the dollar value covered by insurers for the service. The paid medical cost PMPM reflects the dollar value covered by insurers for the health care services spread over the relevant fully insured population.

retention). On average, out-of-pocket cost sharing accounts for an estimated 6.8 percent of the total cost for CDI.

Current coverage

The mandate went into effect on July 1, 1975. The mandate requires \$500 of coverage for outpatient care and up to thirty days of coverage for hospitalizations. Most Connecticut residents have medical services for CDI as a covered benefit under their health plan. It is expected that in many cases, actual coverage exceeds the requirements of the state mandate. Adjusted to 2010 dollars, the value of the \$500 payable for outpatient care would be approximately \$2,000. Notably, under the federal Emergency Medical Treatment and Labor Act, hospitals authorized to accept Medicare reimbursements must provide stabilizing care to individuals regardless of ability to pay.

Premium impact

The projected 2010 average per member per month (PMPM) for all covered CDI provided to fully insured members is summarized below. The gross cost presented is expected to be higher than the “new” cost or change in cost that may have occurred following the mandate.

Group plans: The medical cost is estimated to be \$0.03 PMPM. The estimated total premium (carrier paid medical claims, administrative fees, and profit) of the mandated services in 2010 for group plans is \$0.04 PMPM, which is less than 0.01 percent of the estimated total cost for group plans.

Individual policies: On a 2010 basis, the weighted average paid medical cost of CDI claims is estimated to be \$0.02 PMPM. The estimated total premium of the mandated services in 2010 in individual policies is \$0.03 PMPM, which is less than 0.01 percent of estimated total costs in individual policies.

Self-funded plans

Nearly all of the self-funded plans managed by the five responding carriers cover CDI at least to the extent of Connecticut’s statutory requirements. Approximately 93 percent of the five carriers’ self-funded groups, capturing 96.2 percent of the carriers’ self-funded members, cover CDI to an equal or greater extent than the Connecticut mandate requires of fully insured groups. Furthermore, of the group plans administered by the five responding carriers, 28 percent of self-funded groups extended coverage beyond the minimum mandated for fully insured plans.

This report is intended to be read in conjunction with the General Introduction to this volume and the Ingenix Consulting Actuarial Report (Set Three) included as Appendix II.

II. Background

Controlled Drugs

Controlled drugs are often the substance involved in poisoning cases for which emergency medical care is sought. The terms “controlled substances” or “controlled drugs” refer to a drug or other substance listed as a schedule I, II, III, IV, or V controlled substance as defined by the Federal Controlled Substances Act of 1970, or under the authority of the Commissioner of Consumer Protection.²⁰⁵ A definition of schedule I, II, III, IV, or V drugs or substances may also be found in the current edition of the Physicians’ Desk Reference (PDR).

Under federal law, controlled drugs are defined as having a “stimulant, depressant or hallucinogenic effect upon the higher functions of the central nervous system and as having a tendency to promote abuse or

²⁰⁵ Title 21 United States Code. Controlled Substances Act. Section 802. Definitions.

psychological or physiological dependence, or both. Such controlled drugs are classifiable as amphetamine-type, barbiturate-type, cannabis-type, cocaine-type, hallucinogenic, morphine-type and other stimulant and depressant drugs. Alcohol, nicotine, and caffeine are specifically excluded from controlled drugs and controlled substances.”²⁰⁶

The schedule level assigned to a given drug is determined by the potential for abuse. Schedule I drugs have the highest potential for abuse and are not considered by the U.S. Drug Enforcement Agency as legitimate for medical use (i.e., certain opioids, heroin, psychedelic substances, stimulants, etc). Schedule II, III, IV, and V are drugs available by prescription for medical use.²⁰⁷

Symptoms of Drug-Related Overdose or Withdrawal

The symptoms related to CDI depend on the quantity, variety, type and frequency of drug ingestion or consumption. The summary of overdose symptoms listed in the U.S. National Library of Medicine include abnormal pupil size, agitation, convulsions, death, delusional or paranoid behavior, difficulty breathing, drowsiness, hallucinations, nausea and vomiting, nonreactive pupils, staggering or unsteady gait (ataxia), tremors, unconsciousness (coma), and violent or aggressive behavior. Weakness, bluish lips and fingernails, clammy skin, paleness, and decreasing alertness are signs of shock related to drug consumption. Symptoms of drug withdrawal include abdominal cramping, agitation, cold sweat, convulsions, delusions, depression, diarrhea, hallucinations, nausea and vomiting, restlessness, shaking and death.²⁰⁸

Treatment of Overdose

Treatment for CDI may be initiated in a variety of ways including contacting a local poison control center, unannounced arrival at a primary care physician’s office, or the initiation of emergency care through 911 or arrival at a hospital emergency department (ED).²⁰⁹ Varying levels of medical intervention may be indicated as a result and will differ depending on the controlled drug ingested.²¹⁰

In some instances, poisonings may be addressed through a local poison control call center with home therapy and observation. However, this approach should only be taken under the direction of a medical professional and is often not medically recommended due to the potential for delayed toxin effects.²¹¹ Most drug-related emergencies are treated in the ED without a hospitalization.

Upon arrival at a medical facility, urine toxicology tests and clinical observation are used to confirm the type of drug(s) involved in the poisoning. Additional laboratory tests may also be conducted.²¹² In many cases, rapid triage is needed to stabilize the airway, respiration or circulation.²¹³ Recommendations also require intravenous fluids to be administered as soon as possible and monitoring of vital signs such as pulse, rate of breathing, temperature and blood pressure is also done.²¹⁴ If other psychiatric or medical complications are indicated, these issues should also receive treatment. In situations of self-harm, psychiatric services are

²⁰⁶ Chapter 420b-Dependency-Producing Drugs § 21a-240.

²⁰⁷ Title 21 United States Code. Controlled Substances Act. Section 812. Schedules of controlled substances.

²⁰⁸ Drug abuse first aid. Medline Plus. A service of the U.S. National Library of Medicine. National Institutes of Health. Available at: <http://www.nlm.nih.gov/medlineplus/ency/article/000016.htm>. Accessed December 5, 2010.

²⁰⁹ Larsen LC, Cummings DM. 1998. Oral poisonings: guidelines for initial evaluation and treatment. *American Family Physician* 57(1):85-92.

²¹⁰ Boyle JS, Bechtel LK, Holstege CP. 2009. Management of the critically poisoned patient. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 17:29.

²¹¹ McGregor T, Parkar M, Rao S. 2009. Evaluation and management of common childhood poisonings. *American Family Physician* 79(5): 397-403.

²¹² Montoya ID, McCann DJ. 2010. Drugs of abuse: management of intoxication and antidotes. *Experientia* 100: 519-41.

²¹³ McGregor T, Parkar M, Rao S. 2009.

²¹⁴ Montoya ID, McCann DJ. 2010.

considered medically necessary.²¹⁵

The preferable recommendation for treatment is to provide appropriate, toxin-specific interventions rather than the traditional interventions.²¹⁶ In general, the recommended treatment for poisoning is to administer a toxin-specific antidote or antagonist that can reduce symptoms. The use of antagonists such as naloxone in opiate poisoning or flumazenil in benzodiazepine poisoning has been shown to have a near 100 percent efficacy in reversing opiate toxicity unless complications develop prior to administering the antidote.²¹⁷ However, few illicit drugs (Schedule I) have established antidotes.²¹⁸ In cases where an overdose involves multiple drugs, the risk of introducing an additional pharmacological agent generally outweighs the benefit. Under these circumstances, the recommended treatment is often observation alone since traditional treatments such as gastric lavage (stomach pump) and whole-bowel irrigation have been found to be inappropriate for the majority of overdose situations.²¹⁹

Despite the limited availability of antidotes to treat CDI poisonings, a recent review article found that when poisonings are recognized early, testing is appropriately provided, supportive care is initiated promptly, and the majority of health outcomes are good.²²⁰

Review of Traditional Treatments

Traditional interventions such as gastric lavage and ipecac syrup are generally considered inappropriate by toxicology organizations. For example, the American Academy of Clinical Toxicology (AACT) and the European Association of Poison Centres and Clinical Toxicologists (EAPCCT) in its gastric lavage position paper states that “Gastric lavage should not be employed routinely in the management of poisoned patients... There is no certain evidence that its use improves clinical outcome and it may cause significant morbidity.” The position statement further concludes that gastric lavage should only be used within 60 minutes of ingestion under circumstances where the patient has consumed a potentially life-threatening amount of poison. In part, the recommendation to not employ gastric lavage routinely, if ever, is due to the potential for severe adverse effects such as hypoxia, dysrhythmias, laryngospasm, perforation of the GI tract or pharynx, fluid and electrolyte abnormalities, or aspiration pneumonitis.²²¹

Ipecac syrup was previously encouraged to be kept in the home as a means to induce vomiting if a toxin was ingested. Although research has documented the success of ipecac syrup for inducing vomiting, the related symptoms are not prevented.²²² The potential risk of delaying use of an alternative treatment and a potential reduction in the effectiveness of activated charcoal, oral antidotes, and whole bowel irrigation have led to repeal of the recommendation for routine stocking of ipecac syrup in the home.²²³ The guideline of the American Association of Poison Control Centers on the use of ipecac syrup in the out-of-hospital management of ingested poisons finds that ipecac-induced emesis is rarely the appropriate or desired method

²¹⁵ WebMD. 2010. Drug Overdose Treatment. Available at: <http://firstaid.webmd.com/drug-overdose-treatment>. Accessed December 5, 2010.

²¹⁶ McGregor T, Parkar M, Rao S. 2009. Evaluation and management of common childhood poisonings. *American Family Physician* 79(5): 397-403.

²¹⁷ Jacobsen D, Haines JA. 1997. The relative efficacy of antidotes: the ICPS evaluation series. International Programme on Chemical Safety. *Archives of Toxicology* Supplement 19:305-10.

²¹⁸ Merigian KS, Blaho K. 1997. Diagnosis and management of the drug overdose patient. *American Journal of Therapeutics* 4(2-3): 99-113.

²¹⁹ *Ibid.*

²²⁰ Boyle JS, Bechtel LK, Holstege CP. 2009. Management of the critically poisoned patient. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 17:29.

²²¹ Vale JA. 1997. Position statement: gastric lavage. American Academy of Clinical Toxicology; European Association of Poisons Centres and Clinical Toxicologists. *Journal of Toxicology Clinical Toxicology* 35(7):711-9.

²²² Minton NA, Glucksman E, Henry JA. 1995. Prevention of drug absorption in simulated theophylline overdose. *Human and Experimental Toxicology* 14(2):170-4.

²²³ Erratum. 2004. Position paper: Ipecac syrup. *Journal of Toxicology Clinical Toxicology* 42(7): 1000.

of gastric decontamination especially since alternative therapies such as activated charcoal may be more effective.²²⁴

According to the AACT and EAPCCT, gastric decontamination using activated charcoal should not be routinely administered to treat poisoning.²²⁵ The charcoal, in liquid form, can bind with many toxins helping to stop absorption into the bloodstream. In some cases, the patient may be given the option of drinking the charcoal, but it is common for it to be administered through a tube into the stomach by way of nose or mouth. Following ingestion, the toxins bound with the charcoal will be eliminated through the patients stool. The limited research that exists finds that the effectiveness of activated charcoal decreases as the time since ingestion of the toxin increases, with the greatest benefit within one-hour of ingestion. Although there is no evidence that administering activated charcoal improves clinical outcomes, use of activated charcoal may be considered if the ingestion occurred within an hour, the amount ingested was potentially toxic, the poison is known to be absorbed by charcoal, and the patient has an intact or protected airway. Based on clinical and experimental studies, multiple-doses of activated charcoal should be considered only if a patient ingests a life-threatening amount of carbamazepine, dapsone, phenobarbital, quinine or theophylline. Under these circumstances, data exists to support enhanced elimination.²²⁶

In general, induced vomiting is no longer recommended as certain corrosive substances which may have been ingested can severely damage the esophagus when vomiting is induced. Similarly, cathartics used to facilitate the excretion of toxins from the body, generally should not be administered to children due to the risk of inducing a fluid or electrolyte imbalance.²²⁷

Drug-Induced and Drug Poisoning related Death, Emergency Care, and Hospitalizations

A recent 2004 report by the Connecticut Department of Public Health (DPH) examines mortality trends, hospitalization admissions and “non-admissions” emergency department (ED) visits due to drug-induced causes.²²⁸ Drug-induced causes capture poisonings from overdose or consumption of the wrong drug, chronic drug abuse, drug dependence and drug psychoses. The vast majority of drug-induced complications involve poisoning. Poisonings refer to overdoses or when the wrong substance is given or taken in an error.

From 2000 to 2002, 1,013 Connecticut resident deaths were attributed to drug-induced causes (approximately 338 deaths annually). For unintentional and intentional drug-induced deaths combined, opiates, related narcotics and hallucinogens were implicated in 53 percent of deaths whereas drugs for the treatment of mental and behavioral disorders were involved in four percent of deaths. Of the 1,013 deaths, 34 percent were unintentional poisonings due to opiates and related narcotics and 28 percent involved unintentional poisonings from other drugs.

Among those who died from unintentional poisoning deaths related to opiate use, 16 percent died during a hospitalization or emergency department visit and an additional 19 percent were declared dead on arrival at the hospital. The majority of opiate poisoning related deaths occurred at home (41 percent) or another

²²⁴ Manoguerra AS, Cobaugh DJ. 2005. Guidelines for the Management of Poisoning Consensus Panel. Guideline on the use of ipecac syrup in the out-of-hospital management of ingested poisons. *Clinical Toxicology* (Philadelphia) 43(1):1-10.

²²⁵ Chyka PA, Seger D. 1997. Position statement: single-dose activated charcoal. American Academy of Clinical Toxicology; European Association of Poisons Centres and Clinical Toxicologists. *Journal of Toxicology Clinical Toxicology* 35(7): 721-41.

²²⁶ *Ibid.*

²²⁷ American Academy of Clinical Toxicology; European Association of Poison Centres and Clinical Toxicologists. 2000. Position statement and practice guidelines on the use of multi-dose activated charcoal in the treatment of acute poisoning. *Journal of Toxicology Clinical Toxicology* 37(6): 731.

²²⁸ Hynes MM, Mueller LM. 2004. Report to the General Assembly. Public Act 03-159: A Report on Fatal and Non-Fatal Drug Overdoses in Connecticut. Connecticut Department of Public Health. January 2004. Available at: http://www.ct.gov/dph/lib/dph/hist/pdf/drug_overdose_report_2004.pdf. Accessed December 5, 2010.

location (24 percent). Of those with a drug-induced death, approximately 8 out of 10 deaths occurred among males.²²⁹

Compared to drug-induced deaths and drug poisoning deaths, receiving medical care through an ED visit or hospitalization is much more common. Table III.3.1 displays aggregate statewide inpatient hospitalization and emergency data as summarized within the DPH report. (The analysis used information from the Connecticut Hospital Association’s ChimeData program, which includes encounter-level demographic, clinical, and billing data from all non-federal acute care hospitals in Connecticut).

Table III.3.1. Drug-Induced Emergency Department Non-Admissions and Hospitalizations, Principal Diagnosis Only-Connecticut Acute Care Hospitals, 2000-2002

Year	Emergency Department (no hospitalization)		Hospitalizations	
	All-Drug Induced (ICD-9 CM Codes 292, 304, 305.2-.9, 960-979)	Drug Poisoning Only (ICD-9 CM Codes 960-979)	All Drug-Induced (ICD-9 CM Codes 292, 304, 305.2-.9, 960-979)	Drug Poisoning Only (ICD-9 CM Codes 960-979)
2000	8,865	3,445	4,002	1,863
2001	10,048	3,387	3,912	1,798
2002	11,293	3,661	3,897	1,901
3 Year Total	30,206	10,493	11,811	5,562

Source: Table 4 and Table 5 in A Report to the General Assembly. Public Act 03-159: A Report on Fatal and Non- Fatal Drug Overdoses in Connecticut, pages 11-12.

Over the three-year period, ED visits without hospitalizations were about 2.5 times more common than hospitalizations. During the same period, the ED visits for drug poisoning remained relatively constant whereas drug psychoses, drug dependence and drug abuse accounted for most of the 27 percent increase in ED visits. Conversely, hospitalizations for drug-induced and drug-poisoning diagnoses remained relatively unchanged. Drug poisonings, which include intentional and unintentional poisonings, accounted for just over one-third of ED non-hospitalizations and about half of hospitalizations.

According to the DPH report, under-reporting of nonfatal drug overdoses is expected. Two studies involving residents in Hartford and select other cities across the nation suggest that a substantial percentage of drug users who had an overdose did not seek medical assistance. In a study that included both Hartford and New Haven, 23 percent of individuals with a drug overdose reported not seeking medical assistance. Among just the drug users in Hartford participating in a different study, about 40 percent of those who overdosed did not seek medical assistance. The primary stated explanation for not seeking assistance was fear of police involvement due to the use of an illegal substance or illegal narcotic.²³⁰

²²⁹ *Ibid.*

²³⁰ *Ibid.*

III. Methods

Under the direction of CPHHP, medical librarians at the Lyman Maynard Stowe Library at the University of Connecticut Health Center (UCHC) gathered published articles and other information related to medical, social, economic, and financial aspects of the required benefit. CPHHP research staff conducted independent literature searches using the Cochrane Review, Scopus, Westlaw and Google Scholar. Where available, articles published in peer-reviewed journals are cited to support the analysis. Other sources of information may also be cited in the absence of peer-reviewed journal articles. Content from such sources may or may not be based on scientific evidence.

CPHHP staff consulted with clinical faculty from the University of Connecticut School of Medicine Department of Psychiatry on matters pertaining to medical standards of care, traditional, current and emerging practices, and evidence-based medicine related to the benefit. Staff also gathered additional information through telephone and e-mail inquiries to appropriate state, federal, municipal, and non-profit entities and from internet sources such as the State of Connecticut website, Centers for Medicare and Medicaid (CMS) website, other states' websites, professional organizations' websites, and non-profit and community-based organization websites.

With the assistance of the Connecticut Insurance Department (CID), CPHHP and Ingenix Consulting requested and received 2007 and 2008 claims data from carriers domiciled in Connecticut. Six carriers provided inpatient medical care arising from CDI claims data for their fully insured group plan participants and four provided claims data for their fully insured individual plan participants. However, the claims data for individual policies is considered less credible than the group plan data due to the lower response rate and fewer covered lives represented by the claims. Five carriers also provided information about CDI coverage in the self-funded plans they administer. It is anticipated that the self-funded plans managed by the sixth carrier offer coverage comparable to the other five carriers.

CPHHP and the CID contracted with Ingenix Consulting (IC) to provide actuarial and economic analyses of the mandated benefit. The full IC report is available in Appendix II.

IV. Social Impact

1. The extent to which medical care arising from accidental ingestion or consumption of controlled drugs is utilized by a significant portion of the population.

A small portion of the population utilizes medical care for CDI. Table III.3.2 (below) illustrates estimates for the number of drug-related emergency department (ED) visits in the U.S. during 2008, the annual visit rate per 100,000 persons under age 65, and an estimate for the number of ED visits in Connecticut.²³¹ The data shown uses Drug Abuse Warning Network (DAWN),²³² a public health surveillance system coordinated by the Substance Abuse and Mental Health Services Administration (SAMSHA). Adjustments to the data include excluding over-the-counter medications, alcohol-only ED visits, and drug-related visits for the population aged 65 and older. However, based on the nature of the survey, the estimates below include ED visits where drugs may or may not be the cause of the ED visit.

²³¹ The U.S. population under age 65 was 267,402,705 (per the U.S. Census Bureau USA Quickfacts, 2009). The estimate of Connecticut drug-related ED visits was based on a Connecticut population of 3,030,233 (State-Level ASRH estimate for 2009 from the Connecticut Department of Public Health).

²³² Drug Abuse Warning Network. Detailed Tables. Available at: <https://dawninfo.samhsa.gov/data/default.asp?met=All>. Accessed December 5, 2010.

	ED visits (U.S.)	Visit rate per 100,000	ED visits (CT)
Pharmaceuticals only	2,160,164	807.8	24,479
Rx with illicit	253,420	94.8	2,872
Illicit drugs	734,133	274.5	8,319
Total drug-related ED visits	3,148,339	1177.3	35,675

Calculations use 2008 national estimates of drug-related emergency department visits available through the SAMSHA Drug Abuse Warning Network (DAWN).

In 2008, an estimated 35,675 drug-related ED visits occurred in Connecticut, of which 23.3 percent involved illicit drugs, 68.6 percent involved only pharmaceuticals, and 8.1 percent involved a combination of prescription and illicit drugs. Although pharmaceuticals comprised the majority of drug-related ED visits, just under 30 percent of the visits were for the inappropriate use of pharmaceuticals (rate: 237.4) while 70 percent of visits were for adverse reactions to appropriately consumed pharmaceuticals. Notably, only 2.4 percent of drug-related visits in 2008 were for accidental ingestion of drugs. At a rate of 28.8 visits per 100,000 persons, Connecticut may have around 874 ED visits annually for accidental ingestion of controlled drugs.

Although it is unclear whether detoxification services sought through an ED would qualify as covered under the mandate, another 5.6 percent of ED visits occur when the person is either seeking detoxification or medical clearance to start a detoxification program. At a rate of 66 visits per 100,000, Connecticut may have around 2,000 visits in a year. In addition, 5.4 percent of drug-related ED visits are expected to be related to suicide attempt(s). Based on national ED visit rates, Connecticut may have around 1,928 visits for this reason.

2. The extent to which medical care arising from accidental ingestion or consumption of controlled drugs is available to the population, including, but not limited to, coverage under Medicare, or through public programs administered by charities, public schools, the Department of Public Health, municipal health departments or health districts or the Department of Social Services.

Medicare

Medicare failed to respond specifically to two requests for information about coverage of services related to CDI, stating that “Medicare does not preauthorize coverage for medical services. Medicare will make a coverage decision when your healthcare provider sends a claim to Medicare. Medicare helps pay for services if they are medically necessary based on Medicare requirements. You must be eligible for Medicare in order to get the covered services.”²³³

Medicare continued by listing some of the criteria by which medical necessity is evaluated: “Services or supplies are considered to be medically necessary if they meet these requirements:

- Are proper and needed for diagnosis or treatment of your medical condition.
- Are provided for the diagnosis, direct care, and treatment of your medical condition.
- Meet the standards of good medical practice in the medical community of your local area.
- Are not mainly for the convenience of you or your doctor.”²³⁴

²³³ Personal Communication. Medicare Customer Support. July 21, 2010.

²³⁴ *Ibid.*

Department of Social Services

Medicaid responded to a request for information regarding coverage of CDI as follows: “The medical necessity rule would apply here. Connecticut Medicaid covers services that are medically necessary and does not [sic] a specific policy regarding accidental ingestion/consumption of a controlled drug.”²³⁵

Public Programs administered by Public Schools

No information was found that would indicate public schools provide services for the accidental ingestion of controlled drugs.

Department of Public Health

The Department of Public Health maintains registration requirements for the disbursement of controlled substances. No information was found that would indicate the Department of Public Health provides services for the accidental ingestion of controlled substances.

Municipal health departments/health districts

No information was found that would indicate municipal health departments/health districts provide services for the accidental ingestion of controlled drugs.

Other

The Connecticut Poison Control Center (CPCC) is an entity established in 1957 under Connecticut General Statute 10a-132 and now coordinated through the University of Connecticut Health Center.²³⁶ The CPCC provides statewide 24-hour emergency service for poison exposure, studies the epidemiology of poisoning and offers poison prevention education. The CPCC staff, which includes Poison Information Specialists, is available 24-hours a day to offer “fast, free, accurate advice for poisonings” and “determine the severity of an exposure and whether the poisoning can be managed safely at home or if hospital treatment is needed.” Referrals to the Toxicology Clinic may be made to callers by CPCC staff for evaluation of exposures related to alcohol and drugs of abuse, drugs and chemicals in women who are pregnant, drug interactions and chemical toxicities in addition to other poison concerns.²³⁷ The UCHC Toxicology Clinic will work with patients without insurance to find financial assistance, but ultimate responsibility for any fees for services incurred falls to the patient.²³⁸

The federal Emergency Medical Treatment and Labor Act of 1986 (EMTALA) gives patients with an emergency condition the right to “stabilizing care.” Under EMTALA, all hospitals that participate in Medicare must provide patients with screening, emergency care and appropriate transfers to other facilities regardless of their ability to pay.

3. The extent to which insurance coverage is already available for medical care arising from accidental ingestion or consumption of controlled drugs.

The state of Connecticut requires fully insured group and individual health policies delivered, renewed or amended in the state as of July 1, 1975 to provide coverage for medical care arising from CDI.²³⁹ For the population under age 65, approximately 46.6 percent of Connecticut residents are enrolled in fully insured

²³⁵ Personal Communication. Nina Holmes, DSS Medical Policy Unit. July 16, 2010.

²³⁶ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. CHAPTER 185B, § 10A-132.

²³⁷ Connecticut Poison Control Center. 2010. About the Center. Available at: <http://poisoncontrol.uchc.edu/about/index.htm>. Accessed December 5, 2010.

²³⁸ Personal Communication. University of Connecticut Health Center Toxicology Clinic Staff. December 21, 2010.

²³⁹ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. §§ 38A-507 AND 38A-534.

health plans subject to the mandate.²⁴⁰ In addition, five Connecticut domiciled carriers reported that 96.2 percent of covered lives under self-funded plans have coverage to an equal or greater extent than required by the state mandate. Combined, fully insured and self-funded health plans cover approximately 74.9 percent of Connecticut residents at least to the extent of the state mandate.

For the 15.7 percent of Connecticut residents (under age 65) who are enrolled in Medicare or Medicaid plans, coverage for the treatment of CDI is neither explicitly covered nor denied. As described under Section IV-2, coverage is determined based on “medical necessity” of the treatment as a remedy for the health condition. Therefore, an estimated 74.9 to 90.6 percent of Connecticut residents under age 65 have coverage to the extent of the state mandate.²⁴¹

4. If the coverage is not generally available, the extent to which such lack of coverage results in persons being unable to obtain necessary health care treatment.

In Connecticut, those lacking coverage (12.5 percent) generally include persons not enrolled in health plans (11.4 percent) and a small percentage (3.8 percent) of members enrolled in self-funded insurance plans. Although individuals may not have insurance coverage for treatment of accidental ingestion of controlled drugs, when the care sought is at the emergency department to stabilize a condition, the health care facility is under an obligation to provide emergency services to the patient.²⁴²

5. If the coverage is not generally available, the extent to which such a lack of coverage results in unreasonable financial hardships on those persons needing treatment.

Insurance status, required cost sharing and personal financial resources determine whether a person will face unreasonable financial hardship when needing treatment. As noted above, coverage for medical care arising from CDI is required to be included in fully insured group and individual policies in Connecticut.²⁴³ The economic analysis section of the IC report compares by family income level the cost burden under varying co-pay arrangements under fully insured plans and if uninsured. The scenario assumes \$944 as the cost for an ED visit and \$8,000 for a four-day inpatient stay. Under the IC scenario, a family with a \$50,000 income would spend 3.5 percent of their income (\$1,780) if fully insured or 17.9 percent (\$8,944) if uninsured for the services combined.

The actual cost of care may be substantially higher or lower. A retrospective chart review comparing the cost of care from psychiatric drug overdose patients admitted into critical care, found that tricyclic compound (TCA) drug-related stays cost \$22,923 compared to \$5,379 for selective serotonin reuptake inhibitor (SSRI) drug-related stays.²⁴⁴ As noted in the study, “The cost of hospital management of a single serious TCA overdose will often exceed the average cost allocation for several years of outpatient mental health care under the typical managed care program.”²⁴⁵

Further discussion of financial and socioeconomic effects of the mandated benefit may be found in Appendix II: Ingenix Consulting Actuarial Report (Set Three), page 43.

²⁴⁰ University of Connecticut, Center for Public Health and Health Policy. 2009. Review and Evaluation of Public Act 09-188, An Act Concerning Wellness Programs and Expansion of Health Insurance Coverage. Available at: <http://publichealth.uconn.edu/images/reports/InsuranceReview09.pdf>. Accessed October 25, 2010.

²⁴¹ Insurance status estimates for the Connecticut population may not sum to 100 because of rounding and enrollment changes over the course of a year.

²⁴² Centers for Medicare and Medicaid Services. Emergency Medical Treatment and Labor Act. Available at: <https://www.cms.gov/EMTALA/>. Accessed December 5, 2010.

²⁴³ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. §§ 38A-507 AND 38A-534.

²⁴⁴ D’Mello DA, Finkbeiner DS, Kocher KN. 1995. The cost of antidepressant overdose. *General Hospital Psychiatry* 17(6): 454-455.

²⁴⁵ *Ibid.*

6. *The level of public demand and the level of demand from providers for medical care arising from accidental ingestion or consumption of controlled drugs.*

Medical librarians and CPHHP staff found no published literature addressing the level of public demand or level of demand from providers for medical care arising from accidental ingestion or consumption of controlled drugs.

7. *The level of public demand and the level of demand from providers for insurance coverage for medical care arising from accidental ingestion or consumption of controlled drugs.*

No published literature was found regarding the level of demand from the public or from providers for insurance coverage of medical care arising from accidental ingestion or consumption of controlled drugs.

8. *The likelihood of achieving the objectives of meeting a consumer need as evidenced by the experience of other states.*

As of November 2008, Connecticut appears to be the only state that mandates coverage of medical care arising from accidental ingestion or consumption of controlled drugs.²⁴⁶

9. *The relevant findings of state agencies or other appropriate public organizations relating to the social impact of the mandated health benefit.*

Thirty states now require a fiscal note or an additional review process for any new required health insurance benefit prior to enactment.²⁴⁷ CPHHP staff and/or medical librarians conducted internet searches, database queries and telephone inquiries to locate reports generated by state agencies or appropriate public organizations on mandating coverage for accidental ingestion or consumption of controlled drugs. No reports were identified.

10. *The alternatives to meeting the identified need, including but not limited to, other treatments, methods or procedures.*

The Connecticut mandate requires fully insured plans to cover medical services for CDI. Given the potential severity of conditions that may result from controlled drug consumption, providing medical services appears to be the only appropriate treatment option. The alternative to meeting the medical need for treating overdoses related to controlled drugs would involve not requiring fully insured plans to include coverage for such medical services when controlled drugs are indicated.

In the case that an individual does not have an insurance plan that will cover medical services related to consumption of controlled drugs, the federal Emergency Medical Treatment and Labor Act of 1986 (EMTALA) gives patients with an emergency condition the right to “stabilizing care.” Under EMTALA, all hospitals that participate in Medicare must provide patients with screening, emergency care and appropriate transfers to other facilities regardless of their ability to pay. Notably, access to care under EMTALA did not occur until eleven years after the Connecticut CDI mandate was implemented. It is therefore possible that in the time leading up to the Connecticut mandate, individuals with a CDI may have faced barriers accessing medically necessary care.

Another alternative, although not a substitute for treatment of medical problems that may arise from consumption of controlled drugs, involves educational interventions for the public. ED visits generally

²⁴⁶ NAIC Compendium of State Laws on Insurance Topics. National Association of Insurance Commissioners. August 2008.

²⁴⁷ National Conference of State Legislatures. 2009. Health insurance coverage mandates: Are they too costly? Presentation at the Louisiana Department of Insurance 2009 Annual Health Care Conference. May 28, 2009. Available at: <http://www.ncsl.org/portals/1/documents/health/MandatesCauchi09.pdf>. Accessed May 7, 2010.

involve a wide variety of controlled drugs. Furthermore, a substantial number of ED visits involve children who have accessed and ingested these prescription drugs in the home. These findings indicate a potential need for promoting education and awareness among caregivers about the danger of accidental ingestion of drugs, the importance of storing drugs in secure locations, and methods for appropriate disposal of leftover or expired drugs. Programs for temporary caregivers (e.g., baby sitters), visitors to the home (e.g., grandparents) and immediate family members may help to decrease the need for medical services to treat medical problems arising from the consumption of controlled drugs.²⁴⁸

11. Whether the benefit is a medical or broader social need and whether it is consistent with the role of health insurance and the concept of managed care.

Health care services to treat a poisoning or adverse reaction after accidentally ingesting or consuming controlled drugs is a medical need. Varying levels of medical intervention may be indicated as a result and will vary depending on the controlled drug ingested. In some instances, poisonings may be addressed through a local poison control call center with home therapy and observation. However, this approach should only be taken under the direction of a medical professional and is often not medically recommended. The more severe overdoses tend to require medically necessary procedures such as washing out the stomach to mechanically remove unabsorbed drugs from the stomach (stomach pump), dosages of activated charcoal to reduce drug absorption into the blood, physical or medical restraints if the individual becomes agitated or violent, and antidotes or other medications to reverse the effects or prevent more harm from the drug ingested. In addition, for self-harm related controlled drug consumption, psychiatric services are considered medically necessary.²⁴⁹ Receiving medical interventions in a timely fashion may impact whether a person survives or whether an overdose results in a permanent disability.

Covering the treatment of poisonings is consistent with the tradition of health insurance plans that have served the function of reducing the economic uncertainty of health conditions that may occur due to accidents, disability, disease or other circumstances by spreading the risk across a population. Treatment of poisonings has a relatively low prevalence on a population level but a potentially high cost at the individual level. Spreading the high cost across the insured population is consistent with the role of health insurance. However, the link between controlled drug-related poisonings and potentially illegal behavior or self-imposed harm has been the source of previous opposition to coverage by health carriers.

However, to the extent that the same treatment can be obtained without insurance coverage as required by federal legislation (EMTALA), the medical need for the mandate is limited. In such instances, it may be more likely that the mandate meets a social need of reducing the financial burden to hospitals for such instances.

12. The potential social implications of the coverage with respect to the direct or specific creation of a comparable mandated benefit for similar diseases, illnesses, or conditions.

This mandate requires fully insured health plans to cover medical services related to CDI. The mandate dates back to 1975 and may have played a role in the creation of related mandates in the years thereafter. Following this mandate, three other mandates related to drug or alcohol consumption and one related to mental health have been passed.

Twenty-five years following the controlled drug overdose mandate, two mandates were implemented in 2000. One requires coverage for the medical complications of alcoholism and the other requires coverage for

²⁴⁸ Drug Abuse Warning Network. 2010. Emergency Department Visits Involving Accidental Ingestion of Drugs by Children Aged 5 or Younger. Available at: <http://oas.samhsa.gov/2k10/DAWN014/AccidentalIngestion.htm>. Accessed December 5, 2010.

²⁴⁹ WebMD. 2010. Drug Overdose Treatment. Available at: <http://firstaid.webmd.com/drug-overdose-treatment>. Accessed December 5, 2010.

mental health disorders as described by the DSM-IV. Between these two mandates, coverage for treatment related to substance abuse and self-harm should be expected.

Under the most recent mandate, implemented in 2006, fully insured health plans are prohibited from denying coverage for injuries that may occur while an individual is under the influence of alcohol or drugs. In some ways, this most recent mandate, which was enacted following a court ruling where denial of coverage under health plans was upheld, is very similar to the 1975 mandate.

13. The impact of the benefit on the availability of other benefits currently offered.

The relatively low utilization of treatment for controlled drug overdoses and the small contribution to overall premium costs (less than 0.01 percent of the average PMPM) suggests the benefit would have little to no impact on the availability of other benefits currently offered.

Even so, it is possible that employers may elect to cut costs by eliminating or restricting access to, or placing limits on other non-mandated benefits currently offered. However, the potential for restricting other benefits may be limited. Existing benefits may be administratively costly to restrict and employers may be contractually obligated to provide them. Additionally, many of the benefits in the plan may be included for competitive advantage.

14. The impact of the benefit as it relates to employers shifting to self-insured plans and the extent to which the benefit is currently being offered by employers with self-insured plans.

It is unlikely that an employer would switch to self-funded solely based on this mandate. On average, the coverage for treating complications arising from CDI contributes less than 0.01 percent of the PMPM premium for fully insured members. In addition, CDI is covered in 93 percent of the self-funded groups on which CPHHP received data. Furthermore, 28 percent of these self-funded groups exceeded the coverage requirements applicable to fully insured plans.

Therefore, it is not anticipated that employers shifted or will shift to self-funded plans as a result of this single mandate. It is also not anticipated that repeal of this single mandate would lead to a shift from self-funded plans to fully insured plans among employers. However, employers cognizant of the cumulative financial effects of mandated benefits and large enough to assume the risk of employee health care costs are more likely to consider shifting to self-funded plans. Alternatively, employers may shift to plans with higher coinsurance amounts to keep premiums at a more affordable level (“benefit buy down”). Benefit buy down can result in employees not taking up coverage and thus being uninsured or not accessing care when it is needed because of high deductibles.

15. The impact of making the benefit applicable to the state employee health insurance or health benefits plan.

The state employee health insurance/benefit plans were subject to covering medical care arising from CDI from the mandate implementation date of July 1, 1975 up until July 1, 2010 when Connecticut transitioned from fully insured group plans to self-funded. As a self-funded group, the State of Connecticut is exempt from state health insurance mandates under the federal Employee Retirement Income Security Act (ERISA) law. Assuming Connecticut continues to cover the mandated benefits, the social impact of the benefit for the approximately 134,344 covered lives in state employee plans and 30,000 state retirees not enrolled in Medicare²⁵⁰ is expected to be the same or similar to the social impact for persons covered in non-state employee health insurance plans as discussed throughout Section IV of this report. In terms of financial

²⁵⁰ Personal communication. Scott Anderson, State of Connecticut Comptroller’s Office. September 14, 2010.

impact, if the state employee health insurance/benefit plans continue to provide coverage for the required benefit, the IC actuarial analysis estimates the medical cost to the state employee health insurance plan will total \$59,160 in 2010.²⁵¹

16. The extent to which credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community determines the service to be safe and effective.

The CDI mandate does not specify the type of treatment covered but instead requires that a certain threshold of the costs associated with medical care sought due to drug ingestion be covered. As highlighted in the Background sections, the treatment for an overdose varies depending on the type and quantity of drug ingested. The preferred method of treatment involves administration of antidotes. However, given the lack of specific antidotes for illicit and controlled drugs, recommendations suggest that treatment be tailored to the needs of the individual patient.

Treatment relies on observation of the patient and use of interventions to treat specific symptoms. Traditional treatments such as gastric lavage, whole-bowel irrigation and the use of activated charcoal are no longer standard treatments due to the potential for severe health risks and potential lack of improved health outcomes following their administration. Despite these limitations, in certain instances where the risk of mortality is high and alternatives are few, traditional treatments may be used.

Overall, several authors conclude that there are benefits to treating poisonings despite limitations in study designs. One author summarizes that combining general supportive care with proper use of antidotes can reduce morbidity and mortality associated with severe poisonings.²⁵² In addition, Boyle et al. (2009) found that across studies when poisonings are recognized early, testing is appropriately provided and supportive care is initiated promptly, the majority of health outcomes are good.²⁵³

V. Financial Impact

1. The extent to which the mandated health benefit may increase or decrease the cost of the service over the next five years

The first year of implementation for the controlled drugs mandate was 1975. Lack of longitudinal data on the treatment of CDIs, both before and after the implementation of the mandate, limit the ability to attribute the extent to which cost changes over the next five years are a result of the mandated benefit.

That said, there is some potential that health care facilities providing care for CDIs may acquire a greater proportion of reimbursement for the charges billed for fully insured persons under the mandate. Hypothetically, this increase in revenue may lead to a decrease in the unit cost of services. Given that the mandated benefit targets treatment for a small subset of the population, the impact, if any, on the unit cost of care would likely be small.

²⁵¹ See Appendix II. Ingenix Consulting Actuarial Report. This estimate has been calculated by multiplying the 2010 PMPM medical cost in table 1.3A by 12 to get an annual cost per insured life, and then multiplying that product by 163,334 covered lives, as reported by the State Comptroller's office. This estimate is calculated using weighted averages for all claims paid by Connecticut-domiciled insurers and health maintenance organizations in the State. The actual cost of this mandate to the State plans may be higher or lower, based on the actual benefit design of the State plans and the demographics of the covered lives (e.g., level of cost-sharing, average age of members, etc.). Retention costs are not included in this estimate because the State is now self-funded and the traditional elements of retention do not apply. State costs for administration of this mandated benefit would be in addition to the above amount.

²⁵² Pillay W. 2008. Current views on antidotal therapy in managing cases of poisoning and overdose. *Journal of Association of Physicians of India* 56: 881-92.

²⁵³ Boyle JS, Bechtel LK, Holstege CP. 2009. Management of the critically poisoned patient. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 17:29.

Although not attributable to the mandate, the unit cost of treatment for CDI would also be likely to increase with medical inflation. Assuming a 4 percent increase in cost and stable utilization each year, PMPM premiums for group policies are expected to increase by \$0.01. (This cost is an estimate of the total cost of the service rather than the cost attributable to the mandate).

2. The extent to which the mandated health benefit may increase the appropriate or inappropriate use of the treatment, service or equipment, supplies or drugs, as applicable, over the next five years.

Emergency health care services, such as the treatment of self-harm and suicide attempts, poisoning and adverse reactions involving controlled drugs, fall under the federal Emergency Medical Treatment and Labor Act, which requires the provision of emergency care to stabilize a patient regardless of the person's ability to pay. Injuries that warrant health care visits generally require a prompt medical intervention addressing damage to the body. Therefore, it appears likely that utilization would not change based on the requirement that health plans cover medical services for CDI.

A 2007 report using the Drug Abuse Warning Network public health surveillance data presents ED visit trend data for 2004-2007. The total number of ED visits for the treatment of drug misuse/abuse did not undergo significant changes (although the types of controlled drugs implicated did shift). It is expected that if significant changes in utilization occur, it would likely be explained by population shifts related to the misuse or abuse of controlled drugs or the change in rates for prescribing opioid and psychotropic drugs rather than the coverage required by the mandate. In addition to the mandate dating back to 1975, the care provided under the mandate covers emergency care thus pent up demand for treating CDIs is not expected.

3. The extent to which the mandated health benefit may serve as an alternative for more expensive or less expensive medical care for accidental ingestion or consumption of controlled drugs.

This mandate covers all treatments for CDI, regardless of location. To the extent that it covers care given in an ED, it provides payment for care that must be given under EMTALA regardless of the ability to pay.

4. The methods that will be implemented to manage the utilization and costs of the coverage for medical care arising from accidental ingestion or consumption of controlled drugs.

It is anticipated that health plan carriers will utilize some of the same methods and cost controls that are used for other covered benefits. There are three key exceptions. The carrier must cover medical services related to CDI as specified by the mandate, CDI outpatient care must be covered up to \$500 and up to 30 days of inpatient care must be covered. Within these parameters, it appears that health plans may continue to specify a deductible, coinsurance and cost-sharing requirements for emergency health care visits and the use of ambulance services so long as the mandate language is met. Utilization and cost control mechanisms may also require authorization for certain services.

5. The extent to which insurance coverage for the service may be reasonably expected to increase or decrease the insurance premiums and administrative expenses for policyholders.

Insurance premiums include medical cost and retention costs. Medical cost accounts for medical services. Retention costs include administrative cost and profit (for for-profit carriers) or contribution to surplus (for not-for-profit carriers). Utilization of coverage for medical care arising from CDI accounts for on average an estimated \$0.04 PMPM for group and \$0.03 PMPM for individual health plan premiums in 2010. For fully insured group policyholders, the average medical cost of insurance accounts for \$0.03 PMPM while retention accounts for \$0.01 PMPM. Under fully insured individual policies, the average total medical claims cost is \$0.03 PMPM and retention accounts for \$0.01 PMPM. This cost estimate does not include

any savings for potential medical costs avoided, but only estimates the cost of coverage for medical care arising from accidental ingestion or consumption of controlled drugs. Since the mandate has been in place since July 1, 1975, the PMPM estimates do not capture the increase in cost attributable to the mandate but rather the cost of providing the service. Unless utilization increased substantially once coverage became mandated, the potential increase in premium would be a small fraction of the PMPMs presented.

6. *The extent to which the service is more or less expensive than an existing treatment, service or equipment, supplies or drugs, as applicable, that is determined to be equally safe and effective by credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community.*

No information was identified in the literature to compare the efficacy, safety or costs associated with treatment offered where treating a CDI is covered versus not covered. There have been a few studies that suggest some patients may not get needed care due to the lack of screening for alcohol or drugs.^{254, 255}

7. *The impact of insurance coverage for the service on the total cost of health care, including potential benefits or savings to insurers and employers resulting from prevention or early detection of disease or illness related to such coverage.*

Insurance coverage for medical care arising from CDI adds an estimated \$532,698 to the total cost of health care in Connecticut, with \$489,800 in paid medical claims and \$42,898 in cost sharing expenses. The impact of the mandate on the total cost of health care would be explained as the population-adjusted change in service use and cost following the mandate. Since the mandate was first implemented in 1975, prior utilization and cost data was not available. However, it is unlikely that the utilization of ED visits or non-inpatient visits would change as a result of the mandate. Instead, the proportion of the medical claim paid by the covered individual may have decreased while the proportion paid by the carrier increased. On the other hand, inpatient services may have increased if carriers did not cover inpatient stays (up to 30 days) prior to the mandate.

The literature does not adequately explore potential cost-savings from treating CDI. One analysis of responses in the National Survey on Drug Use and Health suggests high economic costs related to drug abuse in terms of direct health care expenditures and work days missed or lost productivity. To the extent that treatment of CDI incidents may play a role in the treatment of addiction, employers could potentially experience greater productivity in the long run. Similarly, health care carriers could experience lower direct costs for health care services in the long run if addiction treatment occurred following medical services related to CDI.²⁵⁶

8. *The impact of the mandated health care benefit on the cost of health care for small employers, as defined in § 38a-564 of the general statutes, and for employers other than small employers.*

No published literature was found regarding the effect of mandated coverage of medical care arising from CDI on the cost of health care for small employers. Generally, small employers may be more sensitive to premium increases than other employers due to potentially smaller profit margins, leaner benefit plans, and employees bearing a larger proportion of the insurance cost. The premium cost associated with CDI is estimated at \$0.04 PMPM for fully insured group plans (\$0.04 PMPM) in 2010. It is expected that prior to implementation of the Connecticut mandate, some fully insured health plans covered accidental ingestion or consumption of controlled drugs to the extent required by the mandate. Therefore, the change in PMPM

²⁵⁴ *Ibid.*

²⁵⁵ Connecticut General Assembly. Committee on Insurance and Real Estate. Testimony received by the committee March 7, 2006.

²⁵⁶ Birnbaum HG, White AG, Reynolds JL, et al. 2006. Estimated costs of prescription opioid analgesic abuse in the U.S. in 2001. *Clinical Journal of Pain* 22: 667-76.8.

following the mandate may be lower than the \$0.04. This low cost suggests little difference in effect among different sized employers.

9. The impact of the mandated health benefit on cost-shifting between private and public payers of health care coverage and on the overall cost of the health care delivery system in the state.

The costs underlying the health delivery system in the state is understood to include total insurance premiums (medical costs and retention) and cost sharing. The IC analysis of claims data from health plan carriers in Connecticut suggests the overall cost to the health delivery system in 2010 for the coverage of medical care arising from accidental ingestion or consumption of controlled drugs at \$635,632. It is expected that to some extent both outpatient and inpatient services were provided to treat health conditions following CDI. Therefore, the overall cost to the healthcare delivery system, as a result of providing the mandate coverage, is anticipated to be less than the cumulative estimate of \$635,632 for 2010.

Since 1986, EMTALA has been in place. Under EMTALA, it is expected that ED care for CDI would be accessed regardless of the mandate and therefore the overall cost would likely be the same in the absence of the mandate. The primary difference would be in whether an individual or private insurer pays the claim or the health care facility bears the cost.

For example, if a fully insured person had a claim denied, either that individual would pay the cost or, if unable to pay, the hospital would absorb the cost as uncompensated care. However, to the extent that neither the individual nor fully insured health plan covered the claim directly, the hospital/health care institution may have passed along the uncompensated cost of care in the rates for other services that would be covered by private health plans, whether fully insured or self-funded. The hospital may also have received compensation from the State of Connecticut as part of its Uncompensated Care Reimbursements program for hospitals. To this extent, the mandate shifts costs from the state to private payers.

Volume III

Chapter 4

Prohibition on Denying Coverage for Treatment of Injury Based on Consumption or Intoxication from Alcohol, Drugs, or Both

Review and evaluation of Connecticut General Statutes

Chapter 700, §§ 38a-525c and 38a-498

Denial of coverage prohibited for health care services rendered to persons with an elevated blood alcohol content.

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Chapter 4. Table of Contents

- I. Overview.....75
- II. Background.....76
- III. Methods.....81
- IV. Social Impact.....82
- V. Financial Impact.....88

I. Overview

The Connecticut General Assembly directed the Connecticut Insurance Department to review statutorily mandated health benefits existing on or effective on July 1, 2009, pursuant to section (b) of Public Act 09-179, An Act Concerning Reviews of Health Insurance Benefits Mandated in this State. Each review was conducted following the requirements stipulated under Public Act 09-179 as a collaborative effort of Connecticut Insurance Department (CID) and the University of Connecticut Center for Public Health and Health Policy (CPHHP). The CID and CPHHP contracted with the actuarial firm Ingenix Consulting (IC) to conduct actuarial and economic analyses for each mandate.

The mandated health benefit established under Connecticut General Statutes, Chapter 700, §§ 38a-525c and 39a-498 is the subject of this chapter. The statutes apply to fully insured group and individual health plans. The language prohibits denial of health care services to treat any injury even if the injury occurs or is alleged to have occurred while “under the influence of intoxicating liquor or any drug or both”²⁵⁷ as well as if a person has an elevated blood alcohol content (EBAC). Throughout this report, the covered benefit is referred to as health care services to treat an “alcohol/drug injury” (ADI).

The full mandate language from Connecticut General Statutes, Chapter 700, §§ 38a-525c states:

No group health insurance policy providing coverage of the type specified in subdivisions (1), (2), (4), (11) and (12) of § 38a-469 delivered, issued for delivery, amended, renewed or continued in this state on or after October 1, 2006, shall deny coverage for health care services rendered to treat any injury sustained by any person when such injury is alleged to have occurred or occurs under circumstances in which (1) such person has an elevated blood alcohol content, or (2) such person has sustained such injury while under the influence of intoxicating liquor or any drug or both. For the purposes of this section, “elevated blood alcohol content” means a ratio of alcohol in the blood of such person that is eight-hundredths of one per cent or more of alcohol, by weight.”²⁵⁸ § 38a-498 requires the same coverage under fully insured individual health plans.

In March 2010, CPHHP and IC requested and received 2007 and 2008 claims data related to the mandated benefit from six insurers and managed care organizations (MCOs) domiciled in Connecticut that cover approximately 90 percent of the population in fully insured health insurance plans in Connecticut (1.25 million persons). Six insurers/MCOs (carriers) provided data for group plans and four of the six carriers provided claims data for individual policies. However, the claims data for individual policies is considered less credible than the group plan data due to the lower response rate and fewer covered lives represented by the claims. Five carriers also provided information about the extent to which ADI is included under their self-funded plans. It is anticipated that the self-funded plans managed by the sixth carrier offer coverage comparable to the other five carriers. Projected costs for 2010 were estimated from the IC actuarial analysis of carrier claims data from 2007 and 2008. The financial impacts presented likely overstate the impact of the mandate on premiums and the total cost because the claims data reflects all treatment of ADIs among the fully insured, rather than the change in utilization and cost of the benefit following implementation of the mandate.

Current coverage

The mandate went into effect on October 1, 2006 (P.A. 06-39, S. 2). An estimated 46.6 percent of Connecticut residents are enrolled in fully insured health plans covered by the mandate.

²⁵⁷ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. §38A-525C.

²⁵⁸ *Ibid.*

Premium impact

Group plans: On a 2010 basis, the weighted average paid medical cost of treatment claims is estimated to be \$0.03 per member per month (PMPM). The estimated total premium (carrier paid medical claims, administrative fees, and profit) for treatment claims in 2010 for group plans is \$0.04 PMPM, which is less than 0.01 percent of the estimated total cost for group plans. Estimated cost sharing in 2010 in group plans is \$0.01 PMPM.

Individual policies: On a 2010 basis, the weighted average paid medical cost is estimated to be \$0.10 PMPM. The estimated total premium for treatment claims in 2010 under individual policies is \$0.13 PMPM, which is approximately 0.01 percent of estimated total costs for individual policies. Estimated cost sharing in 2010 in individual policies is \$0.03 PMPM.

Self-funded plans

Responses from five carriers suggest that 92.3 percent of their self-funded members and 90 percent of their self-funded groups have coverage for healthcare services related to ADI to an equal or greater extent than the Connecticut mandate requires of fully insured groups.

The projected 2010 cost on Connecticut's health care system for providing treatment for injuries obtained while under or allegedly under the influence of alcohol or drugs to the fully insured population is \$952,409. This amount includes \$644,304 in paid medical claims,²⁵⁹ \$159,020 of cost sharing, and \$149,085 of administrative expenses plus profit (referred to as retention). On average, out-of-pocket cost sharing accounts for an estimated 16.6 percent of the total ADI related expenses.

This report is intended to be read in conjunction with the General Introduction to this volume and the Ingenix Consulting Actuarial and Economic Report, which is included as Appendix II.

II. Background

Alcohol consumption in the United States

The consumption of alcoholic beverages in the United States (U.S.) is common. Reports from the Alcohol Epidemiologic Data System of the National Institute of Alcohol, Abuse and Addiction (NIAAA) suggest that 64.5 percent of the population age 12 and older were considered "current drinkers" having consumed alcoholic beverage(s) in the past year (2008).²⁶⁰ 43.7 percent of current drinkers were "light drinkers," consuming three or fewer drinks per week, 15.1 percent were "moderate drinkers" (drinking 4 to 6 drinks per week if a female and 4 to 14 drinks per week if a male), and approximately 5.6 percent were "heavier drinkers" (daily drinking of one or more drinks for women and two or more drinks for men).²⁶¹

Episodes of consuming five or more drinks in one occasion, referred to as "heavy drinking" or "binge drinking", occurred among 22.7 percent of the U.S. population age 12 or older in 2008. 54.6 percent of the heavy drinkers had 1 to 11 episodes whereas the remaining heavy drinkers had 12 or more binge episodes in 2008.²⁶² Notably, most of the alcohol consumed in the U.S. is consumed during binge drinking episodes. Studies suggest that among adults, 75 percent of alcohol is consumed during binge episodes whereas 90

²⁵⁹ The use of the term "paid medical claims" or "paid medical cost" refers to the dollar value covered by insurers for the service. The paid medical cost PMPM reflects the dollar value covered by insurers for the health care services spread over the relevant fully insured population.

²⁶⁰ National Institute on Alcohol Abuse and Alcoholism. Quick Facts. Alcohol Consumption. Available at: <http://www.niaaa.nih.gov/Resources/DatabaseResources/QuickFacts/AlcoholConsumption/Pages/default.aspx>. Accessed December 5, 2010.

²⁶¹ *Ibid.*

²⁶² *Ibid.*

percent of the alcohol consumed among those younger than 21 is during binge episodes.²⁶³ According to the Behavioral Risk Factors Surveillance Survey (BRFSS), Connecticut is among the tier of states with the highest rate (17.2 to 23.9 percent) of binge drinking.²⁶⁴

Intoxication-related health risks

The health risks related to intoxication vary depending on the amount and frequency of consumption. Physiological effects in the short term can result in impaired brain function manifested as poor judgment, reduced reaction time, loss of balance and motor skills, and slurred speech. Loss of body heat from dilation of blood vessels may also occur and if alcohol is consumed rapidly and in large quantities, coma and death may result.

The short-term impairments from intoxication can also increase risk of motor-vehicle traffic crashes, violence, injuries, and contracting sexually transmitted diseases (STD). The potential long-term impact of alcohol intoxication includes increased risk for developing alcohol dependence, certain cancers, stroke and liver disease.²⁶⁵ Associations specific to binge drinking have also been described by the Centers for Disease Control and Prevention (CDC). Risks include unintentional and intentional injuries, alcohol poisoning, contracting STDs, unintended pregnancy, fetal alcohol syndrome disorder, high blood pressure, stroke and other cardiovascular diseases, liver disease, neurological damage, sexual dysfunction, and poor control of diabetes.²⁶⁶

Consumption of alcohol is considered the leading risk factor for serious injury and the third leading cause of preventable death in the U.S.²⁶⁷ Research findings also suggest that the impact of alcohol on the body's systems may impede the diagnosis and treatment of an injured patient.²⁶⁸ The potential for complications is even greater among those with alcohol abuse or alcohol dependence conditions. As defined by the CDC, alcohol abuse refers to a pattern of drinking that results in harm to one's health, relationships or ability to work. Long-term alcohol abuse may turn into alcohol dependence, also referred to as the chronic disease of alcohol addiction or alcoholism, where a strong craving and inability to limit alcohol consumption are the characteristic symptoms.²⁶⁹ The 12 month prevalence in 2002 was 4.5 percent for alcohol abuse and 3.8 percent for alcohol dependence for the population under 65.²⁷⁰

Alcohol-related Emergency Department visits and hospitalizations

Data from the 1992 National Hospital Ambulatory Medical Care Survey (NHAMCS) found the most common diagnoses for patients presenting for an alcohol-related emergency department (ED) visit were alcohol abuse, alcohol dependence, open head wound, contusion of lower limb, intracranial injury, neurotic disorder, chest pain, and general medical examination. In 20 percent of the alcohol-related visits,

²⁶³ Center for Disease Control and Prevention. Alcohol Fact Sheets. Binge-drinking. Available at: <http://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm>. Accessed December 5, 2010.

²⁶⁴ Center for Disease Control and Prevention. Alcohol. Available at: <http://www.cdc.gov/alcohol/index.htm>. Accessed December 5, 2010.

²⁶⁵ Center for Disease Control and Prevention. Alcohol Fact Sheets. FAQs. Available at: <http://www.cdc.gov/alcohol/faqs.htm>. Accessed December 5, 2010.

²⁶⁶ Center for Disease Control and Prevention. Alcohol Fact Sheets. Binge-drinking. Available at: <http://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm>. Accessed December 5, 2010.

²⁶⁷ Center for Disease Control and Prevention. Alcohol Fact Sheets. 2003 Alcohol Conference Proceedings. http://www.cdc.gov/ncipc/Spotlight/2003_Alcohol_Conference_Proceedings.htm. Accessed December 5, 2010.

²⁶⁸ Hayman A, Crandall M. 2009. Deadly partners: interdependence of alcohol and trauma in the clinical setting. *International Journal of Environmental Research and Public Health* 6(12): 3097-104.

²⁶⁹ *Ibid.*

²⁷⁰ National Institute on Alcohol Abuse and Alcoholism. Quick Facts. Alcohol Dependence. Available at: <http://www.niaaa.nih.gov/Resources/DatabaseResources/QuickFacts/AlcoholDependence/Pages/default.aspx>. Accessed December 5, 2010.

the principal diagnosis given was alcohol abuse or alcohol dependence.²⁷¹ Complaints of pain, injury, and drinking problems were the principal reasons given by the patient for the alcohol-related ED visit.²⁷² Subsequent reports using NHAMCS data suggest an estimated 68.6 million ED visits attributable to alcohol from 1992 to 2000, a rate of 28.7 visits per 1,000 persons in the U.S. Visit rates were highest for those aged 30 through 49 years old, males, and blacks.

Alcohol use is also strongly associated with visits to the emergency department (ED) or trauma center, and related hospitalizations for treatment of injuries. Early studies also show that for 1992 through 2000, alcohol-related ED patients were 1.6 times as likely as other ED patients to have an injury-related diagnosis.²⁷³ A high prevalence of injury has also been documented among heavy drinkers and alcohol use has been noted as highly prevalent among those visiting the ED or trauma center for injuries.²⁷⁴ 2007 data from the NHAMCS shows that ED visits where injuries sustained involve drug and/or alcohol use contributed 4.5 percent of all ED visits.²⁷⁵

In a California county sample of hospitals and HMO hospitals, Cherpitel (1993) found positive breath analyzer results were more common among the injured than non-injured population. The injured population also reported heavy drinking, more frequent drunkenness, prior alcohol-related accidents, and prior treatment for an alcohol-related problem at higher rates.²⁷⁶ In a survey of employees from New England states, the relative risk of accidental injury, injuries requiring hospitalizations, and job-based accidents were greater for heavy/binge drinkers (>5 drinks) compared to those who abstained from drinking. A similar pattern was also found for the use of psychoactive drugs.²⁷⁷

Mechanism and type of injury

Alcohol is commonly noted as a contributing factor in homicides, suicides, fatal motor vehicle crashes, fatal burn injuries, drowning, and fatal falls with the estimated contribution ranging from about 30 percent to 60 percent depending on the incident and study. For example, an analysis of Virginia data detected alcohol in 31.8 percent of homicides, 29.5 percent of suicides and 23.3 percent of unintentional injuries,²⁷⁸ whereas another study estimated 60 to 70 percent of homicides and 40 percent of suicides as involving alcohol.²⁷⁹ For fatal motor vehicle accidents, an estimated 40-50 percent involved alcohol.^{280, 281} Of Connecticut drivers

²⁷¹ Guohua L, Keyl PM, Rothman R, *et al.* 1998. Epidemiology of alcohol-related emergency department visits. *Academic Emergency Medicine* 5(8): 788-95.

²⁷² *Ibid.*

²⁷³ Guohua L, Keyl PM, Rothman R, *et al.* 1998. Epidemiology of alcohol-related emergency department visits. *Academic Emergency Medicine* 5(8): 788-95.

²⁷⁴ Cherpitel CJ. 1993. Alcohol consumption among emergency room patients: comparison of county/community hospitals and an HMO. *Journal of Studies on Alcohol and Drugs* 54(4): 432-40.

²⁷⁵ Center for Disease Control and Prevention. National Hospital Ambulatory Medical Care Survey. Hospital Emergency Department Visits. 2007 Emergency Department Summary, 2006 Emergency Department Summary, 2005 Emergency Department Summary. Available at: http://www.cdc.gov/nchs/ahcd/ahcd_reports.htm#Emergency. Accessed December 23, 2010.

²⁷⁶ Cherpitel CJ. 1993. Alcohol consumption among emergency room patients: comparison of county/community hospitals and an HMO. *Journal of Studies on Alcohol and Drugs* 54(4): 432-40.

²⁷⁷ Hingson RW, Lederman RI, Walsh DC. 1985. Employee drinking patterns and accidental injury: a study of four New England States. *Journal of Studies on Alcohol and Drugs* 46(4): 298-303.

²⁷⁸ Virginia Department of Health. 2008. Alcohol and Injury Report. Available at: <http://www.vahealth.org/injury/data/reports/documents/2008/pdf/Alcohol%20and%20Injury%20Report.pdf>. Accessed December 23, 2010.

²⁷⁹ D'Onofrio G, Degutis LC. 2002. Preventive care in the emergency department: screening and brief intervention for alcohol problems in the emergency department: a systematic review. *Academy of Emergency Medicine* 9(6): 627-638.

²⁸⁰ *Ibid.*

²⁸¹ Alcohol Epidemiologic Data System. Yi H, Chen CM, Williams GD. 2006. Surveillance Report #76: Trends in alcohol-related fatal traffic crashes, United States, 1982-2004. Bethesda, MD: National Institute on Alcohol Abuse and Alcoholism, Division of Epidemiology and Prevention Research.

involved in fatal traffic crashes and administered BAC tests, 41.9 percent were intoxicated.²⁸² Analyses of the injured visiting the ED found references to intoxication in 27 percent of falls, 85 percent of stab wounds²⁸³ and 65 percent of gunshot wounds.²⁸⁴

An analysis of NEISS-AIP data managed by the U.S. Department of Consumer Protection, also finds that involvement of alcohol is associated with where on the body an injury occurs, the precipitating cause of injury, and the type of treatment received for the injury.²⁸⁵ In the NEISS-AIP analysis, ED visits for unintentional alcohol-related nonfatal traumas were more likely to involve an injury to the head or neck (51.6 versus 27.2 percent) and less likely to involve injuries to extremities (hands/feet) than injuries not involving intoxication. The precipitating cause of the injury also differed with falls (40 percent) and transportation-related incidents (36 percent) more likely among alcohol-related injuries than injuries occurring in the absence of alcohol.²⁸⁶

Falls and transportation accounted for more than seven out of ten ED visits for alcohol-related unintentional injuries. Among those with alcohol-related injury, the most common body part injury was the head and neck followed by limbs and other parts. The precipitating cause of these injuries was most commonly falls, transportation accidents, being struck or cut, and other injury mechanisms.²⁸⁷

Treatment

Treatment upon arrival at an ED varies depending on the condition of an individual. According to the 2007 NHAMCS survey, diagnostic and screening services occurred at 66.4 percent of visits. The most common tests ordered included blood tests (39.8 percent), x-rays (33.8 percent), and urinalysis (22.5 percent). Electrocardiograms (16.6 percent), computed tomography (CT) scans (13.9 percent), cardiac monitoring (8 percent) and other imaging (4.7 percent MRI, Ultrasound or other) also occurred at ED visits.²⁸⁸

At approximately half of ED visits (45.5 percent), the visit involved one or more of the following procedures: intravenous fluids (26.6 percent), splint or wrap (5.7 percent), laceration repair (4.4 percent), nebulizer therapy (2.6 percent), bladder catheter (2.2 percent), wound debridement (1.7 percent), incision and drainage (1 percent), cast (0.5 percent), foreign body removal (0.4 percent), nasogastric tube gastric suction, endotracheal intubation, or other procedures (8.3 percent).²⁸⁹ Just over three out of four ED visits involved prescribing or administering a medication to the patient. Of ED visits in 2007, 27.6 percent involved hospitalization, transfer to another unit in the hospital or transfer out of the hospital.

There is some evidence to suggest that alcohol-related injuries may involve additional health care services such as diagnostic tests or hospitalizations. Analysis of the NEISS-AIP data suggests that injury visits involving intoxication were four times more likely to be admitted for hospitalization (16.7 versus 4.3

²⁸² Connecticut Department of Public Health. The Connecticut Highway Safety Strategic Plan FY 2006. Available at: <http://www.ct.gov/dot/lib/dot/documents/ddotinfo/safety/final06plan.pdf>. Accessed December 23, 2010.

²⁸³ Hayman A, Crandall M. 2009. Deadly partners: interdependence of alcohol and trauma in the clinical setting. *International Journal of Environmental Research and Public Health* 6(12): 3097-104.

²⁸⁴ Maier RV. 2001. Ethanol Abuse and the Trauma Patient. *Surgical Infections* 2(2): 133-41.

²⁸⁵ Shults RA, Elder RW, Hungerford DW, et al. 2009. Emergency department visits for alcohol-related unintentional traumatic injuries, United States, 2001. *Journal of Safety Research* 40(4): 329-331.

²⁸⁶ *Ibid.*

²⁸⁷ *Ibid.*

²⁸⁸ Niska R, Bhuiya F, Xu J. 2010. National hospital medical care survey: 2007 emergency department summary. National Health Statistics Reports. Number 26. Available at: <http://www.cdc.gov/nchs/data/nhsr/nhsr026.pdf>. Accessed December 10, 2010.

²⁸⁹ Center for Disease Control and Prevention. National Hospital Ambulatory Medical Care Survey. Hospital Emergency Department Visits. 2007 Emergency Department Summary. Available at: <http://www.cdc.gov/nchs/data/nhsr/nhsr026.pdf>. Accessed December 23, 2010.

percent).²⁹⁰ In a large-scale study, patients positive for alcohol during admission to an ED were found to require significantly more invasive procedures, including intubation, catheter insertion, and diagnostic tests. They were also found to be less likely to be discharged from the EDs and require hospitalization or intensive care unit admission.²⁹¹ In addition, acute intoxication at ED arrival has been found to complicate medical work-ups, requiring more diagnostic procedures such as abdominal ultrasounds or CT scans to clarify potential medical problems.²⁹² NHAMCS data from 1992 through 2000 also suggests that alcohol-related ED patients are 1.8 times more likely to require “urgent” or “emergent” care.²⁹³

Alcohol-related Injury: Access to Treatment and Health Insurance Coverage

The federal Emergency Medical Treatment and Labor Act of 1986 (EMTALA) gives patients with an emergency condition the right to “stabilizing care.” Under the law, all hospitals that participate in Medicare must provide patients with screening, emergency care, and appropriate transfers to other facilities regardless of their ability to pay. Therefore, it is expected that individuals seeking medical care for an ADI would have access to treatment.

Conversely, in the U.S., there has been a long history of denying reimbursements for medical care received by individuals under the influence. The National Association of Insurance Commissioners’ (NAIC) issued the Uniform Accident and Sickness Policy Provision Law (UPPL) in 1947 advocating for states to adopt legislation that would deny reimbursements to patients for medical costs incurred when an accident occurs as a result of “the insured’s being intoxicated or under the influence of any narcotic.” The majority of states passed legislation enacting the UPPL recommendations.

More than fifty years later, the NAIC unanimously voted to amend the UPPL to repeal the Alcohol Exclusion Laws.²⁹⁴ The repeal received broad support with endorsements from the National Conference of State Legislators, the American Medical Association, the National Conference of Insurance Legislators, Mothers Against Drunk Driving, the Emergency Nurses Association, American College of Emergency Physicians, the American Public Health Association and the American Bar Association.²⁹⁵

Although Connecticut never enacted an alcohol exclusion policy, the issue of health plan policy exclusions came to the forefront in 2003 with the court case *Bishop v. National Health Insurance Co.* Following an alcohol-related car accident, nearly \$250,000 in health care claims for Mr. Bishop’s medical care was denied by the insurance carrier. The policy excluded coverage for alcohol-related injuries and ultimately, the court supported the denial of claims based on Bishop’s intoxication at the time of injury and the explicit policy language for intoxication as a condition for benefit exclusion.²⁹⁶ In addition to the court case, previous Connecticut legislation from 1998 required hospitals to establish and implement protocols for screening trauma patients for alcohol and substance abuse (PA 98-201, § 19a-490h). Yet, based on the lack of

²⁹⁰ Shults RA, Elder RW, Hungerford DW, *et al.* 2009. Emergency department visits for alcohol-related unintentional traumatic injuries, United States, 2001. *Journal of Safety Research* 40: 329-31.

²⁹¹ O’Keeffe T, Shafi S, Sperry JL, *et al.* 2009. The implications of alcohol intoxication and the Uniform Policy Provision Law on trauma centers; a national trauma data bank analysis of minimally injured patients. *Journal of Trauma* 66(2):495-8.

²⁹² Roudsari B, Caetano R, Field C. 2010. Alcohol intoxication/dependence, ethnicity and utilization of health care resources in a level I trauma center. *International Journal of the Care of the Injured* 42(2011): 66-71.

²⁹³ Guohua L, Keyl PM, Rothman R, *et al.* 1998. Epidemiology of Alcohol-related Emergency Department Visits. *Academic Emergency Medicine* 5(8): 788-95.

²⁹⁴ American College of Surgeons. Fact Sheet. Summary of UPPL/alcohol exclusion law repeal efforts. Available at: <http://www.facs.org/ahp/views/uppl.pdf>. Accessed November 22, 2010.

²⁹⁵ Ensuring Solutions to Alcohol Problems. The George Washington University. Putting an end to exclusions. Available at: http://www.ensuringsolutions.org/resources/resources_show.htm?doc_id=336682. Accessed November 22, 2010.

²⁹⁶ Rosenbaum A, Van Dyck H, Bartoshesky M, *et al.* 2004. Analysis of State Laws Permitting Intoxication Exclusions in Insurance Contracts and their Judicial Enforcement. Available at: http://www.gwumc.gwu.edu/sphhs/departments/healthpolicy/dhp_publications/pub_uploads/dhpPublication_3626D84B-5056-9D20-3DE5C10098AB28B8.pdf. Accessed November 22, 2010.

existing laws in Connecticut, health insurers could, as they did in the Bishop case, deny coverage based on a positive screening. Prior to the passage of the ADI mandate in Connecticut in 2006, medical providers testified at public hearings in support of the legislation.

III. Methods

Under the direction of CPHHP, medical librarians at the Lyman Maynard Stowe Library at the University of Connecticut Health Center (UCHC) gathered published articles and other information related to medical, social, economic, and financial aspects of the required benefit. Medical librarians conducted literature searches using PubMed, Scopus, UptoDate, DynaMed, Cochrane database, EMedicine, CINAHL, PsycInfo and a web search using Google.

Searches were generally limited to randomized control trial, review, meta-analysis, or practice guidelines articles written in English and published in the last ten years. At times searches were expanded to include government publications, legal cases, legislation, validation studies, multicenter studies, clinical trials and case reports. The primary searches included alcohol-related, drug-related, intoxication, blood alcohol, BAC, ETOH, serum ethanol level or substance abuse plus injury, injuries, or trauma. Modifying terms frequently included visit, visits, trauma center or trauma centre, or emergency. A number of additional search strategies including MeSH and other terms or keywords were employed. To explore economic and social impact, terms such as cost, cost analysis, cost-savings, cost-benefit analysis, health care costs, cost-effectiveness, health care accessibility, health care rationing, and reimbursement were used.

CPHHP staff conducted independent literature searches using the Cochrane Review, PubMed, Westlaw and Google Scholar using search terms similar to those used by the UCHC medical librarians. Where available, articles published in peer-reviewed journals are cited to support the analysis. Other sources of information may also be cited in the absence of peer-reviewed journal articles. Content from such sources may or may not be based on scientific evidence.

Staff gathered additional information through telephone and e-mail inquiries to appropriate state, federal, municipal, and non-profit entities and from internet sources such as the State of Connecticut website, Centers for Medicare and Medicaid (CMS) website, other states' websites, professional organizations' websites, and non-profit and community-based organization websites. In addition, CPHHP staff consulted with clinical faculty from the University of Connecticut School of Medicine Department of Psychiatry on matters pertaining to medical standards of care, traditional, current and emerging practices, and evidence-based medicine related to the benefit.

With the assistance of the Connecticut Insurance Department (CID), CPHHP and Ingenix Consulting requested and received 2007 and 2008 claims data from insurance companies and MCOs domiciled in Connecticut. Six carriers provided claims data for their fully insured group plan participants and four provided claims data for their fully insured individual plan participants. However, the claims data for individual policies is considered less credible than the group plan data due to the lower response rate and fewer covered lives represented by the claims. Five carriers also provided information about coverage for treatment of ADI under the in the self-funded plans they administer. The five carriers cover approximately 47 percent of self-funded members in Connecticut. It is anticipated that the self-funded plans managed by the sixth carrier offer coverage comparable to or more generous than the other five carriers.

CPHHP and the CID contracted with Ingenix Consulting (IC) to provide actuarial and economic analyses of the mandated benefit. A description of the methods used for the actuarial analysis is available in the Ingenix Consulting report located in Appendix II.

IV. Social Impact

1. The extent to which the health care services to treat alcohol/drug injury is utilized by a significant portion of the population.

Individuals accessing health care for the treatment of an ADI are expected to comprise a small percentage of the overall population in Connecticut. In recent years, Connecticut averaged approximately 9,990 injury hospitalizations per year among the population under age 65.²⁹⁷ (3.3 injury visits per 1,000 residents under age 65 annually).

The validity of estimates for treatment of injury potentially acquired while under the influence of alcohol or drugs is complicated by inconsistencies in screening and record documentation.^{298, 299} Analysis of the National Trauma Bank data suggests that estimates on the prevalence of injury visits where a patient is under the influence of drugs or alcohol likely has a strong downward bias.³⁰⁰ Despite these limitations, one national study estimates that about one-tenth of accidental injury visits are due to alcohol.³⁰¹ Using this approach, approximately 1,000 visits would be attributable to ADIs in Connecticut. Alternatively, other estimates, including that found in the analysis of Connecticut carrier claims data, suggest one ADI visit occurred per 1,000 people. Applied to Connecticut, this would suggest approximately 2,985 accidental ADIs occur annually (accounting for 44.7 percent of accidental injury hospitalizations).

The latter estimate of 2,985 visits or 1 per 1,000 residents appears to be more consistent with ADI visit rates of 32.5 percent of visits as suggested in a meta-analysis article³⁰² or assuming rates closer to 50 percent as suggested by the National Trauma Bank data.³⁰³ Using these rates, the estimate of annual ADI visits in Connecticut would be 3,247 or 4,995. (The number of ADI visits attributable to the fully insured population is estimated at approximately one-fifth of the number of visits estimated.³⁰⁴ Therefore, use of treatment for ADI may range from an estimated 200 to 1,000 hospitalizations annually among the fully insured population covered by the mandate).

2. The extent to which the health care services to treat alcohol/drug injury to the population, including, but not limited to, coverage under Medicare, or through public programs administered by charities, public schools, the Department of Public Health, municipal health departments or health districts or the Department of Social Services.

Medicare

Coverage is available for both diagnostic and therapeutic services furnished by the hospital to outpatients for the treatment of alcoholism as defined under hospital services covered under Part B. There is no coverage

²⁹⁷ Table 4: All-injury hospitalization rates by year, sex, age group, race/ethnicity and county of residence. Connecticut Residents, 2000-2004. Available at: <http://www.ct.gov/dph/cwp/view.asp?a=3137&q=397622&dphPNavCtr=|46973|#49305>. Accessed November 22, 2010.

²⁹⁸ Center for Disease Control and Prevention. National Hospital Ambulatory Medical Care Survey. Hospital Emergency Department Visits. 2007 Emergency Department Summary. Available at: <http://www.cdc.gov/nchs/data/nhsr/nhsr026.pdf>. Accessed December 23, 2010.

²⁹⁹ Shults RA, Elder RW, Hungerford DW, *et al.* 2009. Emergency department visits for alcohol-related unintentional traumatic injuries, United States, 2001. *Journal of Safety Research* 40(4): 329-331.

³⁰⁰ London JA, Battistella F. 2007. Testing for substance use in trauma patients: are we doing enough? *Archives of Surgery* 142(7): 633-8.

³⁰¹ Appendix II: Ingenix Consulting. Actuarial Report for the State of Connecticut on Set Three of the Health Insurance Mandates Covered by Public Act No. 09-179. December 15, 2010. p.17

³⁰² MacLeod JB, Hungerford DW. 2010. Alcohol-related injury visits: do we know the true prevalence in U.S. trauma centers. *Injury* 41(7): 847-51.

³⁰³ London JA, Battistella F. 2007. Testing for substance use in trauma patients: are we doing enough? *Archives of Surgery* 142(7): 633-8.

³⁰⁴ This rough estimate of 20 percent is based on the following: 1) O’Keeffe *et al.* (2009) found that 32.3% of NTDB patients with injuries were privately-insured. 2) Prior analysis presented in Appendix III (page 2) of the CPHHP report, “Review and Evaluation of Public Act 09-188, An Act Concerning Wellness Programs and Expansion of Health Insurance Coverage, estimates that 60 percent of individuals covered by private plans are fully insured.

for day hospitalization programs; however, individual hospital services that meet the requirements of the Medicare Benefit Policy Manual may be covered.³⁰⁵ Alcohol treatment services that are provided incident to a physician's professional service in a freestanding clinic may also be covered. However, the patient must have been discharged from an inpatient hospital stay for the treatment of alcoholism or not be in the acute stages of alcoholism.³⁰⁶

There is no evidence to indicate that Medicare would deny coverage for a patient presenting with an elevated BAC level.

Department of Social Services

Medicaid affirmatively stated that it never denies coverage on the basis that the services a client needs are the result of an injury sustained while under the influence of alcohol and/or drugs.³⁰⁷

No information was found that would indicate the Department of Public Health, public schools, municipal health departments, or charities run public programs covering treatment of ADIs.

3. The extent to which insurance coverage is already available for health care services to treat an alcohol/drug injury.

The state of Connecticut requires fully insured group and individual health policies delivered, renewed or amended in the state as of October 1, 2006 to cover health care services to treat an ADI.³⁰⁸ Approximately 46.6 percent of Connecticut residents under age 65 are enrolled in fully insured plans subject to the mandate.³⁰⁹ Information received from carriers domiciled in Connecticut suggests that coverage for the benefit is provided to approximately 92.3 percent of individuals enrolled in self-funded plans. Although Medicaid language does not specify coverage for treatment, according to the DSS Medical Policy Unit, Medicaid does not deny coverage based on whether alcohol or drugs were used at the time of injury.

Cumulatively, about 84-87 percent of residents are enrolled in health plans that cover treatment of ADI as required under the Connecticut mandate.³¹⁰ This estimate includes fully insured, self-funded and Medicaid plans. CPHHP did not find any information to verify that Medicare covers treatment for ADI. Conversely, no evidence was found to indicate that Medicare would not cover treatment for an ADI as described by Connecticut statute.

4. If the coverage is not generally available, the extent to which such lack of coverage results in persons being unable to obtain necessary health care treatment.

Due to the need for timely medical intervention, those with an ADI would likely seek medical care at an emergency department or trauma center regardless of insurance coverage. Under federal law, provision of emergency care is required regardless of the patient's ability to pay.

Some research suggests that medical provider concerns regarding fear of claims denial may decrease the likelihood of screening³¹¹ and "may compromise clinical care and hamper the identification of patients who

³⁰⁵ Medicare National Coverage Determinations Manual. Chapter 1, Part 2, Section 130.2. Revised October 08, 2010.

³⁰⁶ *Ibid.*

³⁰⁷ Personal Communication. Nina Holmes, DSS Medical Policy Unit. July 16, 2010.

³⁰⁸ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. §38A-525C.

³⁰⁹ University of Connecticut, Center for Public Health and Health Policy. 2009. Review and Evaluation of Public Act 09-188, An Act Concerning Wellness Programs and Expansion of Health Insurance Coverage. Available at: <http://publichealth.uconn.edu/images/reports/InsuranceReview09.pdf>. Accessed October 8, 2010.

³¹⁰ Calculations use data from Table 1: Insurance Status for Connecticut's Population.

³¹¹ Gentilello LM, Donato A, Nolan S, *et al.* 2005. Effect of the Uniform Accident and Sickness Policy Provision Law on alcohol screening and intervention in trauma centers. *Journal of Trauma* 59(3): 624-31.

are candidates for an alcohol intervention, even in uninsured patients.”³¹² A similar sentiment was also noted at a 2006 public hearing by Dr. Mark Krauss, former chairman of the Connecticut Medical Society’s Committee on Addictive Medicine. He voiced concerns that lack of screening or testing, or documentation of test results, may prevent patients from getting services they need.³¹³

5. If the coverage is not generally available, the extent to which such a lack of coverage results in unreasonable financial hardships on those persons needing treatment.

Insurance status, required cost sharing, and personal financial resources determine whether a person will face unreasonable financial hardship when needing treatment. The economic analysis section of the IC report compares by family income level the cost burden under varying co-pay arrangements under fully insured plans and if uninsured. Services to persons for an ADI range in cost. Assuming an average hospital charge of \$10,405 for those “minimally injured,” the model family with a \$50,000 income would pay 4.2 percent of their income with a 20 percent co-pay (\$2,081), 2.1 percent with a 10 percent co-pay (\$1,041), or 20.8 percent if uninsured (\$10,405). (Minimally injured refers to patients with a length of stay less than one day and with an Injury Severity Score less than nine).³¹⁴

Notably, the estimated burden could be substantially more than 2.1 to 20.8 percent of a family’s annual income. Under the Connecticut court case that preceded the state mandated benefit, medical charges of \$242,235.45 were denied based on intoxication status.³¹⁵ Alternatively, the burden may be substantially less, as suggested in an analysis of ADI claim denials in California where the average cost of each denied claim was around \$1,260.³¹⁶ Assuming a mean of 2.4 claim denials, the cost would be \$605 or 1.2 percent of a \$50,000 income for an individual with a 20 percent co-pay.

Further discussion of the burden of cost model can be found in Appendix II: Ingenix Consulting Actuarial Report, pages 44-45, and 62.

6. The level of public demand and the level of demand from providers for health care services to treat an alcohol/drug injury.

The public testimony from the Connecticut Medical Society highlighted concerns that around 40 percent of patients presenting to emergency departments have elevated blood alcohol levels and that lack of screening may lead to patients not receiving the care they need.³¹⁷

7. The level of public demand and the level of demand from providers for insurance coverage for health care services to treat an alcohol/drug injury.

During the 1940s the National Association of Insurance Commissioners (NAIC) advocated for states to adopt legislation that would deny reimbursements to patients for costs incurred when an accident is a result of “the insured’s being intoxicated or under the influence of any narcotic.” In 2001, the NAIC unanimously

³¹² O’Keeffe T, Shafi S, Sperry JL, *et al.* 2009. The implication of alcohol intoxication and the Uniform Policy Provision Law on Trauma Centers; A National Data Bank analysis of minimally injured patients. *The Journal of Trauma* 66(2): 495-8.

³¹³ Connecticut General Assembly. Committee on Insurance and Real Estate. Testimony received by the committee March 7, 2006.

³¹⁴ O’Keeffe T, Shafi S, Sperry JL, *et al.* 2009. The implication of alcohol intoxication and the Uniform Policy Provision Law on Trauma Centers; A National Data Bank analysis of minimally injured patients. *The Journal of Trauma* 66(2): 495-8.

³¹⁵ Rosenbaum A, Van Dyck H, Bartoshesky M, *et al.* 2004. Analysis of State Laws Permitting Intoxication Exclusions in Insurance Contracts and their Judicial Enforcement. Available at: http://www.gwumc.gwu.edu/sphhs/departments/healthpolicy/dhp_publications/pub_uploads/dhpPublication_3626D84B-5056-9D20-3DE5C10098AB28B8.pdf. Accessed November 22, 2010.

³¹⁶ California Health Benefits Review Program, 2007. Analysis of Senate Bill 1461, Alcohol and Drug Abuse Exclusion. Available at: http://www.chbrp.org/docs/index.php?action=read&bill_id=58&doc_type=3. Accessed December 18, 2010.

³¹⁷ Connecticut General Assembly. Committee on Insurance and Real Estate. Testimony received by the committee March 7, 2006.

recommended states repeal Alcohol Exclusion Laws.³¹⁸

Specific to Connecticut, during public hearings, members of the Connecticut State Medical Society (CMS) articulated concerns about denial of coverage for patients with an elevated blood alcohol level and the potential medical consequences. The CMS chairman of the Committee on Addictive Medicine, also noted that state requirements to screen for alcohol and drugs at ED visits combined with the potential for insurance denials for care following a positive screen was leading to “ethically precarious situations when treating patients.”³¹⁹

In addition, demand for insurance coverage to treat an ADI also came to the forefront in 2003 with the court case Bishop versus National Health Insurance Co. Under this case medical charges were denied based on the insured person’s intoxication at the time of injury and policy language specifying an intoxication exclusion.³²⁰

8. The likelihood of achieving the objectives of meeting a consumer need as evidenced by the experience of other states.

Almost all states have some policy regarding insurance coverage for the treatment of ADIs. Consistent with the 1947 NAIC policy and not the 2001 repeal, most state policies support denial of coverage for ADI. Prohibition of claim denials for ADI or required coverage regardless of intoxication status exists in at least 10 states, including Connecticut.

Results from a 2002 survey conducted by The George Washington University Medical Center (GWU) identified eight states with mandate coverage for alcohol-related treatment with no exceptions: Connecticut, Delaware, Indiana, Kentucky, Minnesota, New Jersey, Vermont, and Virginia.³²¹ This includes alcohol-related injuries and other treatment related to the consumption of alcohol. In addition, as of 2004, two additional states, Iowa³²² and South Dakota³²³ prohibit the use of alcohol- or drug-related intoxication exclusion clauses in health insurance contracts.

Another seven states do not have drug or alcohol exclusion legislation (Utah, Colorado, Massachusetts, Michigan, New Hampshire, New Mexico, and Wisconsin). However, this does not mean that carriers cannot exclude based on intoxication. Interestingly, two states, Minnesota and Oklahoma permit exclusion for injuries related to narcotics but remain silent on alcohol.³²⁴

9. The relevant findings of state agencies or other appropriate public organizations relating to the social impact of the mandated health benefit.

Thirty states now require a fiscal note or an additional review process for any new required health insurance

³¹⁸ American College of Surgeons. Fact Sheet. Summary of UPPL/alcohol exclusion law repeal efforts. Available at: <http://www.facs.org/ahp/views/uppl.pdf>. Accessed November 22, 2010.

³¹⁹ Connecticut General Assembly. Committee on Insurance and Real Estate. Testimony received by the committee March 7, 2006.

³²⁰ Rosenbaum A, Van Dyck H, Bartoshesky M, *et al.* 2004. Analysis of State Laws Permitting Intoxication Exclusions in Insurance Contracts and their Judicial Enforcement. Available at: http://www.gwumc.gwu.edu/sphhs/departments/healthpolicy/dhp_publications/pub_uploads/dhpPublication_3626D84B-5056-9D20-3DE5C10098AB28B8.pdf. Accessed November 22, 2010.

³²¹ The George Washington University Medical Center. Ensuring Solutions. December 2002. State laws, health insurance, and alcohol treatment. Available at: http://www.ensuringsolutions.org/resources/resources_show.htm?doc_id=332865. Accessed: November 22, 2010.

³²² Iowa Code Ann. § 514A.3 (2) (K) (West 2003).

³²³ South Dakota. Codified Laws § 58-17-30.8.

³²⁴ The George Washington University Medical Center. Ensuring Solutions. December 2002. State laws, health insurance, and alcohol treatment. Available at: http://www.ensuringsolutions.org/resources/resources_show.htm?doc_id=332865. Accessed November 22, 2010.

benefit prior to enactment.³²⁵ CPHHP staff conducted internet searches, database queries and telephone inquiries to locate reports generated by state agencies or appropriate public organizations on the mandate. States searched for which no evidence of a review was found include Alabama, Alaska, Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Maryland, Maine, Massachusetts, Virginia, Wisconsin, Louisiana, New Jersey, Pennsylvania, Washington and Texas.

The one study identified reviewed California Senate Bill 1461, Alcohol and Drug Abuse Exclusion (2007). The review conducted by the California Health Benefits Review Program (CHBRP) included a discussion related to the social impact of mandated insurance coverage for the treatment of alcohol or drug related injury. Major findings included that an estimated 281 claims for 110 individuals (2.4 claims per person) were denied in 2006 due to the exclusion of coverage for injuries sustained while intoxicated. The report estimates the average cost of each denied claim around \$1,260. CHBRP found no compelling evidence that the mandate would change physician practice patterns in terms of screening and counseling for alcohol and substance abuse or treatment for illness and injuries sustained in conjunction with alcohol or substance abuse thus resulting in no changes to overall public health.³²⁶

10. The alternatives to meeting the identified need, including but not limited to, other treatments, methods or procedures.

The federal Emergency Treatment and Labor Act of 1986 (EMTALA) gives patients with an emergency condition the right to “stabilizing care.” Under the law, all hospitals that participate in Medicare must provide patients with screening, emergency care and appropriate transfers to other facilities regardless of their ability to pay. Since the Connecticut mandate prohibits fully insured plans from denying coverage for treatment of an ADI and injuries must be treated under EMTALA, no alternatives are apparent.

11. Whether the benefit is a medical or broader social need and whether it is consistent with the role of health insurance and the concept of managed care.

The need for health care services to treat an injury is not alleviated if it is sustained while under the influence of alcohol, drugs, or both. Treating injuries (e.g., broken bones, contusions, poisoning, burns) requires varying levels of medical intervention. A person suffering a fall may require a broken bone to be reset and cast while a patient in a car accident may require surgery, blood transfusions, organ transplants or other trauma care. Receiving medical interventions in a timely fashion may impact whether a person lives or whether an injury becomes a permanent disability.

Covering the treatment of injuries is consistent with the role of health insurance because it reduces the economic uncertainties that may occur due to accidents, disability, disease or other circumstances by spreading the risk across a population. Treatment of injury has a low prevalence but a high cost. Spreading the cost across the insured population is consistent with the role of health insurance. However, the link between ADI and potentially illegal behavior or self-imposed harm has been the source of previous opposition of coverage for ADI claims.

To the extent that “stabilizing care” can be obtained without insurance coverage as required by federal legislation, the medical need for the mandate may be limited. If fewer alcohol and drug screenings occur or opportunities for brief drug and alcohol interventions are missed, then there may be some medical need for the mandate.

³²⁵ National Conference of State Legislatures. 2009. Health insurance coverage mandates: Are they too costly? Presentation at the Louisiana Department of Insurance 2009 Annual Health Care Conference. May 28, 2009. Available at: <http://www.ncsl.org/portals/1/documents/health/MandatesCauchi09.pdf>. Accessed May 7, 2010.

³²⁶ California Health Benefits Review Program, 2007. Analysis of Senate Bill 1461, Alcohol and Drug Abuse Exclusion. Available at: http://www.chbrp.org/docs/index.php?action=read&bill_id=58&doc_type=3. Accessed December 18, 2010.

12. The potential social implications of the coverage with respect to the direct or specific creation of a comparable mandated benefit for similar diseases, illnesses, or conditions.

The ADI mandate removes the ability to exclude from fully insured health plans coverage for the treatment of injuries based on drug or alcohol-related intoxication. There are some social implications for the creation of comparable mandates in the future. However, predating implementation of the ADI mandate in 2006, three other mandates related to drug or alcohol consumption had been passed. The earlier mandates require coverage for treatment of accidental ingestion or consumption of controlled drugs, treatment of the medical complications of alcoholism, and coverage for mental health disorders as described by the DSM-IV.

In the future, it is also possible that as in the case of the ADI mandate, other mandates may be passed to prohibit certain coverage exclusions. An example of a mandate to this effect is the autism spectrum disorders mandate, implemented in 2009. Under this mandate, to the extent that a policy covered physical therapy, speech therapy and occupational therapy for other conditions, the policy became required to cover such therapies for individuals with an autism spectrum disorders diagnosis. Previously, an autism spectrum disorder diagnosis may have been written in as part of a therapy exclusion policy.

13. The impact of the benefit on the availability of other benefits currently offered.

The relatively low utilization of treatment for ADI and the small contribution to overall premium costs (less than 0.01 percent of the average PMPM) suggests the benefit would have little to no impact on the availability of other benefits currently offered.

Even so, it is possible that the carriers or employers may elect to cut costs by eliminating or restricting access to, or placing limits on, other non-mandated benefits currently offered. However, the potential for restricting other benefits may be limited. Existing benefits may be administratively costly to restrict and insurers or employers may be contractually obligated to provide them. Additionally, many of the benefits in the plan may be included for competitive advantage. Inclusion of mandated benefits despite exemption from such requirements under the Employee Retirement Income Security Act (ERISA) is often seen in self-funded group plans, suggesting that the range of benefits that would be considered for elimination under any health plan is likely limited.

14. The impact of the benefit as it relates to employers shifting to self-insured plans and the extent to which the benefit is currently being offered by employers with self-insured plans.

Considering the relatively low cost of providing treatment for ADIs when the cost is spread across the fully insured population, it appears unlikely that an employer would switch to self-funded solely based on the mandate. On average the coverage of ADIs contributes less than 0.01 percent of the PMPM premium for fully insured members. It also appears that covering treatment of ADI appears to be the norm for self-funded groups. (90 percent of the self-funded groups CPHHP received information about covered health care services for the treatment of ADI at least to the extent of the Connecticut mandate).

Therefore, it is not anticipated that employers shifted or will shift to self-funded plans as a result of this single mandate. It is also not anticipated that repeal of this single mandate would lead to a shift from self-funded plans to fully insured plans among employers. However, employers cognizant of the cumulative financial effects of mandated benefits and large enough to assume the risk of employee health care costs are more likely to consider shifting to self-funded plans. Alternatively, employers may shift to plans with higher coinsurance amounts to keep premiums at a more affordable level (“benefit buy down”). Benefit buy down can result in employees not taking up coverage and thus being uninsured or not accessing care when it is needed because of high deductibles.

15. The impact of making the benefit applicable to the state employee health insurance or health benefits plan.

The state employee health insurance/benefit plans were subject to the mandate for treatment of ADI from the implementation date of October 1, 2006 up until July 1, 2010 when Connecticut transitioned from fully insured group plans to self-funded. As a self-funded group, the State of Connecticut is exempt from state health insurance mandates under the federal Employee Retirement Income Security Act (ERISA). Assuming Connecticut continues to cover the mandated benefits, the social impact of the benefit for the approximately 134,344 covered lives in state employee plans and 30,000 state retirees not enrolled in Medicare³²⁷ is expected to be the same or similar to the social impact for persons covered in non-state employee health insurance plans as discussed throughout Section IV of this report. In terms of financial impact, if the state employee health insurance/benefit plans continue to provide coverage for the required benefit, the IC actuarial analysis estimates the medical cost to the state employee health insurance plan will total \$59,160 in 2010.³²⁸

16. The extent to which credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community determines health care services to treat an alcohol/drug injury to be safe and effective.

The type of treatment provided under this mandate is specific to injury. In some cases, it may be necessary to account for the added impact of intoxication on medical interventions. However, this mandate is primarily concerned with requiring health plans to cover health care services rendered for the treatment of ADI rather than focus on any specific type of treatment. Although the literature does not specifically evaluate the safety and effectiveness of the mandate provisions, there is evidence to suggest that ensuring insurance coverage for ADI may increase provider compliance with trauma patient screening initiatives.³²⁹

V. Financial Impact

1. The extent to which the mandated health benefit may increase or decrease the cost of health care services to persons with an alcohol/drug injury over the next five years.

Lack of longitudinal data on the treatment of ADIs both before and after the implementation of the mandate limit the ability to attribute the extent to which cost changes over the next five years are a result of the mandated benefit.

That said, there is some potential that health care facilities providing care for ADIs may acquire a greater proportion of reimbursement for the charges billed for fully insured persons under the mandate. Hypothetically, this increase in revenue or offset in what may otherwise be uncompensated care may lead to a decrease in the unit cost of services. Given that the mandated benefit targets treatment for a subset of the overall population likely to acquire medical care for ADI and that the prevalence of health care sought for

³²⁷ Personal communication. Scott Anderson, State of Connecticut Comptroller's Office. September 14, 2010.

³²⁸ For details on estimate calculation refer to Appendix II: Ingenix Consulting Actuarial Report for the State of Connecticut on Set Three of the Health Insurance Mandates Covered by Public Act 09-179. This estimate has been calculated by multiplying the 2010 PMPM medical cost in table 1.3A by 12 to get an annual cost per insured life, and then multiplying that product by 163,334 covered lives, as reported by the State Comptroller's office. This estimate is calculated using weighted average for all claims paid by Connecticut-domiciled insurers and health maintenance organizations in the State. The actual cost of this mandate to the State plans may be higher or lower, based on the actual benefit design of the State plans and the demographics of the covered lives (e.g., level of cost-sharing, average age of members, etc.). Retention costs are not included in this estimate because the State is now self-funded and the traditional elements of retention do not apply. State costs for administration of this mandated benefit would be in addition to the above amount.

³²⁹ O'Keeffe T, Shafi S, Sperry JL, *et al.* 2009. The implication of alcohol intoxication and the Uniform Policy Provision Law on Trauma Centers; A National Data Bank analysis of minimally injured patients. *The Journal of Trauma* 66(2): 495-8.

ADIs is relatively low,³³⁰ the impact, if any, on the unit cost of care would likely be small.

Although not attributable to the mandate, the unit cost of treatment for ADI would also be likely to increase with medical inflation.

2. The extent to which the mandated health benefit may increase the appropriate or inappropriate use of the treatment for alcohol/drug injuries, over the next five years.

Some emergency health care services, such as the treatment of injury or trauma, fall under the federal Emergency Medical Treatment and Labor Act (EMTALA), which requires the provision of emergency care to stabilize a patient regardless of the person's ability to pay. Injuries that warrant health care visits generally require a prompt medical intervention addressing damage to the body. Therefore, it appears likely that utilization would not substantially change based on the requirement that health plans not deny coverage for treatment of ADI.

3. The extent to which coverage of health care services to treat an alcohol/drug injury may serve as an alternative for more expensive or less expensive treatment, service or equipment, supplies or drugs, as applicable.

Some, and perhaps most treatments for an ADI would be provided under EMTALA. EMTALA gives patients with an emergency condition the right to "stabilizing care" from hospitals authorized to accept Medicare patients regardless of one's ability to pay. Since federal law requires such hospitals to render emergency care, medical care is likely to be received for the treatment of ADI even in the absence of a mandate. However, due to EMTALA, it is expected that the costs of "stabilizing care" associated with treatment of an ADI would be similar in the absence of the Connecticut mandate.

4. The methods that will be implemented to manage the utilization and costs of health care services rendered to treat alcohol/drug injuries.

It is anticipated that health plan carriers will utilize the same methods and cost controls that are used for other covered benefits. The primary exception is that coverage exclusions based on alcohol or drug use is not permitted. It further appears that requirements that would be in place for hospital or emergency health care visits would apply under this mandate. In many cases, health plans specify a deductible and cost-sharing for emergency health care visits and the use of ambulance services. Utilization and cost control mechanisms may also require authorization for certain services.

5. The extent to which insurance coverage for health care services to treat alcohol/drug injuries are reasonably expected to increase or decrease the insurance premiums and administrative expenses for policyholders.

Insurance premiums include medical cost and retention costs. Medical cost accounts for medical services. Retention costs include administrative cost and profit (for for-profit carriers) or contribution to surplus (for not-for-profit carriers). Use of health care services for treating an ADI cost, on average, an estimated \$0.04 PMPM for group and \$0.13 PMPM for individual health plan premiums in 2010. For fully insured group policyholders, the average medical cost of insurance accounts for \$0.03 PMPM while retention accounts for \$0.01 PMPM. Under fully insured individual policies, the average total medical claims cost is \$0.10 PMPM and retention accounts for \$0.03 PMPM.³³¹ The PMPM estimates do not reflect the impact on premiums that may have occurred once coverage became mandated. Relevant information on available coverage prior to enactment of the mandate on October 1, 2006 was not identified.

³³⁰ *Ibid.*

³³¹ Ingenix Consulting. Actuarial Report for the State of Connecticut. Located in Appendix II.

6. *The extent to which health care services to treat alcohol/drug injury are more or less expensive than an existing treatment, service or equipment, supplies or drugs, as applicable, that is determined to be equally safe and effective by credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community.*

No information was identified in the literature to compare the efficacy, safety or costs associated with treatment where treating an ADI is covered versus not covered. A few articles note that concerns about claim denials drive poor adherence to professional practice guidelines to screen patients for alcohol and drug use at emergency visits.³³² It has also been suggested that patients may not get needed care due to the lack of such screening.^{333, 334}

7. *The impact of insurance coverage for health care services to treat alcohol/drug injury on the total cost of health care, including potential benefits or savings to insurers and employers resulting from prevention or early detection of disease or illness related to such coverage.*

Insurance coverage for health care services to treat ADIs in the fully insured population accounts for an estimated \$803,324 of health care costs. Because the federal EMTALA requires “stabilizing care” be provided by Medicare authorized hospitals, it is possible that the projected cost of \$803,324 would remain in the absence of the mandate. However, in the absence of the mandate the injured party and/or the hospital would assume the cost of the medical claim rather than the insurance carrier.

Although it is likely that employees/plan members would obtain treatment for ADIs in the absence of the mandate, there is potential that having a mandate that prohibits denial of claims based on alcohol or drug-related intoxication may increase implementation of Alcohol Screening, Brief Intervention and Referral (SBIRT) programs in emergency department or trauma center settings.³³⁵ Such programs are promoted by the American College of Emergency Physicians, Emergency Nurses Association, the American College of Surgeons-Committee on Trauma, the American Public Health Association, and the National Highway Traffic Safety Administration.³³⁶ Evidence from the literature suggests that interventions with problem drinkers reduce both injuries and events that lead to injury (e.g., motor vehicle crashes, falls, suicide attempts, domestic violence).³³⁷

8. *The impact of the mandated health care benefit on the cost of health care for small employers, as defined in § 38a-564 of the general statutes, and for employers other than small employers.*

Providing treatment as required by the mandate cost group plans, on average, \$0.04 PMPM. Available data does not allow for a calculation of how much of the \$0.04 in treatment-related costs occur as a result of the mandate being passed. Small employers may be more sensitive to cost changes than larger employers. However, the low-impact of the mandate on fully insured group plan premiums suggests little difference in effect has occurred based on employer size.

9. *The impact of the mandated health benefit on cost-shifting between private and public payers of health care coverage and on the overall cost of the health care delivery system in the state.*

³³² O’Keeffe T, Shafi S, Sperry JL, *et al.* 2009. The implication of alcohol intoxication and the Uniform Policy Provision Law on Trauma Centers; A National Data Bank analysis of minimally injured patients. *The Journal of Trauma* 66(2): 495-8.

³³³ *Ibid.*

³³⁴ Connecticut General Assembly. Committee on Insurance and Real Estate. Testimony received by the committee March 7, 2006.

³³⁵ American College of Surgeons. 2006. Statement on insurance, alcohol-related injuries, and trauma centers.ST-55. Available at: http://www.facs.org/fellows_info/statements/st-55.html. Accessed December 23, 2010.

³³⁶ Vaca FE, Winn D. 2007. The basics of alcohol screening, brief intervention and referral to treatment in the emergency department. *Western Journal of Emergency Medicine* 8(3): 88-92.

³³⁷ Dinh-Zarr TB, Goss CW, Heitman E, *et al.* Interventions for preventing injuries in problem drinkers. *Cochrane Database of Systematic Reviews* 2004, Issue 3. Art. No.: CD001857.

The costs underlying the health care delivery system in the state is understood to include insurance premiums (which include medical cost and retention) plus cost sharing. The overall cost of treating ADIs for the fully insured population is expected to be approximately \$952,409 in 2010. Due to EMTALA provisions, it is expected that much of the care for ADIs would be accessed regardless of the mandate and therefore the overall cost would likely be similar in the absence of the mandate.

The requirement that fully insured plans meet the state mandate may or may not result in a shift of costs between the private and public payers of health care. It may be the case that the costs shift across different private payers or across private and nonprofit payers.

Prior to the mandate, if a fully insured person had a claim denied, either that individual would pay the cost or if unable to pay, the hospital would absorb the cost as uncompensated care. However, to the extent that neither the individual nor fully insured health plan covered the claim directly, the hospital/health care institution may have passed along the uncompensated cost of care in the rates for other services that would be covered by private health plans, whether fully insured or self-funded.

Volume III

Chapter 5

Treatment of Medical Complications of Alcoholism

Review and evaluation of Connecticut General Statutes,

Chapter 700, § 38a-533

Mandatory coverage for the treatment of medical complications of alcoholism

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Chapter 5. Table of Contents

- I. Overview..... 95
- II. Background..... 96
- III. Methods..... 99
- IV. Social Impact..... 100
 - Table III.5.1: U.S. Alcohol related hospital discharge rates per 10,000 people (2007)..... 100
- V. Financial Impact..... 107

I. Overview

The Connecticut General Assembly (the Committee) directed the Connecticut Insurance Department to review statutorily mandated health benefits existing on or effective on July 1, 2009, pursuant to section (b) of Public Act 09-179, An Act Concerning Reviews of Health Insurance Benefits Mandated in this State. Each review was conducted following the requirements stipulated under Public Act 09-179 as a collaborative effort of Connecticut Insurance Department (CID) and the University of Connecticut's Center for Public Health and Health Policy (CPHHP). The CID and CPHHP contracted with the actuarial firm Ingenix Consulting (IC) to conduct a fiscal and economic analysis for each mandate.

This chapter evaluates the financial and social impact of the requirement for fully insured group health insurance policies to cover medical expenses connected to the medical complications of alcoholism (MCA), as specified under Connecticut General Statutes, Chapter 700, §§ 38a-533. The mandate initially passed in 1974 under P.A. 74-162, S. 1-6. The statutory language requires that each group health insurance policy:

- (a) Except as provided in subsection (c) of this section, each group health insurance policy providing coverage of the type specified in subdivisions (1), (2), (4), (11) and (12) of § 38a-469 shall provide coverage for expenses incurred in connection with medical complications of alcoholism pursuant to diagnosis or recommendation by a physician licensed pursuant to the provisions of chapter 370. As used in this section, “medical complications of alcoholism” means such diseases as cirrhosis of the liver, gastrointestinal bleeding, pneumonia, and delirium tremens.
- (b) Medical complications of alcoholism shall be recognized to the extent specified in the contract for confinement for any other disease.
- (c) A group health insurance policy providing coverage of the type specified in subdivisions (1), (2), (4), (11) and (12) of § 38a-469 may exclude the benefits required by this section if such benefits are included in a separate policy issued to the same group by an insurance company, health care center, hospital service corporation, medical service corporation or fraternal benefit society. Such separate policy, which shall include the benefits required by this section, shall not be required to include any other benefits mandated by this title.
- (d) The provisions of this section shall apply to any group health insurance policy delivered or issued for delivery, renewed or continued in this state on and after January 1, 2000, and to any group health insurance policy which is thereafter amended to substantially alter or change benefits or coverage's.

The MCA mandate does not require plans for fully insured individuals to include the coverage described above. The language is only applicable to group plans.

To evaluate this mandate, in March 2010, CPHHP and IC requested and received 2007 and 2008 claims data related to the mandated benefit from six insurers and managed care organizations (carriers) domiciled in Connecticut that cover approximately 90 percent of the population in fully insured group and individual health insurance plans in Connecticut (1.25 million persons). Six carriers provided data for group plans. Five carriers also provided information about the extent to which treatment for MCA is included under their self-funded plans. It is anticipated that the self-funded plans managed by the sixth carrier offer coverage comparable to the other five carriers. Projected costs for 2010 were estimated from the IC actuarial analysis of carrier claims data from 2007 and 2008. The financial impacts presented likely overstate the impact of

the mandate on premiums and the total cost because the claims data reflects all treatment for MCA among members of fully insured group plans, rather than the change in utilization and cost of the benefit following implementation of the mandate.

Current coverage

The original MCA mandate went into effect in 1975 (P.A. 74-162, S. 1-6). The mandate applies to fully insured groups, covering approximately 40.8 percent of the Connecticut population. Although not required by the mandate, survey results suggest that approximately 95.5 percent of residents enrolled in self funded plans are covered for MCA.

Premium impact

The projected 2010 average per member per month (PMPM) for all covered MCA provided to members of fully insured plans is summarized below. The gross cost presented is expected to be higher than the “new” cost or change in cost that may have occurred following the mandate.

Group plans: On a 2010 basis, medical cost is estimated to be \$0.37 PMPM. The estimated total premium (carrier paid medical claims, administrative fees, and profit) of the mandated services in 2010 for group plans is \$0.44 PMPM, which is 0.1 percent of the estimated total cost for group plans. However, it is important to note that a wide range in average PMPMs were observed across health plan carriers, with some carriers reporting *de minimus* costs less than \$0.03 PMPM and one carrier reporting costs greater than \$1.00 PMPM. Using an alternative data set and analytic method, a supplementary analysis conducted by IC suggests a lower paid medical cost for MCA of \$0.10 PMPM. Estimated cost sharing on a 2010 basis is \$0.03 PMPM.

Individual policies: Not applicable. The MCA mandate is limited to group plans.

Self-funded plans

90 percent of self-funded plans managed by five responding carriers cover MCA at least to the extent of Connecticut’s statutory requirements. For the responding carriers, 94.5 percent of self-funded members had coverage for expenses related to MCA.

The projected 2010 cost on Connecticut’s health care system for covering expenses related to MCA for the fully insured group population is \$6,925,508. This amount includes \$5,419,362 total paid medical claims, \$422,274 cost sharing and \$1,083,872 retention (administrative expenses plus profit). On average, out-of-pocket cost sharing accounts for an estimated 6.1 percent of the total MCA related expenses.

This report is intended to be read in conjunction with the General Introduction to this volume and the Ingenix Consulting Actuarial and Economic Report, which is included as Appendix II.

II. Background

Defining Alcoholism

First published in 1952 by the American Psychiatric Association, the Diagnostic and Statistical Manual of Mental Disorders (DSM) sets forth the standard classifications used by mental health professionals in the United States.³³⁸ Since its inception, the DSM has undergone periodic content revisions and updates to reflect contemporary knowledge of psychiatric conditions and related treatments. Updates to the DSM were published in 1968 (DSM II), 1980 (DSM III), 1987 (DSM III-R), 1994 (DSM IV) and 2000 (DSM IV-

³³⁸ American Psychiatric Association. 2010. Diagnostic and statistical manual.

Available at: <http://www.psych.org/mainmenu/research/dsmiv.aspx>. Accessed December 20, 2010.

TR) with the next expected manual due out in 2013 (DSM V).

Under the DSM I and DSM II, alcoholism was the only classification for alcohol-related disorders. Rather than specific criteria for diagnosis, descriptive language defining alcoholism was presented in paragraph form.³³⁹ In the DSM II, the category of alcoholism was “for patients whose alcohol intake is great enough to damage their physical health, or their personal or social functioning, or when it has become a prerequisite to normal functioning.”³⁴⁰ The four potential categories for alcoholism included:

- episodic excessive drinking: intoxication as frequently as four times a year, where intoxication involves impaired speech or clearly altered behavior;
- habitual excessive drinking: intoxication more than 12 times a year or being recognizably under the influence of alcohol more than once a week, though not intoxicated;
- alcohol addiction: dependence on alcohol as suggested by withdrawal symptoms or continued heavy drinking for three or more months; and
- other and unspecified alcoholism.³⁴¹

The DSM III (1980) replaced the classification of “alcoholism” with “alcohol-related disorders.” Under alcohol-related disorders, the concepts of alcohol abuse and alcohol dependence became separate diagnoses. This dichotomous classification continues to exist under the DSM IV (1994). Clinicians first look to diagnose alcohol dependence and if the criteria are not met, a diagnosis of alcohol abuse is explored.

The DSM-IV defines dependence as:

- a maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12-month period:
- tolerance, as defined by either of the following: (1) a need for markedly increased amounts of the substance to achieve intoxication or desired effect, (2) markedly diminished effect with continued use of the same amount of substance;
- withdrawal, as manifested by either of the following: (1) the characteristic withdrawal syndrome for the substance; (2) the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms;
- the substance is often taken in larger amounts or over a longer period than was intended;
- there is a persistent desire or unsuccessful efforts to cut down or control substance use;
- a great deal of time is spent in activities to obtain the substance, use the substance, or recover from its effects; and
- important social, occupational or recreational activities are given up or reduced because of substance use;
- the substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., continued drinking despite recognition that an ulcer was made worse by alcohol consumption).

The DSM IV defines abuse as:

- a maladaptive pattern of substance use leading to clinically significant impairment or distress, as

³³⁹ Hasin D. 2003. Classification of alcohol use disorders. *Alcohol Research and Health* 27(1): 5-17.

³⁴⁰ American Psychiatric Association. 1968. Diagnostic and statistical manual of mental disorders. 2nd Ed. Washington, DC: Author, 45.

³⁴¹ *Ibid.*

manifested by one (or more) of the following, occurring within a 12-month period:

- recurrent substance use resulting in a failure to fulfill major role obligations at work, school, home (e.g., repeated absences or poor work performance related to substance use; substance-related absences, suspensions, or expulsions from school; neglect of children or household)
- recurrent substance use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by substance use)
- recurrent substance-related legal problems (e.g., arrests for substance-related disorderly conduct)
- continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance (e.g., arguments with spouse about consequences of intoxication, physical fights).³⁴²

In contemporary terms, alcohol dependence is synonymous with the chronic disease of alcohol addiction or alcoholism.³⁴³ However, the concept of alcoholism at the time the MCA mandate was passed encompassed both alcohol dependence and alcohol abuse.

Alcohol-Related Disorders and At-Risk Drinking in the United States

According to the 2001-2002 National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), the lifetime prevalence of any alcohol use disorder was 30.3 percent, with 17.8 percent for alcohol abuse and 12.5 percent for alcohol dependence. The 12-month prevalence of alcohol-related disorders was 8.5 percent for 2001-2002 with 4.7 percent for alcohol abuse and 3.8 percent for alcohol dependence.³⁴⁴

Among those who consume alcohol, individuals considered “heavier drinkers” and those who participate in “heavy drinking” or “binge drinking” are at increased risk for alcohol-related disorders or other medical complications.³⁴⁵ Analyses of national data suggest that 5.6 percent of the population age 12 and older were “heavier drinkers” (2002)³⁴⁶ and 22.7 percent had binge drinking episodes (2008).³⁴⁷ [Heavy drinkers are defined as women who drink one or more drinks daily and men who drink two or more drinks daily whereas binge drinking or heavy drinking refers to episodes in which five or more drinks are consumed at one occasion].

Alcohol-Related Medical Complications

The health complications related to alcohol vary depending on the amount and frequency of alcohol consumption. Physiological effects in the short term can result in impaired brain function manifested as poor judgment, reduced reaction time, loss of balance and motor skills, and slurred speech. Loss of body heat from dilation of blood vessels may also occur. If alcohol is consumed rapidly and in large quantities, coma and death may result. The short-term impairments from intoxication can also increase risk of motor-vehicle traffic crashes, violence, injuries and contracting sexually transmitted diseases (STD). Research

³⁴² American Psychiatric Association. 2000. Diagnostic and statistical manual of mental disorders. 4th Ed., text rev. Washington, DC: Author, 198.

³⁴³ Schuckit MA, Nathan PE, Helzer JE, *et al.* 1991. Alcohol Health and Research. Available at: http://findarticles.com/p/articles/mi_m0847/is_n4_v15/ai_12754641/?tag=content;col1. Accessed December 23, 2010.

³⁴⁴ Hasin DS, Stinson FS, Ogburn E, *et al.* 2007. Prevalence, correlates, disability, and comorbidity of DSM-IV Alcohol Abuse and Dependence in the United States. Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Archives of General Psychiatry* 64(7): 830-842.

³⁴⁵ Centers for Disease Control and Prevention. 2010. Alcohol Fact-Sheet. Binge-drinking. Available at: <http://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm>. Accessed December 23, 2010.

³⁴⁶ National Institute on Alcohol Abuse and Alcoholism. Quick Facts. Alcohol Consumption. Available at: <http://www.niaaa.nih.gov/Resources/DatabaseResources/QuickFacts/AlcoholConsumption/Pages/default.aspx>. Accessed December 5, 2010.

³⁴⁷ *Ibid.*

findings also suggest that the impact of alcohol on the body's systems may impede the diagnosis and treatment of an injured patient.³⁴⁸

Alcohol is also considered a risk factor for a number of long-term chronic health conditions, including the top three causes of death (heart disease, cancer and stroke) in the United States. Associations specific to binge drinking have also been described by the Centers for Disease Control and Prevention (CDC). Binge-related risks include unintentional and intentional injuries, alcohol poisoning, contracting STDs, unintended pregnancy, fetal alcohol syndrome disorder, high blood pressure, stroke and other cardiovascular diseases, liver disease, neurological damage, sexual dysfunction, and poor control of diabetes.³⁴⁹

The potential long-term impact of alcohol intoxication includes increased risk for developing alcohol dependence and adversely impacting the function of body systems and organs.³⁵⁰ Adverse effects have been noted in the liver, pancreas, esophagus and stomach along with the cardiovascular system, skeletal system, nervous system and immune system. Some potential conditions include: alcoholic liver disease, pancreatitis, esophagitis, gastroesophageal hemorrhage, impaired immune response, alcoholic cardiomyopathy, hypertension, stroke, bone and skeletal disorders, periodontal disease, and degeneration of the nervous system.^{351,352,353,354}

III. Methods

Under the direction of CPHHP, medical librarians at the Lyman Maynard Stowe Library at the University of Connecticut Health Center (UCHC) gathered published articles and other information related to medical, social, economic, and financial aspects of the required benefit. Medical librarians conducted literature searches using PubMed, Scopus, UpToDate, DynaMed, Cochrane database, EMedicine, CINAHL, UpToDate, and a web search using Google. The primary search terms included: alcoholism, alcohol-use disorders, alcohol drinking, alcohol withdrawal, alcohol-related liver diseases, and fetal alcohol syndrome. Additional terms included medical complications, central nervous system/abnormalities, health expenditures, delivery of health care, health plan implementation, health services accessibility, treatment outcome, cost of care, health services, insurance, Medicare, Medicaid, hypertension, treatment, comorbidity, safety, effectiveness and needs assessment.

CPHHP staff conducted independent literature searches using the Cochrane Review, Scopus, PsycInfo, Westlaw and Google Scholar using similar search terms used by the UCHC medical librarians. Where available, articles published in peer-reviewed journals are cited to support the analysis. Other sources of information may also be cited in the absence of peer-reviewed journal articles. Content from such sources may or may not be based on scientific evidence. Staff also gathered additional information through telephone and e-mail inquiries to appropriate state, federal, municipal, and non-profit entities and from internet sources such as the State of Connecticut website, Centers for Medicare and Medicaid (CMS) website, other states' websites, professional organizations' websites, and non-profit and community-based

³⁴⁸ Hayman A, Crandall M. 2009. Deadly partners: interdependence of alcohol and trauma in the clinical setting. *International Journal of Environmental Research and Public Health* 6(12): 3097-104.

³⁴⁹ Centers for Disease Control and Prevention. 2010. Alcohol Fact-Sheet. Binge-drinking. Available at: <http://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm>. Accessed December 23, 2010.

³⁵⁰ Centers for Disease Control and Prevention. 2010. Alcohol frequently asked questions. Available at: <http://www.cdc.gov/alcohol/faqs.htm>. Accessed December 23, 2010.

³⁵¹ Franke A, Teyssen S, Singer MV. 2005. Alcohol-related diseases of the esophagus and stomach. *Digestive Diseases* 23: 204-213.

³⁵² Friedlander AH, Marder SR, Pisegna JR, et al. 2003. Alcohol abuse and dependence. *Journal of the American Dental Association* 134: 731-740.

³⁵³ Alcohol Related Disease Impact (ARDI). Interactive table. Table on direct alcohol related % for chronic conditions. Available at: <https://apps.nccd.cdc.gov/ardi/Homepage.aspx>. Accessed December 23, 2010.

³⁵⁴ [No authors listed]. 2000. Medical Consequences of Alcohol Abuse. *Alcohol Research and Health* 24(1): 27-31.

organization websites.

CPHHP staff consulted with clinical faculty from the University of Connecticut School of Medicine Department of Psychiatry on matters pertaining to medical standards of care, traditional, current and emerging practices, and evidence-based medicine related to the benefit.

With the assistance of the Connecticut Insurance Department (CID), CPHHP and Ingenix Consulting (IC) requested and received 2007 and 2008 claims data from insurance companies and MCOs domiciled in Connecticut. Six carriers provided inpatient medical care arising from accidental ingestion or consumption of controlled drugs claims data for their fully insured group plan participants and four provided claims data for their fully insured individual plan participants. Five carriers also provided information about medical care arising from ingestion or consumption of controlled drugs coverage in the self-insured plans they administer. It is anticipated that the self-funded plans managed by the sixth carrier offer coverage comparable to the other five carriers.

CPHHP and the CID contracted with Ingenix Consulting to provide actuarial and economic analyses of the mandated benefit. The full IC report is available under Appendix II.

IV. Social Impact

1. The extent to which the treatment of medical complications of alcoholism is utilized by a significant portion of the population.

The IC analysis of 2007 and 2008 claims data available at IC suggests that only 0.03 percent of the fully insured population in the data had a diagnosis of alcohol dependence or alcohol-related mental disorders. Overall, only about 2 out of every 10,000 people insured had claims for MCA. MCA-related health care utilization claims included ER visits, office visits, tests, and treatments. Notably, these estimates likely understate the actual occurrence of MCA based on under-reporting of alcohol-related diagnoses and the process used for coding outpatient medical claims. Estimates are also complicated by decisions whether to code a condition as alcohol-related or not since the cause of onset for certain conditions may not be verifiable.

The national Alcohol Epidemiologic Data System lists the following rates of utilization of inpatient treatment for MCA by age group in 2007. Table III.5.1 illustrates the alcohol-related discharge rates using the first-listed diagnosis and the all-listed diagnosis options of which there were 416,000 and 1,403,000 (respectively) in the U.S. during 2007.³⁵⁵

Age Group	First-listed diagnosis	Any-listed diagnosis
15-24	4.1	21.8
25-44	18.6	62
45-64	31.8	104

Applying the national rates to Connecticut, among the population aged 15-64 there would be 4,967 first-

³⁵⁵ National Institute on Alcohol Abuse and Alcoholism. 2010. Surveillance Report No. 89. Trends in alcohol related morbidity among short stay community hospital discharges, United States, 1979–2007. Available at: <http://pubs.niaaa.nih.gov/publications/surveillance89/HDS07.htm>. Accessed July 29, 2010.

listed alcohol-related discharges and 16,750 any-listed alcohol related discharges in 2007. The rate of first-listed alcohol related discharge is estimated at 21.03 per 10,000 residents age 15-64 or 16.39 per 10,000 residents under age 65. This estimate is specific only to hospital care and does not estimate MCA-related care that may be received in a physician's office or for pharmaceuticals.

For all age groups with alcohol-related discharges in 2007 (first-listed), 36.7 percent were for alcoholic psychosis, 29.3 percent for alcohol dependence syndrome, 25.1 percent for cirrhosis and 9 percent were for non-dependent use of alcohol.³⁵⁶ The average length of stay in inpatient days by condition was 4.5 days for alcoholic psychosis, 4.7 days for alcohol dependence syndrome, 6.0 days for all chronic liver disease or cirrhosis (6.5 days for alcoholic chronic liver disease/cirrhosis), and 3.0 days for non-dependent abuse of alcohol.³⁵⁷

2. The extent to which the treatment of medical complications of alcoholism is available to the population, including, but not limited to, coverage under Medicare, or through public programs administered by charities, public schools, the Department of Public Health, municipal health departments or health districts or the Department of Social Services.

No information was found to indicate that the State Department of Public Health, municipal health departments or local health districts, charity administered public programs, or public schools would provide services for the treatment of MCA. Coverage available for MCA under Medicare, the Department of Social Services and the Department of Mental Health and Addiction Services is described below.

Medicare

Medicare provides coverage of medically necessary treatments for the medical complications of alcoholism (including cirrhosis of the liver, GI bleeding, pneumonia and delirium tremens). Alcoholic cirrhosis of the liver has been classified as a condition for which liver transplantation is reimbursable under Medicare.³⁵⁸

When there is a high probability of medical complications (e.g., delirium, confusion, trauma, or unconsciousness), or when alcohol withdrawal necessitates the availability of physicians and/or complex medical equipment found only in the hospital setting, Medicare Part A will generally cover 2-3 days of inpatient alcohol detoxification, though up to 5 days (and occasionally, even more) may be authorized when there is a documented medical need.³⁵⁹

There is no evidence to indicate Medicare would deny coverage for medical treatment associated with complications from alcoholism. However, various medical treatments may have different requirements for meeting authorization.

Department of Social Services

Based on the Medicaid tenet of "medical necessity," Medicaid covers the diagnosis and treatment of the medical complications of alcoholism, including cirrhosis of the liver, GI bleeding, pneumonia, and delirium tremens.³⁶⁰

³⁵⁶ *Ibid.*

³⁵⁷ National Institute on Alcohol Abuse and Alcoholism. 2010. Surveillance Report No. 89. Trends in alcohol related morbidity among short stay community hospital discharges, United States, 1979–2007. Available at: <http://pubs.niaaa.nih.gov/publications/surveillance89/HDS07.htm>. Accessed July 29, 2010.

³⁵⁸ National Institute on Alcohol Abuse and Alcoholism No. 20 PH 330 April 1993. Available at: <http://pubs.niaaa.nih.gov/publications/aa20.htm>. Accessed July 29, 2010. (citing Health Care Financing Administration. Medicare program; criteria for Medicare coverage of adult liver transplants. *Federal Register* 56(71):15,006, Apr. 12, 1991).

³⁵⁹ Medicare Coverage Issues Manual Codes 35-22. Available at: http://www.dmerc.com/manual/Medical%20Procedures.htm#_1_24. Accessed July 29, 2010.

³⁶⁰ Personal correspondence with Nina Holmes, DSS Medical Policy Unit. July 16, 2010.

Department of Mental Health and Addiction Services (DMHAS)

A variety of treatment services for alcohol-related disorders are offered through DMHAS. 170 community-based treatment programs and three inpatient state treatment facilities throughout the state are funded and monitored by DMHAS. The focus of treatment is to help individuals recover from addiction. Treatment services supported through DMHAS also include ambulatory care, residential detoxification, long-term care, long-term rehabilitation, intensive and intermediate residential services, chemical maintenance, outpatient, and partial hospitalization.³⁶¹

3. The extent to which insurance coverage is already available for the treatment of medical complications of alcoholism.

The state of Connecticut requires fully insured group health policies delivered, renewed, or amended in the state to cover treatment of medical complications of alcoholism.³⁶² Approximately 40.8 percent of Connecticut residents are enrolled in fully insured group plans subject to the mandate. Information received from health plan carriers domiciled in Connecticut suggests that about 5.5 percent of individuals enrolled in self-funded plans lack such coverage. In addition, it appears that individuals enrolled in Medicare or Medicaid would also have care covered for the medical complications of alcoholism, although the policies do not make specific reference to such coverage. No information was gathered regarding availability of coverage among the fully insured population with individual policies.

4. If the coverage is not generally available, the extent to which such lack of coverage results in persons being unable to obtain necessary health care treatment.

For MCAs requiring routine or ongoing treatment, lack of coverage and inability to pay out of pocket may result in a person being unable to obtain necessary health care treatment. The primary exception is if a person presents to an emergency department at a hospital that accepts Medicare with a medical emergency. In such cases, the person would then receive stabilizing care under the federal Emergency Medical Treatment and Labor Act regardless of ability to pay. Conditions that may apply include episodes of acute pancreatitis, withdrawal or alcohol psychosis. Conversely, routine management of other MCAs may be difficult to obtain if inability to pay out of pocket is an issue. The typical treatment varies across conditions, but may include pharmaceutical (e.g., pain management, antibiotics, antipsychotics, anti-seizure), insulin injections, surgical procedures, organ transplants (especially of the liver or heart), or implantable defibrillators or pacemakers.

5. If the coverage is not generally available, the extent to which such a lack of coverage results in unreasonable financial hardships on those persons needing treatment.

Insurance status, required cost sharing and personal financial resources determine whether a person will face unreasonable financial hardship when needing treatment. The cost of MCA varies by complication. As summarized in the IC report, a liver transplant can cost around \$300,000 for the transplant itself and subsequently will require expensive anti-rejection and other medications. On the other hand, IC estimates that a facility stay for alcohol detoxification including treatment for delirium tremens can cost between \$3,000 and \$7,000. For a family with an annual income of \$50,000 and no coverage for the cost of detoxification, \$5,000 worth of charges would consume 10 percent of their income. If the same family had a 20 percent co-pay, 2 percent of the family income would be consumed. In cases where an individual acquires a chronic medical complication such as alcohol-related hepatitis, the expenses for treatment would be long-term, likely increasing as the condition worsens. Within the Connecticut claims data analyzed by IC, the highest cost claim was \$10,000 for an inpatient stay. The paid claim does not include any additional

³⁶¹ Department of Mental Health and Addiction Services. About DMHAS.

Available at: <http://www.ct.gov/dmhas/cwp/view.asp?a=2899&cq=334082>. Accessed July 29, 2010.

³⁶² CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. §38A-507 AND §38A-534.

out of pocket costs that may have been paid by the member for the service.

Further discussion of financial and socioeconomic effects of the mandated benefit may be found in Appendix II: Ingenix Consulting Actuarial Report, pages 45-46.

6. The level of public demand and the level of demand from providers for the treatment of medical complications of alcoholism

Treatment of alcohol addiction began gaining support in the 1930s through the work of Alcoholics Anonymous. By the 1970s and 1980s public acceptance for treatment began to grow with the introduction of the disease concept of addiction and the potential for effective treatments. Realizations of social costs related to untreated dependency and the suggested success of new therapies increased the proportion of health plans covering addiction medicine. During this period, the state of Connecticut passed the original MCA mandate.³⁶³

Although no public hearing support was located from this time, during hearings for the 1990 revision of the statute, a number of community stakeholders voiced support for the mandate. These stakeholders included the Connecticut Alcohol and Drug Abuse Commission, Connecticut Association of Substance Abuse Agencies, Connecticut Dependency Treatment Programs, and the Connecticut Association of Child Caring Agencies.³⁶⁴

Specific to organ transplants, ethical issues have arisen as to whether those with alcoholism should be eligible for transplants if they do not intend to abstain from alcohol. The primary concerns with regard to permitting organ transplants among unrecovered alcoholics include potential damage to the transplanted organ. The United Network for Organ Sharing requires that patients needing a transplant meet stringent guidelines before they can be placed on a waiting list.³⁶⁵

7. The level of public demand and the level of demand from providers for insurance coverage for the treatment of medical complications of alcoholism.

Although no public hearing support was located for the original mandate, during hearings for the 1990 revision of the statute, a number of community stakeholders voiced support for the mandate. These stakeholders included the Connecticut Alcohol and Drug Abuse Commission, Connecticut Association of Substance Abuse Agencies, Connecticut Dependency Treatment Programs, and the Connecticut Association of Child Caring Agencies.³⁶⁶ However, no additional evidence of public or private demand for insurance coverage was identified.

8. The likelihood of achieving the objectives of meeting a consumer need as evidenced by the experience of other states.

It is unclear the extent to which states require treatment for MCAs. In a cursory search, Illinois was the only state identified with a coverage mandate specific to MCA. However, coverage of treatment for alcoholism is available in 45 states according to the Council for Affordable Health Insurance.³⁶⁷ Comparably, research by the George Washington University Medical Center (2002) concluded that only five states had no language

³⁶³ Blume SB. 2000. Treatment of substance misuse in the new century. *Western Journal Medicine* 172(1): 4-5.

³⁶⁴ Connecticut General Assembly. Public Hearing Testimony regarding Public Act 90-243.

³⁶⁵ Robin S. Livestrong.com. Alcoholic liver transplant. Available at: <http://www.livestrong.com/article/99017-alcoholic-liver-transplant/>. Accessed November 23, 2010.

³⁶⁶ Connecticut General Assembly. Public Hearing Testimony regarding Public Act 90-243.

³⁶⁷ Bunce VC, Wieske JP. 2009. Health insurance mandates in the states 2009. Council for Affordable Health Insurance. Available at: http://www.cahi.org/cahi_contents/resources/pdf/HealthInsuranceMandates2009.pdf. Accessed May 6, 2010.

for alcoholism treatment whereas the following states mandate coverage for alcohol treatment with no exceptions: Connecticut, Delaware, Indiana, Kentucky, Minnesota, New Jersey, Vermont, and Virginia.³⁶⁸ The remaining states either required some level of coverage or an offer of coverage.³⁶⁹

9. The relevant findings of state agencies or other appropriate public organizations relating to the social impact of the mandated health benefit.

Thirty states now require a fiscal note or an additional review process for any new required health insurance benefit prior to enactment.³⁷⁰ Searches and inquiries focused on states that have or had an established process for studying mandated health insurance benefits, with a relatively large number of mandated health benefits, or located in the Northeast. States searched for which no evidence of a review was found include Alabama, Alaska, Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Maryland, Maine, Massachusetts, Virginia, Louisiana, Pennsylvania, Washington and Texas. Studies from California and New Jersey discussed the social impact of substance abuse treatment whereas a Wisconsin review focused primarily on the potential financial impact of a related proposal. Since the Connecticut mandate for treatment of MCA covers treatment of withdrawal from alcoholism, a summary of the California and New Jersey report are provided.

California: In February 2004, the California Health Benefits Review Program (CHBRP) reviewed Senate Bill 101, Substance Disorders. The mandate requires health care service plans to provide coverage for substance-related disorders. The report found evidence suggesting that the treatment of substance abuse would result in public health benefits. Specifically, the report notes that for affected individuals, substance abuse often results in medical expenditures, impaired earnings capacity, disrupted family life, and even premature death. Substance abuse was summarized as imposing a financial burden on society and threatening communities with higher crime rates and spread of infectious diseases.

The report suggests that coverage for treatment of substance abuse would reduce medical costs, improve care for individuals with health problems unrelated to their dependence, and reduce the health risks of the general population. However, the report notes the difficulty in discerning the magnitude of the public health impact because of uncertainty related to how many of the insured have substance abuse-related conditions, how many of these would use the benefit, and how the mandate will be implemented by health plans and insurers at the provider level.³⁷¹

New Jersey: In 2005, the New Jersey Mandated Health Benefits Advisory Commission reviewed Assembly Bill A-33. The report found that 7 percent of New Jersey residents have an alcohol or substance addiction, and only one-third or 2 percent seek treatment. Further, the report estimates premiums would increase from the treatment of alcoholism and drug abuse from 0.1 to 0.2 percent.³⁷²

10. The alternatives to meeting the identified need, including but not limited to, other treatments, methods or procedures.

³⁶⁸ The George Washington University Medical Center. Ensuring Solutions. December 2002. State laws, health insurance, and alcohol treatment. Available at: http://www.ensuringsolutions.org/resources/resources_show.htm?doc_id=332865. Accessed November 22, 2010.

³⁶⁹ *Ibid.*

³⁷⁰ National Conference of State Legislatures. 2009. Health insurance coverage mandates: Are they too costly? Presentation at the Louisiana Department of Insurance 2009 Annual Health Care Conference. May 28, 2009. Available at: http://www.lsi.state.la.us/Health/LHCC/2009_HealthCareConference/index.html. Accessed May 7, 2010.

³⁷¹ California Health Benefits Review Program, 2004. Analysis of Senate Bill 101, Substance Disorders. Available at: http://www.chbrp.org/docs/index.php?action=read&bill_id=98&doc_type=3. Accessed December 18, 2010.

³⁷² New Jersey Mandated Health Benefits Advisory Commission, 2005. A Study of Assembly Bill A-33. Available at http://www.state.nj.us/dobi/division_insurance/mhbac/a333report.pdf. Accessed December 8, 2010.

The MCA mandate does not designate a specific procedure or treatment that must be used for specific medical complications. It is therefore, assumed, for the potential of analysis that clinicians may select whatever measure is covered under a specific health plan. Relevant to this mandate, the identified need is to address carrier denial of claims to treat MCAs. As such, the alternative to this mandate would be not requiring coverage of such claims.

11. Whether the benefit is a medical or broader social need and whether it is consistent with the role of health insurance and the concept of managed care.

One of the roles of health insurance is to cover low utilization, high cost health services.

The mandated benefit under review falls in this category. The MCA statute is also consistent with the concept of managed care since carriers are permitted to use the managed care tools to control the cost and utilization of care. However, coverage of MCA is not necessarily consistent with what insurers and managed care organizations have traditionally covered. For example, in the period when MCOs gained momentum, expenditures for addiction treatment fell dramatically compared to expenditures for general health (74.5 versus 11.5 percent).³⁷³

12. The potential social implications of the coverage with respect to the direct or specific creation of a comparable mandated benefit for similar diseases, illnesses, or conditions.

It is possible that a comparable mandated benefit could be created for addiction related treatment or conditions that may be related to health behaviors of an individual. Mandates related to health behaviors may include coverage for medical complications from eating disorders and substance abuse.

13. The impact of the benefit on the availability of other benefits currently offered.

The relatively low utilization of treatment for MCA and the small contribution to overall premium costs (less than 0.1 percent of the average PMPM for group plans) suggests the benefit would have little to no impact on the availability of other benefits currently offered.

Even so, it is possible that the carriers or employers may elect to cut costs by eliminating or restricting access to, or placing limits on other non-mandated benefits currently offered. However, the potential for restricting other benefits may be limited. Existing benefits may be administratively costly to restrict and insurers may be contractually obligated to provide them. Additionally, many of the benefits in the plan may be included for competitive advantage. To some extent, this may be reflected in the high percentage (90 percent) of self-funded groups reported by five carriers as covering treatment of MCA, despite being exempt from the state requirements under the federal Employee Retirement Income Security Act (ERISA).

14. The impact of the benefit as it relates to employers shifting to self-insured plans and the extent to which the benefit is currently being offered by employers with self-insured plans.

It is not anticipated that employers will shift or would shift to self-funded plans based solely on the MCA mandate. On average, the cost associated with providing treatment for MCAs is 0.1 percent of the PMPM premium. Furthermore, based on responses from five health plan carriers in Connecticut, it appears that the general practice of self-funded groups (90 percent) is to include coverage for MCA. Potentially, an employer wishing to avoid the cumulative premium impact of all mandated benefits and premium taxes may switch to self-funded. However, even if an employer becomes self-funded, provision of MCA and other mandated benefits may be maintained if such benefits are included in plans for competitive advantage, contractual obligations, or to be consistent with market norms for coverage.

³⁷³ Blume SB. 2000. Treatment of substance misuse in the new century. *Western Journal Medicine* 172(1): 4-5.

15. *The impact of making the benefit applicable to the state employee health insurance or health benefits plan.*

The state employee health insurance/benefit plans were subject to the MCA requirement from mandate implementation in 1975 up until July 1, 2010 when Connecticut transitioned from fully insured group plans to self-funded. As a self-funded group, the State of Connecticut is exempt from state health insurance mandates under the federal Employee Retirement Income Security Act (ERISA) law. Assuming Connecticut continues to cover the mandated benefits, the social impact of the benefit for the approximately 134,344 covered lives in state employee plans and 30,000 state retirees not enrolled in Medicare³⁷⁴ is expected to be the same or similar to the social impact for persons covered in non-state employee health insurance plans as discussed throughout Section IV of this report. In terms of financial impact, if the state employee health insurance/benefit plans continue to provide coverage for the required benefit, the IC actuarial analysis estimates the medical cost to the state employee health insurance plan will total \$729,643 in 2010.³⁷⁵

16. *The extent to which credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community determines the treatment of medical complications of alcoholism to be safe and effective.*

The MCA mandate does not prescribe coverage for a specific condition or treatment but instead encompasses all medical complications of alcoholism. The numerous potential treatments for the many possible complications have varying safety and effectiveness. Given the scope of the mandate, brief comments rather than a comprehensive review are provided regarding treatment of alcohol withdrawal syndrome, alcohol dependence and chronic pancreatitis.

Alcohol Withdrawal Syndrome

Administering pharmaceuticals such as benzodiazepines (mainly diazepam and lorazepam) is considered effective and safe for reducing risk of severe withdrawal symptoms such as seizure or delirium tremens.³⁷⁶ The adverse effects related to use of benzodiazepines for the maximum duration (seven days) are generally mild. Treatments that use effective communication and individual support may also reduce the severity of symptoms.³⁷⁷

Alcohol Dependence

Pharmacotherapy and psychosocial interventions are the standard treatments for drug dependence. Higher levels of effectiveness are noted when pharmacotherapy and psychosocial interventions are provided simultaneously. There are four FDA-approved drugs for the treatment of alcohol dependence. These drugs are regarded to have modest efficacy for the reduction of drinking or increased duration of abstinence from alcohol consumption. Issues with patient non-adherence to drug therapy and heterogeneity of alcohol dependence have been noted.³⁷⁸ The literature also suggests that psychosocial interventions such as psychotherapy, drug counseling and twelve-step interventions have mild to moderate effectiveness in the

³⁷⁴ Personal communication. Scott Anderson, State of Connecticut Comptroller's Office. September 14, 2010.

³⁷⁵ See Appendix II. Ingenix Consulting Actuarial Report. This estimate has been calculated by multiplying the 2010 PMPM medical cost in table 1.3A by 12 to get an annual cost per insured life, and then multiplying that product by 163,334 covered lives, as reported by the State Comptroller's office. This estimate is calculated using weighted averages for all claims paid by Connecticut-domiciled insurers and health maintenance organizations in the State. The actual cost of this mandate to the State plans may be higher or lower, based on the actual benefit design of the State plans and the demographics of the covered lives (e.g., level of cost-sharing, average age of members, etc.). Retention costs are not included in this estimate because the State is now self-funded and the traditional elements of retention do not apply. State costs for administration of this mandated benefit would be in addition to the above amount.

³⁷⁶ Hughes JR. 2009. Alcohol withdrawal seizures. *Epilepsy Behavior* 15(2):92-7.

³⁷⁷ [No authors listed]. 2007. Alcohol withdrawal syndrome: How to predict, prevent, diagnose and treat it. *Prescribe International* 16: 24-31.

³⁷⁸ Garbutt JC. 2009. The state of pharmacotherapy for the treatment of alcohol dependence. *Journal of Substance Abuse and Treatment* 36(1): S15-23.

treatment of addictive disorders.³⁷⁹

Chronic Pancreatitis

A number of presentations and treatments may occur. Reviews of the medical literature suggest that for pseudocysts, abscess and malignancy, endoscopic treatments are generally safe and effective.³⁸⁰

V. Financial Impact

1. The extent to which the mandated health benefit may increase or decrease the cost of the treatment of medical complications of alcoholism over the next five years.

The mandate is not expected to materially affect the availability of treatment of MCA or its cost over the next five years. The mandated benefit is a low-volume service and the presence of the insurance mandate is not expected to have any additional effect on its cost. Additionally, inclusion of mandated services in nearly all self-funded plans further dilutes any effect the existence of a mandate may have on the cost of the service. The cost of the service is likely to increase (or decrease) at the same rate as any other medical service.

2. The extent to which the mandated health benefit may increase the appropriate or inappropriate use of the treatment of medical complications of alcoholism over the next five years.

For those persons whose insurance plans would not otherwise cover MCA, the mandated health benefit may increase appropriate use of some treatments. For those covered by self-funded plans, using out-of-pocket funds, or receiving MCA treatment defined in the statute from other sources, a mandated benefit may not increase appropriate use. Inappropriate use or overutilization is not expected to be a potential factor due to the nature of the mandated service and low overall utilization. An increase in utilization for treatment of alcohol dependence is also limited by the space available in treatment programs and the stigma and time associated with seeking the treatment.

3. The extent to which the treatment of medical complications of alcoholism may serve as an alternative for more expensive or less expensive treatment, service or equipment, supplies or drugs, as applicable.

The MCA mandate does not specify specific modes of treatment for MCAs that must be covered. Instead, the mandate requires insurance coverage for treatment of MCAs. Therefore, the mandate serves as an alternative to not requiring insurance coverage for treatment of MCAs.

4. The methods that will be implemented to manage the utilization and costs of the treatment of medical complications of alcoholism.

It is anticipated that carriers can employ the same utilization management methods and cost controls that are used for other covered benefits under the same fully insured group policy. The statute expressly states that “medical complications of alcoholism shall be recognized to the extent specified in the contract for confinement for any other disease.” The legislation does not prohibit carriers from employing visit restrictions, prior authorization, maximum payments, deductibles, coinsurance, co-pays or other utilization tools at their discretion.

5. The extent to which insurance coverage for treatment of medical complications of alcoholism may be reasonably expected to increase or decrease the insurance premiums and administrative expenses for policyholders.

³⁷⁹ Woody GE. 2003. Research findings on psychotherapy of addictive disorders. *American Journal of Addictions* 12 Suppl 2: S19-26.

³⁸⁰ Delhaye M, Arvanitakis M, Bali M, et al. 2005. Endoscopic therapy for chronic pancreatitis. *Scandinavian Journal of Surgery* 94(2): 143-53.

Health insurance premiums consist of reimbursable medical costs and retention. Retention refers to the administrative expenses and profit charges set by the carriers for each given medical claim. For 2010 (not accounting for implementation of the federal legislation), IC's projections based on carriers' claims data indicate that on average, an employer pays \$0.37 per member per month (PMPM) for medical costs and \$0.07 PMPM for retention. As a total, the employer with a fully insured group plan pays \$0.44 PMPM for MCA.

However, it is important to note that a wide range in average PMPMs were observed across health plan carriers, with some carriers reporting *de minimus* costs less than \$0.03 PMPM and one carrier reporting costs greater than \$1 PMPM. A subsequent analysis conducted by IC on other available claims data, also suggests a lower paid medical cost for MCA of \$0.10 PMPM. (The method used for this analysis involved selecting all individuals with a diagnosis code for alcohol related disorders and alcohol dependence. Subsequently, claims codes were used to narrow remaining claims to only include conditions likely associated with alcoholism).

It is important to note that although an average \$0.37 PMPM, or with the alternative analysis \$0.10 PMPM, is expected to be paid out in medical claims for MCA, a high proportion of this amount may be funded regardless of the mandate. As noted previously, self-funded group plans are not required by state-law to offer MCA, yet 90 percent of the self-funded groups managed by five Connecticut carriers cover MCA.

Neither an increase nor decrease in premiums is expected for fully insured individuals since they are not guaranteed coverage for MCA by the state statute.

For further information, please see Appendix II, Ingenix Consulting Actuarial Report, pages 24-25.

6. The extent to which the treatment of medical complications of alcoholism is more or less expensive than an existing treatment, service or equipment, supplies or drugs, as applicable, that is determined to be equally safe and effective by credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community.

The MCA mandate does not specify specific modes of treatment for MCAs that must be covered. Instead, the mandate requires insurance coverage for treatment of MCAs. Therefore, the mandate serves as an alternative to not requiring insurance coverage for treatment of MCA. Within the literature there are numerous recommendations for how to treat MCAs. In the absence of the mandate a few scenarios regarding treatment may occur and are summarized as follows:

- Patients with coverage or with financial resources available to pay out of pocket would receive needed care.
- For conditions that present as medical emergencies, care may be obtained at hospitals accepting Medicare. Under the federal EMTALA, these institutions are required to provide stabilizing care. In this case, the patient would be fully responsible for the cost of care or, if the patient were unable to pay, the hospital would bear the cost burden.
- For conditions that do not present as an emergency but may require medical interventions such as pharmaceuticals, organ replacement, stenting or surgery, inability to pay for care may result in an individual not receiving care. Lack of care may in turn lead to a worsening in condition and increased risk of mortality.

7. The impact of insurance coverage for the treatment of medical complications of alcoholism on the total cost of health care, including potential benefits or savings to insurers and employers resulting from prevention or early detection of disease or illness related to such coverage.

The estimated total cost of treatment for MCAs is projected for 2010 at \$5,841,636 according to IC's analysis of Connecticut domiciled health plan carrier claims data. This projection captures all MCA-related claims for fully insured group members without controlling for the level of MCA-related claims that would exist in the absence of the mandate or accounting for any cost-savings that may occur from prevention or early detection of a condition.

Since the alternative to the mandate involves no requirement for coverage, health plan carriers are not likely to experience any cost savings from prevention or early detection of disease related to coverage. On the other hand, there is some potential for savings among employers if MCAs are covered. To the extent that an employee is rehabilitated from an alcohol-related disorder or is better able to access care for a family member covered by the same policy, some costs for alcohol-related absenteeism, lower productivity, and higher rates of workers' compensation and disability claims may resolve.³⁸¹

8. The impact of the mandated health care benefit on the cost of health care for small employers, as defined in § 38a-564 of the general statutes, and for employers other than small employers.

Although small employers may be more sensitive to premium increases, the estimated impact of the mandate on insurance premiums in fully insured group plans (\$0.44 PMPM) suggests little difference in effects among different sized employers.

9. The impact of the mandated health benefit on cost-shifting between private and public payers of health care coverage and on the overall cost of the health care delivery system in the state.

The overall cost of the health delivery system in the state is understood to include total insurance premiums (medical costs and retention) and cost sharing. Actuarial analysis of claims data received from health plan carriers in Connecticut shows an expected cost in 2010 of \$6,925,508 for MCA for Connecticut residents covered by fully insured group health insurance plans. This overall cost represents all MCA for the fully insured population in group plans and is not limited to the change in cost that may have resulted from implementation of the mandate. It is also important to note that to the extent that alcohol use disorders and MCAs are treated early-on or effectively, the aggregate amount of health expenditures related to MCA could potentially decrease.

The provision for fully insured plans to cover treatment of MCA may result in some cost shifting. In the absence of a mandate, paying for MCA out of pocket may deplete the financial resources of an individual to the extent that they become eligible for health care services under Medicare and/or Medicaid. For emergency medical care related to MCA, hospitals' authorized to accept Medicare must provide stabilizing care to patients regardless of ability to pay. In such instances, either the hospital or the patient assumes the cost of care.

With the MCA mandate in place, treatment for conditions is available to the extent it would be for conditions not related to alcoholism. If such care leads to successful treatment of individuals with alcohol-related disorders and reduces the incidence of events that drive up societal costs (crime, fire destruction, social welfare administration, or the ability of individuals to pay taxes such as premature death or unemployment), the public sector may experience a decrease in cost. It is also possible that the private sector may experience some benefits in terms of reductions in lost productivity from alcohol-related crimes or alcohol-related illness.³⁸²

³⁸¹ The George Washington University Medical Center. 2008. Health Plans and Insurance. Ensuring Solutions: Health Plans and Insurance. Available at: http://www.ensuringsolutions.org/resources/resources_list.htm?cat_id=965. December 10, 2010.

³⁸² National Institute on Alcohol Abuse and Alcoholism. Estimated economic costs of alcohol abuse in the United States, 1992 and 1998. Available at: <http://www.niaaa.nih.gov/Resources/DatabaseResources/QuickFacts/EconomicData/Pages/cost8.aspx>. Accessed December 5, 2010.

Volume III

Chapter 6

Occupational Therapy

Review and evaluation of Connecticut General Statutes,
Chapter 700, §§ 38a-524 and 38a-496

Coverage for Occupational Therapy. Definitions. Benefits.

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Chapter 6. Table of Contents

- I. Overview..... 113
- II. Background..... 114
- III. Methods..... 116
- IV. Social Impact..... 117
 - Table III.6.1. Occupational Therapy and Connecticut’s Health Insurance Mandates..... 121
- V. Financial Impact..... 127

I. Overview

The Connecticut General Assembly (the Committee) directed the Connecticut Insurance Department to review statutorily mandated health benefits existing on or effective on July 1, 2009, pursuant to section (b) of Public Act 09-179, An Act Concerning Reviews of Health Insurance Benefits Mandated in this State. Each review was conducted following the requirements stipulated under Public Act 09-179 as a collaborative effort of Connecticut Insurance Department (CID) and the University of Connecticut Center for Public Health and Health Policy (CPHHP). The CID and CPHHP contracted with the actuarial firm Ingenix Consulting (IC) to conduct a fiscal and economic analysis for each mandate.

This chapter evaluates the financial and social impact of the requirement for fully insured group and individual health insurance policies to cover occupational therapy (OT) as specified under Connecticut General Statutes, Chapter 700, § 38a-524 and § 38a-496. The statute reads as follows:

“Occupational therapy” means services provided by a licensed occupational therapist in accordance with a plan of care established and approved in writing by a physician licensed in accordance with the provisions of chapter 370, who has certified that the prescribed care and treatment are not available from sources other than a licensed occupational therapist and which are provided in private practice or in a licensed health care facility. Such plan shall be reviewed and certified at least every two months by such physician.

(2) “Health care facility” means an institution which provides occupational therapy, including, but not limited to, an outpatient clinic, a rehabilitative agency and a skilled or intermediate nursing facility.

(3) “Rehabilitative agency” means an agency which provides an integrated multi-treatment program designed to upgrade the function of handicapped disabled individuals by bringing together, as a team, specialized personnel from various allied health fields.

(4) “Partial hospitalization” means a formal program of care provided in a hospital or facility for periods of less than twenty-four hours a day.

(b) Each group health insurance policy providing coverage of the type specified in subdivisions (1), (2), (4), (6), (11) and (12) of § 38a-469 delivered, issued for delivery or renewed in this state on or after October 1, 1982, which provides coverage for expenses incurred for physical therapy shall provide coverage for occupational therapy provided in private practice or in a health care facility or in a partial hospitalization program on an exchange basis.³⁸³

To evaluate this mandate, in March 2010, CPHHP and IC requested and received 2007 and 2008 claims data related to the mandated benefit from six insurers and managed care organizations (MCOs) domiciled in Connecticut that cover approximately 90 percent of the population in fully insured health insurance plans in Connecticut (1.25 million persons). Six insurers/MCOs (carriers) provided data for group plans and four of the six carriers provided claims data for individual policies. However, the claims data for individual policies is considered less credible than the group plan data due to the lower response rate and fewer covered lives represented by the claims. Five carriers also provided information about the extent to which OT is included

³⁸³ CONNECTICUT GENERAL STATUTES, Revised January 1, 2010. CHAPTER 700, §38A-524 AND §38A-496.

under their self-funded plans. It is anticipated that the self-funded plans managed by the sixth carrier offer coverage comparable to the other five carriers. Projected costs for 2010 were estimated from the IC actuarial analysis of carrier claims data from 2007 and 2008. The financial impacts presented likely overstate the impact of the mandate on premiums and the total cost because the claims data reflects all OT among the fully insured, rather than the change in utilization and cost of the benefit following implementation of the mandate.

Current coverage

The mandate went into effect on October 1, 1982 (P.A. 82-148; P.A. 90-243, S.86). Most Connecticut residents have OT as a benefit under their health plan. However, coverage for occupational therapy (OT) may be for a specified number of visits, require co-pays, or exclude certain conditions or habilitative services from reimbursement.

Premium impact

The projected 2010 average per member per month (PMPM) premium for all covered OT provided to fully insured members is summarized below. The gross cost presented is expected to be higher than the “new” cost or change in cost that may have occurred following the mandate.

Group plans: On a 2010 basis, medical cost is estimated to be \$0.86 PMPM. The estimated total premium (carrier paid medical claims, administrative fees, and profit) of the mandated services in 2010 in group plans is \$1.03 PMPM, which is 0.3 percent of the estimated total cost for group plans. Estimated cost sharing in 2010 group plans is \$0.73 PMPM.

Individual policies: On a 2010 basis, the weighted average paid medical cost of OT claims is estimated to be \$0.42 PMPM. The estimated total premium of the mandated services in 2010 in individual policies is \$0.54 PMPM, which is approximately 0.2 percent of estimated total costs in individual policies. Estimated cost sharing in 2010 individual policies is \$0.15 PMPM.

Self-funded plans

Responses from five carriers suggest that approximately 91 percent of their self-funded groups, covering 95 percent of self-funded members are covered for OT to an equal or greater extent than the Connecticut mandate requires of fully insured groups.

Overall, the projected 2010 cost to Connecticut’s health care system for providing OT services to the population enrolled in fully insured plans is \$27,298,980. This amount includes \$13,465,755 in total medical claims, \$2,778,962 in retention (administrative expenses plus profit) and \$11,052,643 in cost sharing. On average, out-of-pocket cost sharing is expected to comprise over 40 percent of the dollars spent on OT services for the fully insured population.

This report is intended to be read in conjunction with the General Introduction to this volume and the Ingenix Consulting Actuarial Report (Appendix II).

II. Background

The ability to carry out every day life activities, referred to as “occupations,” may affect the health, well-being and quality of life for individuals. OT focuses on helping patients to regain, maintain or cultivate the adaptive skills or environmental modifications needed to achieve “maximal physical and mental functioning.”³⁸⁴ This type of therapy is often initiated for individuals who have experienced a spinal cord injury, hand, wrist or shoulder injury, cancer, congenital condition, premature birth, developmental delay, mental illness, recent stroke, or a variety of other conditions potentially leading to functional impairments.³⁸⁵ With the increasing elderly population and increasing number of individuals, especially children, with disabilities seeking health care services, the demand for OT is expected to continue to grow.³⁸⁶

The standard practice for OT involves evaluating the performance of the individual as they carry out occupations in various contexts (e.g., home, work, play), collaborating with the patient to develop a treatment plan for addressing any performance barriers (e.g., physical, cognitive, psychosocial, sensory, communication, etc.), and incorporating life activities, consultation, education, and advocacy into therapeutic interventions.³⁸⁷ Principles of motor, sensory, and cognitive rehabilitation may be incorporated into the OT rehabilitation program.³⁸⁸

Common OT interventions include helping children with disabilities to participate fully in school, social situations and at home, helping people recovering from injury to regain skills (e.g., bathing, feeding, dressing), and providing support for older adults experiencing physical and cognitive changes.³⁸⁹ Stroke, the largest cause of severe physical disability, is also a condition often treated with OT.³⁹⁰ The OT treatment goal for this condition is to redevelop lost skills and functional limitations while also accommodating physical or cognitive impairments that often occur following stroke.³⁹¹

OT usually occurs within medical facilities such as hospitals, outpatient rehabilitation clinics, skilled nursing facilities, or psychiatric facilities. However, OT may also be accessed through schools, community programs or as part of a home health program.³⁹² To practice OT, all fifty states require licensing as an occupational therapist or occupational therapist assistant. Within Connecticut there are 1,904 occupational therapists and 614 occupational therapist assistants licensed by the State of Connecticut Department of Public Health.³⁹³ Licensed occupational therapists are required to hold a baccalaureate from a program accredited by the American Occupational Therapy Association (AOTA), satisfactorily complete 24 weeks of supervised field work through an approved education institution or training program, and successfully complete the National Board for Certification in Occupational Therapy (NBCOT) certification examination.³⁹⁴

³⁸⁴ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. CHAPTER 376A, § 20-74A.

³⁸⁵ American Occupational Therapy Association. Federal Legislative Issues 2007. Available at: <http://www.aota.org/Archive/Advocacy/FedReimba/Issues/39040.aspx>. Accessed December 7, 2010.

³⁸⁶ Bureau of Labor and Statistics. Occupational Outlook Handbook 2010. Occupational Therapists. Available at <http://www.bls.gov/oco/ocos078.htm#outlook>. Accessed December 7, 2010.

³⁸⁷ American Occupational Therapy Association. Standards of Practice for Occupational Therapy. Available at: <http://www.aota.org/about/core/36194.aspx>. Accessed December 7, 2010.

³⁸⁸ Govender P, Kalra L. 2007. Benefits of occupational therapy in stroke rehabilitation. *Expert Review of Neurotherapeutics* 7(8):1013-9.

³⁸⁹ American Occupational Therapy Association. About Occupational Therapy. Available at: <http://www.aota.org/Consumers.aspx>. Accessed December 7, 2010.

³⁹⁰ Govender P, Kalra L. 2007.

³⁹¹ *Ibid.*

³⁹² *Ibid.*

³⁹³ State of Connecticut. November 2010. Office of the Secretary of State. Selected facts about Connecticut. Available at: <http://www.sots.ct.gov/sots/cwp/view.asp?a=3188&q=392592>. Accessed December 7, 2010.

³⁹⁴ State of Connecticut. May 2010. Department of Public Health. OT Licensure Requirements. Available at: <http://www.ct.gov/dph/cwp/view.asp?a=3121&q=389444>. Accessed December 7, 2010.

III. Methods

Under the direction of CPHHP, medical librarians at the Lyman Maynard Stowe Library at the University of Connecticut Health Center (UCHC) gathered published articles and other information related to medical, social, economic, and financial aspects of the required benefit. Medical librarians conducted literature searches using PubMed, Scopus, UptoDate, DynaMed, Cochrane database, EMedicine, CINAHL, OT Seeker, Physiotherapy Evidence Database (PEDRO) and a web search using Google.

CPHHP staff conducted independent literature searches using the Cochrane Review, the Agency for Healthcare Quality and Research National Guidelines Clearinghouse, PubMed, Westlaw and Google Scholar. Search terms included OT plus efficacy, guidelines, insurance, insurance coverage, social impact, reimbursement, economic, effective, and cost. Where available, articles published in peer-reviewed journals are cited to support the analysis. Other sources of information may also be cited in the absence of peer-reviewed journal articles. Content from such sources may or may not be based on scientific evidence.

Staff gathered additional information through telephone and e-mail inquiries to appropriate state, federal, municipal, and non-profit entities and from internet sources such as the State of Connecticut website, Centers for Medicare and Medicaid (CMS) website, other states' websites, professional organizations' websites, and non-profit and community-based organization websites.

With the assistance of the Connecticut Insurance Department (CID), CPHHP and Ingenix Consulting requested and received 2007 and 2008 claims data from health plan carriers domiciled in Connecticut. Six carriers provided claims data for their fully insured group plan participants and four provided claims data for their fully insured individual plan participants. However, the claims data for individual policies is considered less credible than the group plan data due to the lower response rate and fewer covered lives represented by the claims. Five of the six carriers also provided information about coverage for treatment of OT under the in the self-funded plans they administer. The five carriers administer benefits for approximately 47 percent of self-funded members in Connecticut. It is anticipated that the self-funded plans managed by the sixth carrier provide coverage comparable to or more comprehensive than the other five carriers.

CPHHP and the CID contracted with Ingenix Consulting (IC) to provide actuarial and economic analyses of the mandated benefit. A description of the methods used for the actuarial analysis is available in the Ingenix Consulting report located in Appendix II.

IV. Social Impact

1. The extent to which occupational therapy is utilized by a significant portion of the population.

The National Ambulatory Medical Care Survey (NAMCS), a national probability sample survey, can be used to produce annual, national estimates of health care visits. 2006 data shows 1.9 million ambulatory care visits for occupational and/or speech therapy, which accounts for 0.2 percent of all ambulatory care visits in the United States. The data used from the NAMCS does not distinguish between occupational and speech therapy visits. Compared to the 20.8 million physical therapy (PT) visits, the frequency of visits for occupational and speech therapy combined is much lower.³⁹⁵

2. The extent to which occupational therapy, as applicable, is available to the population, including, but not limited to, coverage under: Medicare, the Department of Social Services, the Department of Public Health, Municipal Health Departments and public programs run by public schools or charities.

Medicare

Medicare Part B covers medically necessary outpatient OT from participating hospitals and skilled nursing facilities, as well as home health rehabilitation and public health agencies.³⁹⁶ Additionally, Medicare covers the services of occupational therapists in private practice. Medicare caps annual outpatient OT at \$1840, except in the case of services rendered by a hospital outpatient therapy department for which there is no cap for services.³⁹⁷ Patients must pay 20 percent of the Medicare-approved amount before reaching the annual cap, and 100 percent of the charges after reaching the cap. Additionally, there is an annual \$155 deductible before any Part B benefits begin.³⁹⁸ National-level Medicare B utilization data shows that approximately 121,397 enrollees received outpatient OT during the 2007 calendar year with an annual mean OT expenditure of \$875.³⁹⁹

Under Medicare Part A (hospital insurance) OT may be offered as a part of home health care services if the individual spends at least three days in the hospital and enters a skilled nursing facility within 30 days of hospital discharge.⁴⁰⁰

Department of Social Services

Medicaid generally covers medically necessary OT when “a physician deems the therapy as necessary and provides a written order for it, it can be billed to Medicaid.”⁴⁰¹ Unlike Medicare, Medicaid does not enroll independent occupational therapists; Medicaid only authorizes OT “accessed through a Rehabilitation Clinic, Hospital Outpatient department, or through home health services.”⁴⁰²

Also administered under the Connecticut Department of Developmental Services (DDS), the Connecticut

³⁹⁵ National Health Statistics Report. August 2008. National Ambulatory Medical Care Survey: 2006 Summary. Available at: www.cdc.gov/nchs/data/nhsr/nhsr003.pdf. Accessed December 7, 2010.

³⁹⁶ Medicare Coverage Guidelines for Occupational Therapy. May 2009. State of Connecticut. Available at: <http://www.medicare.gov/coverage/Search/Results.asp?State=CT|Connecticut&Coverage=49|Occupational+Therapy&submitState=View+Results+%3E>. Accessed August 12, 2010.

³⁹⁷ *Ibid.*

³⁹⁸ *Ibid.*

³⁹⁹ Kandilov A, Lyda-McDonald B, Drozd EM. June 2009. Developing outpatient therapy payment alternatives (DOTPA): 2007 utilization report. RTI Project Number 0209853.012.001.003. (pages 6,8)

⁴⁰⁰ Employee Benefit Research Institute. Notes. June 2005. Vol. 26, No. 6. Available at: http://www.ebri.org/pdf/notespdf/EBRI_Notes_06-2005.pdf. Accessed August 12, 2010.

⁴⁰¹ Personal correspondence with Nina Holmes, DSS Medical Policy Unit. June 16, 2010.

⁴⁰² *Ibid.*

Birth to Three System is the vehicle for coordinating and administering comprehensive related services for children age birth to three who “develop differently, or at a slower rate than most other children.”⁴⁰³ OT is among the services that may be provided to an eligible child under the program.

Department of Public Health

The Department of Public Health requires that all occupational therapists be registered with the department and maintains compliance of these guidelines. No information was found that would indicate the Department of Public Health provides OT services.

Public programs run by public schools

Under several federal laws including the Individuals with Disabilities Education Act Part B and Connecticut law (Connecticut General Statutes, §§ 10-76a to 10-76dd), OT is one of the related services for special education services offered to children with disabilities (ages 3 through 21) under Individualized Education Programs. The Connecticut State Department of Education (SDE) first produced guidelines for school-based occupational therapists in 1982, the year of implementation for the OT health insurance mandate. The SDE “Guidelines for Occupational Therapy in Education Settings” clarifies that the role of the school-based occupational therapist is to assist students in acquiring abilities “necessary to access educational materials and adapt to the educational environment.” Since the goal of school-based OT is to remove barriers from learning, the SDE suggests that school-based OT may differ substantially from OT received in a hospital or clinic setting.⁴⁰⁴

Public programs by charities

Some chapters of condition specific organizations, such as the National Multiple Sclerosis Society, may have programs to help pay for OT sessions.⁴⁰⁵

Other

In addition to the above venues, workers compensation insurance generally covers OT as a mode of treatment for workplace-related injuries. No information was found that would indicate municipal health departments/health districts provide OT services.

3. The extent to which insurance coverage is already available for occupational therapy.

OT is routinely included as a covered benefit in health insurance plans. However, that coverage is often limited. For the 46.6 percent of Connecticut residents enrolled in fully insured health plans,⁴⁰⁶ the State of Connecticut requires policies to cover OT to the extent the plan covers physical therapy.⁴⁰⁷ Information received from five of the major health plan carriers domiciled in Connecticut suggests that 95 percent of self-funded members have OT coverage at least to the extent established by Connecticut statute. Combined, the privately insured population under age 65 covered for OT accounts for approximately 74.8 percent of Connecticut residents. An additional 15.7 percent of Connecticut residents under age 65 have OT coverage under the Medicare or Medicaid government health programs.⁴⁰⁸ However, the extent to which health plans

⁴⁰³ Connecticut Birth-to-Three Program. Available at: <http://www.birth23.org/programs/programs.html>. Accessed September 27, 2010.

⁴⁰⁴ State of Connecticut, Department of Education. 1999. Guidelines for Occupational Therapy in Education Settings. Working Draft. Available at: <http://www.sde.ct.gov/sde/lib/sde/PDF/DEPS/Special/OTGuidelines.pdf>. Accessed August 12, 2010.

⁴⁰⁵ Stachowiak J. 2009. About.com. Occupational Therapy for Multiple Sclerosis. Available at: http://ms.about.com/od/livingwellwithms/a/occupational_therapy_overview.htm. Accessed August 12, 2010.

⁴⁰⁶ University of Connecticut, Center for Public Health and Health Policy. 2009. Review and Evaluation of Public Act 09-188, An Act Concerning Wellness Programs and Expansion of Health Insurance Coverage. Available at: <http://publichealth.uconn.edu/images/reports/InsuranceReview09.pdf>

⁴⁰⁷ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. CHAPTER 700, §38A-524 AND §38A-496.

⁴⁰⁸ University of Connecticut, Center for Public Health and Health Policy. 2009. Review and Evaluation of Public Act 09-188, An Act Concerning Wellness Programs and Expansion of Health Insurance Coverage. Available at: <http://publichealth.uconn.edu/images/reports/InsuranceReview09.pdf>

cover OT varies widely.

An analysis of health insurance coverage documents conducted in 2002 by Fox, McManus and Reichman found that 87 percent of the most popular HMO and PPO plans offered in each state across the United States covered OT. Of the plans covering OT, 86 percent imposed at least one limitation for number of visits, duration or reimbursement level. Cost-sharing requirements existed either in the form of coinsurance or co-payments for 78 percent of plans. In the same study, almost all plans restricted access to coverage for OT based on condition exclusions for impairments not caused by illness or injury (e.g., learning disabilities (34.1 percent), mental retardation (28.2 percent), autism spectrum disorders (18.8 percent), developmental disabilities (17.6 percent), developmental delay (14.1 percent), or conditions that cannot be improved significantly within a short period of time (43.5 percent). The authors' noted that, "HMOs were more likely than PPOs to offer OT services, but also more likely to impose benefit limits.... However, a much smaller proportion of HMOs required cost sharing than did PPOs....HMOs generally relied on co-payments and PPOs, on coinsurance."⁴⁰⁹

A CPHHP review of health insurance plan documents (as of 10/05/2010) available to Connecticut residents through Aetna (small group and individual), Anthem Blue Cross Blue Shield (individual policies), and ConnectiCare (individual policies) also reflects that plans typically cover OT. Limits to the number of OT visits allowed per year existed for all plans, ranging from 20 to 30 visits. The number of allowed visits tended to aggregate physical, occupational and speech services. The Connecticut plans also involved a wide range of deductibles (\$0-7,500) and cost sharing (0 percent, 20 percent or 50 percent) or co-pay requirements (\$45 under one insurer's plans). In the case of one insurer, the maximum amount covered per visit by the insurer was \$25.

4. If the coverage is not generally available, the extent to which such lack of coverage results in persons being unable to obtain necessary health care treatment.

Lack of insurance coverage for OT may be a barrier to obtaining necessary health care, especially since the Connecticut mandate requires that the "care and treatment are not available from sources other than a licensed occupational therapist."⁴¹⁰ In Connecticut, the population without coverage for OT generally is not enrolled in a health insurance plan. However, as described in Section IV-3, the cost-sharing requirements and limitations to coverage may result in a person being unable to obtain necessary health care treatment. For the fully insured population, the IC analysis of carrier claims data suggests that on average, members pay out of pocket for an estimated 35 percent of the cost for an OT visit. This level of cost sharing could be difficult for some people to afford and lead to individuals not seeking treatment. Depending on the type of OT treatment needed the burden may increase or decrease given the wide variation in types of services and duration of treatment that may be involved. For example, the IC report found many OT services to be relatively low cost on a per service basis or per hour but that certain services, like 15 minutes for a neuromuscular re-education session can cost \$126.

5. If the coverage is not generally available, the extent to which such a lack of coverage results in unreasonable financial hardships on those persons needing treatment.

Members who are eligible for OT coverage for their condition may or may not have plan coverage sufficient for the insured's family to avoid financial hardship. Cost-sharing requirements, limitations on the number of covered visits, and personal financial resources will determine if hardship occurs. On average, IC found that fully insured members paid 35 percent of the allowed cost for OT. However, the unit cost of OT services

⁴⁰⁹ Fox HB, McManus MA, Reichman MB. January 2002. The strengths and weaknesses of private health insurance coverage for children with special health care needs. Maternal and Child Health Policy Research Center. US Department of Health and Human Services. (49)

⁴¹⁰ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. CHAPTER 700, §38A-524 AND §38A-496.

varies widely. A low-range cost for service is about \$65 per hour but as noted by IC, the OT procedure for neuromuscular education may cost \$126.⁴¹¹

As noted above, coverage for OT is required to be included in fully insured plans to the extent the health plan includes PT. Assuming a range of cost from \$780 to \$1,512 (based on 12 visits⁴¹² at \$65 and \$126 per hour) the model family with a \$50,000 income would pay 0.5 to 1.1 percent of their income with a 35 percent co-pay (\$273-\$529) or 1.6 to 3.0 percent of their income if uninsured (\$780-\$1,512). Additional financial burden may be imposed by the time commitment, transportation costs, or loss of income due to absence from work related to obtaining care.

Further discussion of financial and socioeconomic effects of the mandated benefit can be found in Appendix II: Ingenix Consulting Actuarial Report, pages 50-51, 60.

6. The level of public demand and the level of demand from providers for occupational therapy.

Demand for OT can be inferred from the history and continued growth of the profession, provider referrals to occupational therapists for patients, and the inclusion of OT under many state mandates and the federal Medicare and Medicaid programs.

From a historical perspective, OT gained public support following wartime efforts in the 1940s where OT services provided to servicemen received positive press. Prior to the wartime efforts, mainstream attention was not directed towards the use of OT, which primarily occurred in mental health settings. However, the U.S. military was an early adopter of OT services and integrated OT into the medical model. In the military setting, orthopedic or other physicians had the responsibility of referring clients to OT services. After the war, civilian hospitals began offering OT. The U.S. Bureau of Labor Statistics projects continued growth for the OT profession with a 26 percent increase in the number of occupational therapists (OTs) between 2008 and 2018, an employment growth rate much higher than most industries but comparable to the increase expected for PT (30 percent).⁴¹³

Public demand for OT is also reflected in the twenty or more states with provider or service mandates related to OT. Connecticut and a number of other states require coverage of OT through more than one health insurance mandate. For numerous mandates, OT coverage is extended based on specific health conditions, settings or to children. Table III.6.1 summarizes mandates related to OT that exist in the state of Connecticut.

7. The level of public demand and the level of demand from providers for insurance coverage for occupational therapy.

The demand for insurance coverage for OT is reflected by the passing of Connecticut's OT insurance mandate in 1982. Demand for insurance coverage for OT is also reflected by the passage of population, condition, and setting-specific provisions that specify OT as a covered therapy in Connecticut and at least nineteen other states. Table III.6.1, below, highlights Connecticut's health insurance mandates for autism spectrum disorders, birth-to-three, OT, comprehensive rehabilitation services and home health care as related mandates that reflect the demand for insurers to cover OT.

⁴¹¹ Ingenix Consulting Actuarial Report for the State of Connecticut on Set Three of the Health Insurance Mandates Covered by Public Act Number 09-179. December 10, 2010. (in Appendix II).

⁴¹² State of Connecticut Workers' Compensation Program. Employee Information Brochure. Available at: http://www.nwcc.commnet.edu/humanresources/workers_comp/Employee_Information_Brochure.pdf. Accessed December 7, 2010.

⁴¹³ Bureau of Labor and Statistics. Occupational Outlook Handbook 2010. Occupational Therapists. Available at <http://www.bls.gov/oco/ocos078.htm#outlook>. Accessed December 7, 2010.

Table III.6.1. Occupational Therapy and Connecticut’s Health Insurance Mandates			
Effective	Mandate		Type of plan
1975	Home health care (§ 38a-520; § 38a-493)	Home health care, as a substitute for inpatient hospital care or for terminally ill patients must be covered. OT is among the services that may be specified in the home health care plan (which must be written by a physician).	Group; Individual
1982	Occupational Therapy (§§ 38a-524; 38a-496)	Insurers must cover occupational therapy to the extent that physical therapy is covered.	Group; Individual
1982	Comprehensive rehabilitation services (§ 38a-523)	Insurers must offer a group plan for purchase that covers rehabilitation services, including OT, provided by a comprehensive rehabilitation facility.	Group
1993	Birth-to-Three (§§ 38a-490a; 38a-516a)	Insurers must reimburse for medically necessary early intervention services for children enrolled in the Birth-to-Three program. OT is among the “medically necessary” services provided.	Group; Individual
2009	Autism Spectrum Disorders (Public Act 08-132).	For those with an ASD, OT must be covered to the extent that it would be for other conditions under the same policy.	Group; Individual

8. The likelihood of achieving the objectives of meeting a consumer need as evidenced by the experience of other states.

A review of the literature and extensive internet searches did not result in identification of any reports evaluating the effectiveness of OT-related health insurance mandates with regards to meeting a consumer need. Therefore, it is difficult to report on the extent to which the mandates have addressed a consumer need. To the extent that a government enacting policy addresses a consumer need, the availability of health benefit mandates in states across the country may reflect an increased likelihood of meeting a health need for consumers.

The National Association of Insurance Commissioners “Compendium of State Laws on Insurance Topics” summarizes health benefit mandates available in each state. Twenty states and the District of Columbia require at least some coverage for OT as a health benefit either in general, for specific models of care (home health care, outpatient rehabilitation) or for specific populations (e.g., children of a certain age, autism spectrum disorders, neurodevelopmental disorders, congenital birth defects).⁴¹⁴ A number of states, including Connecticut have multiple mandates requiring OT for varying populations or care locations.

The states with mandates include Arkansas, California, Colorado, Connecticut, Florida, Illinois, Indiana, Iowa, Louisiana, Maine, Maryland, Massachusetts, Missouri, New Mexico, Rhode Island, Texas, Virginia, and Wyoming.⁴¹⁵ The broadest coverage appears to be provided in Iowa’s mandate under which HMOs must cover OT. Extensive coverage also may be available for covered populations in Arkansas, California, Louisiana and Texas where occupational therapists are mandated to be covered as providers on health plans. Connecticut’s OT mandate under §§ 38a-524 and 38a-496 provides fairly broad coverage for OT. Different from other states, Connecticut requires coverage for OT expenses on an “exchange basis” in plans that cover

⁴¹⁴ NAIC Compendium of State Laws on Insurance Topics. National Association of Insurance Commissioners. August 2008.

⁴¹⁵ *Ibid.*

PT expenses. Other types of OT mandates specify OT as a covered service under rehabilitative services, long term care, and/or home health mandates in four states and coverage of OT for the child population or segments of the child population in eleven states.

9. The relevant findings of state agencies or other appropriate public organizations relating to the social impact of the mandated health benefit.

Thirty states now require a fiscal note or an additional review process for any new required health insurance benefit prior to enactment.⁴¹⁶ CPHHP staff and/or medical librarians conducted internet searches, database queries and telephone inquiries to locate reports generated by state agencies or appropriate public organizations on the mandate. States searched included Arkansas, California, Colorado, Delaware, Louisiana, Maine, Maryland, Massachusetts, Minnesota, New Jersey, New York, Missouri, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, Virginia, Washington, and Wisconsin.

Internet searches and telephone inquiries identified five studies from state agencies and public organizations related to the social impact of mandated insurance coverage for OT. However, the majority of reviews focused on OT for a certain population, such as individuals with a congenital or genetic birth defect, autism spectrum disorder, or children eligible for birth-to-three early intervention services. Only one state, California, discussed the potential impact of a broader mandate proposal for covering OT (plus PT and speech therapy). The report, by the California Health Benefits Review Program (CHBRP) reviewed Senate Bill 890, Basic Health Care Services. The report found that there is evidence that some forms of physical, occupational, and speech therapy are effective for treatment of some injuries, illnesses, and conditions. CHBRP also estimated that as a result of the mandate, utilization of physical, occupational, and speech therapy would increase.⁴¹⁷

The reports for mandated coverage for specific conditions are described below.

Maryland: The Maryland Health Care Commission reviewed HB 1192/SB 994, which would mandate coverage for habilitative services (occupational, physical and speech therapy) for persons of all ages who suffered congenital or genetic birth defects. The report suggested that due to the low prevalence rates of mental retardation, cerebral palsy, and autism, use of service would be low impact.⁴¹⁸

New Jersey: The New Jersey Mandated Health Benefits Advisory Commission reviewed Assembly Bill A-99, regarding among other things coverage of OT for the treatment of Autistic Disorder, Childhood Disintegrative Disorder, Asperger's Disorder, and Pervasive Developmental Disorder. The report found that the therapies covered under the mandate (physical, speech, and OT) are generally seen as improving the life prospects of the person with an autism spectrum disorder. The report also notes that some research suggests the cost benefit equation of OT as compelling, with each dollar spent on therapy repaid many times over in societal savings from greater independence and reduced social services expenditures.⁴¹⁹

Maine: The Maine Bureau of Insurance reviewed LD 1198, An Act to Reform Insurance Coverage to Include Diagnosis for Autism Spectrum Disorder, which covers OT for individuals with autism. The report

⁴¹⁶ National Conference of State Legislatures. 2009. Health insurance coverage mandates: Are they too costly? Presentation at the Louisiana Department of Insurance 2009 Annual Health Care Conference. May 28, 2009. Available at: <http://www.ncsl.org/portals/1/documents/health/MandatesCauchi09.pdf>. Accessed May 7, 2010.

⁴¹⁷ California Health Benefits Review Program. 2010. Analysis of Senate Bill 890, Basic Health Care Services. Available at: http://www.chbrp.org/docs/index.php?action=read&bill_id=91&doc_type=3. Accessed December 18, 2010.

⁴¹⁸ Maryland Health Care Commission, 2008. Annual Mandated Health Insurance Services Evaluation. Available at: http://mhcc.maryland.gov/health_insurance/habilitative15_1501.pdf. Accessed December 8, 2010.

⁴¹⁹ New Jersey Mandated Health Benefits Advisory Commission, 2007. A Study of Assembly Bill A-999. Available at http://www.state.nj.us/dobi/division_insurance/mhbac/070314_A999rpt_MHBAC.pdf. Accessed December 8, 2010.

notes that while most insurance plans will provide coverage for diagnosis and treatment of autism, most plans have annual limits for therapies, such as physical, occupational, and speech therapy.⁴²⁰

Virginia: The Joint Legislative Audit and Review Commission reviewed House Bill 83, mandated coverage of treatment of autism spectrum disorders, which includes OT. Major findings of the report include that there are approximately 7,500 children in Virginia with ASD, despite services provided through the Early Intervention System and public schools some children need additional services, and the cost of obtaining services may result in a considerable financial hardship for families.⁴²¹

10. The alternatives to meeting the identified need, including but not limited to, other treatments, methods or procedures.

For OT to be covered under the Connecticut mandate a physician must certify “that the prescribed care and treatment are not available from sources other than a licensed occupational therapist.” Occupational therapists are the ancillary service providers focused on helping patients reach their maximum capacity for independently carrying out physical and social activities of daily living (ADLs). Although there are numerous commonalities in procedures or treatments that may be used by an OT and other providers, the occupational therapist focuses the interventions around the patient building or rebuilding the skills necessary to complete ADLs. The OT also incorporates the potential barriers to carrying out ADLs from the person’s environment when developing the treatment plan.

If OT were not available, working with a physical therapist (PT) and/or speech therapist would allow access to some of the strategies used to improve functioning under OT. These providers could also provide guidance on select assistive devices and technologies if indicated. However, the focus of PT and speech therapy would not necessarily be focused around maximizing an individual’s ability to carry out ADLs as independently as possible. Furthermore, although OT and PT are sometimes used interchangeably, there are several differences between the two. OT focuses on preparing individuals to return to living independently and performing activities of daily living. Conversely, PT focuses on rehabilitating one’s strength, mobility, or fitness so that they may have full use of their extremities. These services will typically be employed following an injury, trauma, or surgery.⁴²² OT is a more functional rehabilitation while PT is physical rehabilitation.

Additional alternative care if a person is not able to complete ADLs independently may include home health aides, certified nurse’s assistants (CNAs), caregiver(s), or a supportive living program. Through these providers, volunteers and venues an individual could receive direct support to complete ADLs.

11. Whether the benefit is a medical or broader social need and whether it is consistent with the role of health insurance and the concept of managed care.

Occupational therapists work with patients to help them reach their maximum level of function and independence during activities of daily living. The aspect of OT generally covered by carriers of health plans follows an episode of acute disease, injury, or condition. OT considered not medically necessary by health carriers generally serves a preventive, maintenance, educational or workplace function.⁴²³ Regaining skills,

⁴²⁰ Maine Bureau of Insurance, 2009. Review and Evaluation of LD 1198, *An Act to Reform Insurance Coverage to Include Diagnosis for Autism Spectrum Disorder*. http://www.maine.gov/pfr/legislative/documents/LD_1198_Autism_Mandate_Final_Report_Corrected.pdf. Accessed December 14, 2010.

⁴²¹ Virginia Joint Legislative Audit and Review Commission, 2008. Evaluation of House Bill 83: Mandated Coverage of Autism Spectrum Disorders. Available at: <http://jlarc.virginia.gov/reports/Rpt371.pdf>. Accessed December 15, 2010.

⁴²² Stanford Hospitals and Clinics. 2010. Rehabilitation Services. Available at: <http://stanfordhospital.org/clinicsmedServices/medicalServices/rehabilitation>. Accessed December 7, 2010.

⁴²³ Cigna. November 2009. Medical Coverage Policy. Occupational Therapy. Available at: http://www.cigna.com/customer_care/healthcare_professional/coverage_positions/medical/mm_0232_coveragepositioncriteria_occupational_therapy_outpatient.pdf. Accessed December 7, 2010.

acquiring assistive devices, and preventing health conditions from worsening so that an individual may carry out ADLs meets a clear social need. Whether meeting this need is also considered medical or consistent with the role of health insurance and the concept of managed care depends on philosophical perspective.

12. The potential social implications of the coverage with respect to the direct or specific creation of a comparable mandated benefit for similar diseases, illnesses, or conditions.

Comparable mandates could be passed for other medical treatments or extensions of coverage to uncovered populations may occur. As outlined under Section IV-7, Connecticut has four additional health benefit mandates that make reference to insurers covering OT. The two mandates passed after the one that is the subject of this report extend coverage for the early intervention population and to individuals with an autism spectrum disorder. Prior to these mandates, OT for early intervention may have been denied as an “educational” rather than “medical” service and a diagnosis of autism precluded an individual from coverage for OT.

Potential social implications may also include the extension of coverage to other types of therapies, often not included in plans. Seven years following implementation of the OT mandate, Connecticut implemented a mandate for coverage of chiropractic services. Unlike the OT mandate, which requires coverage to the extent that a plan covers PT, the chiropractor services mandate requires coverage of chiropractic services to the extent that a plan covered “services rendered by a physician.”⁴²⁴

13. The impact of the benefit on the availability of other benefits currently offered.

Provider supply, medical claims and mandate language drive the degree to which the OT mandate may impact the availability of other health benefits. Claims data shows that OT services account for on average, 0.3 percent of the PMPM premium under fully insured group plans in Connecticut and it is expected that the amount attributable to the OT mandate is substantially less. It is also expected that the size of the premium attributable to the OT mandate would not lead to carriers or employers removing, restricting access to, or limiting the other non-mandated benefits offered.

The “exchange basis” language in the mandate may further decrease the extent to which the mandate effects premiums while potentially leading to a reduction of PT benefits offered. Specifically, Connecticut requires plans that cover PT expenses to cover OT “on an exchange basis.”⁴²⁵ Assuming a policy does not change the total number of PT visits covered and OT coverage must be covered on the “exchange basis,” then the established number of visits must be shared for PT and OT as prescribed. Potentially, if the number of visits allowed is not equal to or greater than the number of visits prescribed, a member will need to choose whether to use the visit for OT or PT.

14. The impact of the benefit as it relates to employers shifting to self-insured plans and the extent to which the benefit is currently being offered by employers with self-insured plans.

Decisions about shifting to self-funded status may be driven by health insurance premium increases, the contribution of a mandated benefit to premiums, the proportion of the covered population likely to obtain the mandated service, and whether the mandated benefit is generally covered by self-funded plans. For OT, on average the total medical cost contributes 0.3 percent of the PMPM premium for a fully insured group member. According to five carriers,, 91 percent of their self-funded groups cover OT at least to the extent of Connecticut’s mandate.

Given that the PMPM cost associated with OT contributes an expected 0.3 percent of the premium in 2010

⁴²⁴ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. CHAPTER 700C §§ 38A-507 AND 38A-534.

⁴²⁵ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. CHAPTER 700, §§ 38A-524 AND 38A-496.

and the standard practice of self-funded groups appears to include coverage for the mandated benefit, it is not anticipated that employers shifted or will shift to self-funded plans as a result of this single mandate. It is also not anticipated that in the absence of this mandate a shift from self-funded plans to fully insured plans among employers would occur. However, employers cognizant of the cumulative financial effects of mandated benefits and large enough to assume the risk of employee health care costs are more likely to consider shifting to self-funded plans. Alternatively, employers may shift to plans with higher coinsurance amounts to keep premiums at a more affordable level (“benefit buy down”). Benefit buy down can result in employees not taking up coverage and thus being uninsured or not accessing care when it is needed because of high deductibles.

15. The impact of making the benefit applicable to the state employee health insurance or health benefits plan.

The state employee health insurance/benefit plans were subject to the OT requirement from the mandate implementation date of October 1, 1982 up until July 1, 2010 when Connecticut transitioned from fully insured group plans to self-funded. As a self-funded group, the State of Connecticut is exempt from state health insurance mandates under the federal Employee Retirement Income Security Act (ERISA). Assuming Connecticut continues to cover the mandated benefits, the social impact of the benefit for the approximately 134,344 covered lives in state employee plans and 30,000 state retirees not enrolled in Medicare⁴²⁶ is expected to be the same or similar to the social impact for persons covered in non-state employee health insurance plans as discussed throughout Section IV of this chapter. In terms of financial impact, if the state employee health insurance/benefit plans continue to provide coverage for the required benefit, the IC actuarial analysis estimates the medical cost of providing OT under the state employee health insurance plan will total \$1,695,927 in 2010.⁴²⁷ However, this amount reflects the total medical cost of providing OT rather than the amount of the medical costs attributable to the mandate. It is plausible that the actual cost attributable to the mandate may be overestimated since the value is not adjusted to account for the cost of OT in the absence of a mandate.

16. The extent to which credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community determines occupational therapy to be safe and effective.

As a habilitative or rehabilitative intervention, OT interventions are considered safe. Results from a national survey of OTs suggests that risks in the form of medical errors due to misjudgment (leaving a hot/cold pack on to long), inadequate preparation of the patient for treatment, lack of a supervising mentor for those with limited experience or knowledge of specific conditions, and miscommunication across providers may lead to injury or missed treatment opportunities.⁴²⁸

Multiple systematic reviews on the use of OT for a variety of conditions are available through the Cochrane Database of Systematic Reviews. A systematic review of literature on the efficacy of OT interventions for the elderly and individuals with rheumatoid arthritis, stroke, Parkinson’s disease, Multiple Sclerosis,

⁴²⁶ Personal communication. Scott Anderson, State of Connecticut Comptroller’s Office. September 14, 2010.

⁴²⁷ See Appendix II. Ingenix Consulting Actuarial a Report. This estimate has been calculated by multiplying the 2010 PMPM medical cost in table 1.3A by 12 to get an annual cost per insured life, and then multiplying that product by 163,334 covered lives, as reported by the State Comptroller’s office. This estimate is calculated using weighted averages for all claims paid by Connecticut-domiciled insurers and health maintenance organizations in the State. The actual cost of this mandate to the State plans may be higher or lower, based on the actual benefit design of the State plans and the demographics of the covered lives (e.g., level of cost-sharing, average age of members, etc.). Retention costs are not included in this estimate because the State is now self-funded and the traditional elements of retention do not apply. State costs for administration of this mandated benefit would be in addition to the above amount.

⁴²⁸ Korner-Bitensky N, Desrosiers J, Rochette A. 2008. A national survey of occupational therapists’ practices related to participation post-stroke. *Journal of Rehabilitative Medicine* 40(4):291-7.

Huntington's disease, cerebral palsy, and mental illness was conducted in October 2004.^{429 430} Although the review concluded that the literature lacks adequate evaluation of specific interventions, use of OT with the elderly improved quality of life while OT increased social participation among those with stroke. At the time of the 2004 review, insufficient evidence existed on the efficacy of OT for patients with Parkinson's disease, Multiple Sclerosis, Huntington's disease, cerebral palsy, and mental illness.

Subsequent systematic reviews have documented some changes since the 2004 review. A 2006 meta-analysis based on a systematic review of research on the use of OT for the performance of activities of daily living following stroke found reduced odds of a poor outcome and higher ADL scores compared to controls. The meta-analysis further suggested that for every 11 patients receiving OT for stroke, one was spared a poor outcome. Specifically, the likelihood of maintaining more personal ADLs independently and maintaining these abilities after OT treatment had higher levels among those having received OT.⁴³¹ In addition, a systematic review on OT for treatment of rheumatoid arthritis finds strong evidence on the efficacy of "instruction on joint pain" and a positive effect on functional ability, but limited evidence for provision of splints to decrease pain.⁴³² Another review, specific to feeding interventions for children with cerebral palsy found positive outcomes for eating efficiency and/or safety in almost all of the studies identified.⁴³³ On the other hand, additional systematic reviews find a lack of adequate scientific evidence for the use of OT on adults with neuromuscular disease,⁴³⁴ traumatic brain injury,⁴³⁵ and recent reviews continue to find insufficient evidence for OT-related improvements among individuals with Parkinson's disease.⁴³⁶

Although for several conditions, the research on OT efficacy does not meet scientific evidence standards commonly used for systematic reviews, national guidelines and clinical practice often incorporate OT. Available through the U.S. Agency for Healthcare Research and Quality (AHRQ), nine national guidelines were identified using a query of treatment or intervention recommendations that list "occupational therapy." Published guidelines from U.S. organizations include those by the American Occupational Therapy Association, the American Association of Neuroscience Nurses, the Cincinnati Children's Hospital Medical Center best evidence statements, and the American Academy of Neurology. Topics for guidelines specified a role for OT when treating children with autism, adults with traumatic brain injury, and individuals with work-related injuries and illnesses. A role for OT was also mentioned in sensory processing and deep brain stimulation guidelines.⁴³⁷

⁴²⁹ Steultjens EM, Dekker J, Bouter LM, *et al.* 2005. Evidence of the efficacy of occupational therapy in different conditions: an overview of systematic reviews. *Clinical Rehabilitation* 19(3):247-54.

⁴³⁰ Steultjens EMJ, Dekker J, Bouter LM, *et al.* 2004. Occupational therapy for children with cerebral palsy: a systematic review. *Clinical Rehabilitation* 18(1):1-14.

⁴³¹ Legg L, Drummond A, Langhorne P. Occupational therapy for patients with problems in activities of daily living after stroke. *Cochrane Database of Systematic Reviews* 2006, Issue 4. Art. No.: CD003585.

⁴³² Steultjens EEMJ, Dekker JJ, Bouter LM, Schaardenburg DD, Kuyk MAMAH, Van den Ende ECHM. Occupational therapy for rheumatoid arthritis. *Cochrane Database of Systematic Reviews* 2004, Issue 1. Art. No.: CD003114.

⁴³³ Snider L, Majnemer A, Darsaklis V. 2010. Feeding interventions for children with cerebral palsy. *Physical and Occupational Therapy in Pediatrics* [Epub ahead of print].

⁴³⁴ Cup EHC, Sturkenboom IHW, Pieterse AJ, *et al.* 2008. The evidence for occupational therapy for adults with neuromuscular disease: a systematic review. *The Occupational Therapy Journal of Research* 28(1): 12-18.

⁴³⁵ Lannin NA, McCluskey A. 2008. A systematic review of upper limb rehabilitation for adults with traumatic brain injury. *Brain Impairment* 9(3):237-246.

⁴³⁶ Dixon L, Duncan DC, Johnson P, *et al.* Occupational therapy for patients with Parkinson's disease. *Cochrane Database of Systematic Reviews* 2007, Issue 3. Art. No.: CD002813.

⁴³⁷ Golisz K. Occupational therapy practice guidelines for adults with traumatic brain injury. Bethesda (MD): American Occupational Therapy Association (AOTA); 2009.

V. Financial Impact

1. The extent to which the mandated health benefit may increase or decrease the cost of occupational therapy over the next five years.

The United States Bureau of Labor Statistics predicts 26 percent growth in the number of occupational therapists and 30 percent growth for occupational therapy assistants and aides from 2008 to 2018.⁴³⁸ Increased demand for this profession is expected due to the growing number of adolescents and elderly with functional limitations due to chronic conditions and disabilities.⁴³⁹ Based on the expected increase in utilization, the total dollars spent on OT in aggregate should be expected to increase over the next five years.

The ability to attribute any of the increase in cost to Connecticut's OT mandate is limited by the lack of longitudinal claims and utilization data for fully insured groups and individuals beginning prior to the October 1982 implementation of the mandate. It would be necessary to know the increase in utilization among the population gaining coverage while controlling for other factors that may change the likelihood of utilization, such as the proportion of the population with conditions that would benefit from OT. In addition to the lack of claims data prior to the mandate, the search conducted for this review also found longitudinal data on utilization and cost of OT to be lacking.

2. The extent to which the mandated health benefit may increase the appropriate or inappropriate use of occupational therapy over the next five years.

CPHHP staff and medical librarians were unable to identify reliable data sources on the use of OT by insurance type prior to and following the October 1982 implementation of the OT mandate. The lack of adequate longitudinal data on OT utilization limits the ability to comment on whether utilization of OT services changed as a result of the mandate because the size of the newly covered population using services is unknown. Furthermore, the medical literature does not adequately establish a threshold for the appropriate frequency, intensity, or dosage for the various OT modalities that may be used. As noted above, based on projections from the U.S. Bureau of Labor Statistics a 26 percent increase in the OT workforce is expected between 2008 and 2018.⁴⁴⁰ Therefore, it appears reasonable to expect a substantial increase in the utilization of OT services over the next five years.

3. The extent to which the mandated health benefit may serve as an alternative for a more expensive or less expensive approach.

OT plays a habilitative or rehabilitative role in the health care system. To this extent, OT may serve as an alternative to the severity of health conditions increasing and additional medical care being sought or OT may help individuals develop or redevelop the skills necessary to "age (or live) in place" rather than rely on supportive or assisted living. Generally, it is reasonable to expect that episodes of care for OT would be less expensive than potentially daily supportive living arrangements or treating morbidities with increased severity.

Although many of the modalities used by occupational therapists are similar to those used in PT, speech therapy, and cognitive behavior therapy, OT as a direct alternative for any of these therapies may not be appropriate nor would the converse be appropriate. Generally, OT is complementary to other rehabilitative

⁴³⁸ Bureau of Labor and Statistics. Occupational Outlook Handbook 2010. Occupational Therapists. Available at <http://www.bls.gov/oco/ocos078.htm#outlook>. Accessed December 7, 2010.

⁴³⁹ *Ibid.*

⁴⁴⁰ Bureau of Labor and Statistics. Occupational Outlook Handbook 2010. Occupational Therapists. Available at <http://www.bls.gov/oco/ocos078.htm#outlook>. Accessed December 7, 2010.

therapies and physician care. The use of OT as a treatment focuses on skill development, environmental adaptations, and equipment use so that an individual may carry out activities of daily living such as fine motor tasks (e.g., writing, drawing), self-care activities, and play as independently as possible. The OT treatment plan may also address cognitive or perceptual disabilities, especially related to the visual-motor area.⁴⁴¹

4. The methods that will be implemented to manage the utilization and costs of the mandated health benefit.

The OT mandate language specifies several strategies for utilization and cost management including a physician approved plan of care, physician review and certification of the plan at least every two months. The statute also stipulates that OT be provided on an exchange basis with that allowed for PT and that a physician must certify that the treatment is not available other than if rendered by a licensed occupational therapist.⁴⁴² Under Connecticut's mandate, any utilization and cost management approaches used for PT such as prior authorization, restrictions on the number of visits, higher co-pays, or reimbursement caps could be used. Similarly, it may be possible to use the same diagnosis or condition-based exclusions for covering OT as would exist for covering PT. However, in Connecticut, some limitations based on exclusion are not possible due to other existing health benefit mandates.

5. The extent to which insurance coverage for occupational therapy may be reasonably expected to increase or decrease the insurance premiums and administrative expenses for policyholders.

Insurance premiums include medical cost and retention costs. Medical cost accounts for medical services. Retention costs include administrative cost and profit (for for-profit carriers) or contribution to surplus (for not-for-profit carriers). Utilization of OT accounts for on average, an estimated 0.3 percent or \$1.03 PMPM for group and 0.2 percent or \$0.54 PMPM for individual health plan premiums in 2010. For fully insured group policyholders, the average medical cost of insurance accounts for \$0.86 PMPM while retention accounts for \$0.17 PMPM. Under fully insured individual policies, the average total medical claims cost is \$0.42 PMPM and retention accounts for \$0.13 PMPM. Since the mandate has been in place since October 1, 1982, the PMPM estimates presented do not capture the increase in cost attributable to the mandate but rather the cost of OT for the covered population projected for 2010.

It is also possible that the "exchange basis" language in the mandate may further decrease the extent to which the mandate impacts a policy premium. Specifically, for those covered individuals who substitute OT for therapy visits they would otherwise consume in the form of PT, the mandate may be cost neutral given the relatively similar charges associated with the cost per visit and per episode for both therapies.

6. The extent to which occupational therapy is more or less expensive than an existing approach that is determined to be equally safe and effective by credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community.

As discussed under Section V-3 above, OT is generally offered in conjunction with other rehabilitative or habilitative therapies such as PT and speech therapy. The direct substitute for not providing OT may result in a greater demand for supportive services sooner and at a higher frequency than if OT had been provided. As an alternative to OT, long-term care or supportive living facilities, home health aides or companions or other social services may be sought. There is some evidence to support that the additional care needed if

⁴⁴¹ Steultjens EMJ, Lambregts LM. 2004. Occupational therapy for children with cerebral palsy: a systematic review. *Clinical Rehabilitation* 18: 1-14.

⁴⁴² CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. CHAPTER 700, §38A-524 AND §38A-496.

function diminishes will result in higher costs.⁴⁴³ Within the timeline for this analysis, adequate information was not available to compare the costs of OT to home health aides or other social services that may be needed and sought in the absence of OT.

7. The impact of insurance coverage for occupational therapy on the total cost of health care, including potential benefits or savings to insurers and employers resulting from prevention or early detection of disease or illness related to such coverage.

Among the fully insured population, insurance coverage for OT is projected to contribute \$24,520,018 to the total cost of health care in Connecticut during 2010. Of this amount, approximately 54.9 percent is attributable to medical claims paid by carriers and the remaining 45.1 percent reflects out-of-pocket payments. This number does not account for any savings to the system that may occur as a result of OT. Furthermore, a much smaller proportion of the total cost would be attributable to the presence of the Connecticut mandate. The contribution of the mandate to the total cost depends on the change in OT utilization and cost attributable to the mandate and the extent to which OT visits are a result of replacing a visit that would otherwise be by PT with one for OT. (Additional discussion on the attributable cost of the mandate is available under Section V-1, Section V-2 and Section V-5).

The available literature does not solidly establish that benefit or savings may occur from prevention or early detection of conditions as a result of OT. Findings from at least one randomized control program evaluation suggest that the combined effect of PT and OT on functional status (e.g., self-care, mobility, psychosocial ability) can decrease the cost of care for long-term care residents. The cost analysis from the study findings demonstrated that a 1:50 ratio of PT/OTs to patient beds saves \$16,973 across two years compared to the 1:200 ratio or \$283 per bed annually (in 1993 Canadian dollars).⁴⁴⁴ The positive effect of OT on the functional ability of individuals with rheumatoid arthritis may also have implications for carriers and employers. Hypothetically, the increase in functional ability may translate into fewer work days lost and higher productivity for employers, and health plan carriers may receive fewer claims for additional rheumatoid arthritis interventions if individuals are better able to protect their joints.⁴⁴⁵ The American Occupational Therapy Association (AOTA) also reports that by beginning rehabilitation expensive treatments can be avoided. AOTA also emphasizes the importance of prompt OT rehabilitation for premature infants or children admitted to neonatal intensive care units, individuals with hand, wrist, or shoulder injuries, and individuals with a mental illness diagnosis.⁴⁴⁶

8. The impact of the mandated health care benefit on the cost of health care for small employers, as defined in § 38a-564 of the general statutes, and for employers other than small employers.

According to the IC analysis, the cost of OT is projected to contribute 0.3 percent to the cost of group insurance coverage in 2010. Given the relatively small contribution of OT to premium costs, it is expected that the impact of covering OT will be similar for both small employers and other employers. However, it is possible that some small employers may be more sensitive to premium increases than other employers.

9. The impact of the mandated health benefit on cost-shifting between private and public payers of health care coverage and on the overall cost of the health care delivery system in the state.

⁴⁴³ Przybelski BR, Dumont ED, Watkins ME, *et al.* 1996. Outcomes of enhanced physical and occupational therapy service in a nursing home setting. *Archives of Physical Medicine and Rehabilitation* 77(6): 554-561.

⁴⁴⁴ *Ibid.*

⁴⁴⁵ Steultjens EEMJ, Dekker JJ, Bouter LM, *et al.* Occupational therapy for rheumatoid arthritis. *Cochrane Database of Systematic Reviews* 2004, Issue 1. Art. No.: CD003114.

⁴⁴⁶ American Occupational Therapy Association. OT: Part of the Health Care Solution. Available at: www.aota.org/practitioners/advocacy/federal/solution.aspx. Accessed December 7, 2010.

The overall cost of the health delivery system in the state is understood to include total insurance premiums (medical costs and retention) and cost sharing. Actuarial analysis of claims data received from health plan carriers in Connecticut shows an expected cost in 2010 of \$27,298,980 for OT provided to Connecticut residents covered by fully insured group and individual health insurance plans.

The provision for fully insured plans to cover OT may or may not result in a shift of costs between private and public payers of health care. It is not expected that the cost of the mandate has led or will lead to privately insured persons losing private coverage and subsequently seeking publicly funded health care services. Conversely, if OT is obtained through private insurance plans by those who otherwise would use publicly funded mechanisms through special education, Medicare or Medicaid if the mandate were not in place, then a shift in cost to the private sector would occur.

Theoretically, outside of who pays for OT, other forms of cost-shifting may happen. If a person who otherwise would be out of work is able to return to work or to the extent that someone who lives dependent on the public system is able to live independently as a result of OT obtained because of the coverage mandate, the public sector benefits in the form of tax revenue or reduced demand for social services. At present, it is unlikely that the mandate implemented on October 1, 1982, taken individually, has a significant impact on cost-shifting between private and public payers of health care coverage.

Volume III

Chapter 7

Services of Physician Assistants and Certain Nurses

Review and Evaluation of Connecticut Statute

Chapter 700, § 38a-526 and § 38a-499

Mandatory Coverage for Services of Physician Assistants and Certain Nurses

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Chapter 7. Table of Contents

- I. Overview..... 133
- II. Background..... 133
- III. Methods..... 135
- IV. Social Impact..... 136
- Table III.7.1: State Health Insurance Mandates for Physician Assistants and Certain Nurses 139
- V. Financial Impact..... 143

I. Overview

The Connecticut General Assembly directed the Connecticut Insurance Department to review the health benefits required by Connecticut law to be included in group and individual health insurance policies. Reviews are conducted following the requirements stipulated under Public Act 09-179 and are collaborative efforts of Connecticut Insurance Department (CID) and the University of Connecticut Center for Public Health and Health Policy (CPHHP).

Connecticut General Statutes, Chapter 700, §§ 38a-526 and 38a-499 state that each group or individual health insurance policy...

...shall provide coverage for the services of physician assistants, certified nurse practitioners, certified psychiatric-mental health clinical nurse specialists and certified nurse-midwives if such services are within the individual's area of professional competence as established by education and licensure or certification and are currently reimbursed when rendered by any other licensed health care provider.

In April 2010, CPHHP and Ingenix Consulting (IC) requested and received claims data from six insurers and managed care organizations (MCOs) domiciled in Connecticut that cover 90 percent of the population in fully insured group and individual health insurance plans in Connecticut (1.25 million persons). Claims data shows that claims are being paid for services provided by the mandated providers listed in the statute.

Current coverage

This mandate went into effect on October 1, 1984 for coverage for services provided by nurses as defined in the statute; it went into effect July 1, 1995 for coverage for services provided by physician assistants. (P.A. 90-243, S. 110; P.A. 95-74, S. 8, 9).

Premium impact

Connecticut insurers/MCOs reported costs of the mandate at \$2.03 per member per month (PMPM) in 2008. The actuarial analysis concludes that the net new cost of the mandate is \$0.00 due to a substitution effect. The mandate has not added any new cost to the healthcare system and without these providers there could be more specialty physician care, which would likely add expense to the health system.

Self-funded coverage

Five health insurers/MCOs domiciled in Connecticut provided information about their self-funded plans, which represents an estimated 47 percent of the total population in self-funded plans in Connecticut. These five insurers/MCOs report that 77 percent of members in their self-funded plans have coverage for the mandated providers.

This report is intended to be read in conjunction with the General Introduction to this volume and the Ingenix Consulting Actuarial and Economic Report which is included as Appendix II.

II. Background

The roles and presence of physician assistants, nurse practitioners, certified psychiatric-mental health clinical nurse specialists and certified nurse-midwives are becoming more prominent and growing as the healthcare system evolves. A variety of factors contribute to the expanded roles and presence experienced by physician assistants and certain nurses as defined in the statute including demographics (an aging population), insurance status and expansions of government-sponsored insurance, health care cost increases, and

physician shortages, particularly in areas of primary care and in rural and underserved areas.

Physician assistants

Physician assistants (PA) are semi-autonomous clinicians practicing in conjunction with physicians. PAs perform similar physician tasks in diagnosing, treating, and examining patients. In areas experiencing a shortage of physicians, PAs have become an integral part of health care delivery.⁴⁴⁷ The Department of Public Health administers the registration and licensing of PAs within the state.

Nurse practitioners

Nurse practitioners (NP) are credentialed in Connecticut as advanced practice registered nurses (APRN). APRNs often perform similar tasks as PAs and work in collaboration with physicians.⁴⁴⁸ Education and certification requirements are different for APRNs and PAs. The Department of Public Health administers the registration and licensing of APRNs within the state.

Certified psychiatric-mental health clinical nurse specialists

Certified psychiatric-mental health clinical nurse specialists are APRNs with advanced training and experience in diagnosing and treating mental health diseases and conditions.

Certified nurse-midwives

Certified nurse-midwives perform a variety of functions related to the management of women's health, focusing particularly on family planning and gynecological needs.⁴⁴⁹ Services are provided in collaboration with obstetrician-gynecologists. The Department of Public Health administers the registration and licensing of certified nurse-midwives within the state.

Connecticut authorizes licensed PAs, NPs/APRNs, and certified nurse midwives to prescribe medication within the state.⁴⁵⁰

National sources project that there are 1,375 PAs, 3,040 NPs, and 218 certified nurse-midwives in Connecticut.^{451, 452} As of October 2008, the Connecticut Department of Public Health licensure database listed 1248 PAs, 2526 APRNs, and 177 certified nurse-midwives with unexpired licenses and Connecticut home or work addresses.⁴⁵³ In the United States in 2006 there were 110,000 clinically active PAs and NPs, which represents one sixth of the medical workforce.⁴⁵⁴ The annual number of NP graduates is declining, while the number of PA graduates is increasing. Should this trend continue, future healthcare delivery needs are likely to be affected.⁴⁵⁵

NPs and PAs are educated under different models of practice. PA programs follow a traditional generalist medical preparation while NPs build upon the baccalaureate nursing educational framework and require

⁴⁴⁷ Mittman DE, Cawley JF, Fenn WH. 2002. Physician assistants in the United States. *BMJ Clinical Research Edition* 325(7362):485-7.

⁴⁴⁸ Kasprak, J. Nurse Practitioners (APRN). Office of Legislative Research. Connecticut General Assembly. August 2009. Available at: <http://www.cga.ct.gov/2009/rpt/2009-R-0301.htm>. Accessed November 29, 2010.

⁴⁴⁹ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. CHAPTER 377: MIDWIFERY.

⁴⁵⁰ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. § 20-14c.

⁴⁵¹ Kaiser Health Foundation. State Health Facts. Connecticut. Provider and Service Use. Available at: <http://www.statehealthfacts.org>. Accessed December 1, 2010.

⁴⁵² American College of Nurse Midwives. Certified Nurse Midwives in Connecticut. August 2008. Available at http://www.midwife.org/siteFiles/legislative/Connecticut_09.pdf. Accessed November 21, 2010.

⁴⁵³ University of Connecticut, Center for Public Health and Health Policy. 2008. Assessment of primary care capacity in Connecticut. Available at: http://publichealth.uconn.edu/images/reports/PrimaryCare_Report_02_17_09.pdf. Accessed December 13, 2010.

⁴⁵⁴ Hooker RS. 2006. Physician assistants and nurse practitioners: the United States experience. *Medical Journal of Australia* 185(1): 4-7.

⁴⁵⁵ Hooker RS, Berlin LE. 2002. Trends in the supply of physician assistants and nurse practitioners in the United States. *Health Affairs (Project Hope)* Sep-Oct 21(5):174-81.

students to choose a specialty. All NPs are required to have a minimum of a master's degree in nursing; however, PAs can practice with a certificate, associate, or higher degree.⁴⁵⁶ Certified nurse-midwives are educated in a similar fashion as registered nurses (RN), receiving either an associate's or baccalaureate degree. Additional course work is required at a nurse-midwife program accredited by the American College of Nurse-Midwives. Nurses who successfully complete such a program receive a midwife certification.⁴⁵⁷ PAs and NPs have approximately half the education time of physicians and fewer restrictions when entering the workforce.

A study of health care from PAs and NPs in populations with limited access to physicians concluded there were few differences in utilization and no differences in difficulties in care between care provided by PAs and NPs compared to physicians.⁴⁵⁸ PAs and NPs perform a variety of medical services and act as primary care providers to underserved patients with a range of conditions. Utilization of PAs and NPs in rural areas with limited access to health care and emergency departments and with high volume patient traffic may improve access to care and make better use of limited resources.⁴⁵⁹ Compared to physicians, PAs and NPs perform up to 90% of services rendered by primary care physicians.⁴⁶⁰ Research shows that services provided by physician assistants, nurse practitioners, certified psychiatric mental health clinical nurse specialists, and nurse midwives are safe and effective.

The need for NPs and PAs is growing and employment opportunities are expanding. For example, the Bureau of Labor and Statistics (BLS) predicts employment of physician assistants to grow by 39 percent from 2008 to 2018.⁴⁶¹

III. Methods

Under the direction of CPHHP, medical librarians at the Lyman Maynard Stowe Library at the University of Connecticut Health Center (UCHC) gathered published articles and other information related to medical, social, economic, and financial aspects of the required benefit. Medical librarians conducted literature searches using PubMed, Scopus, Cochrane Database, CINAHL, and a web search using Google. Search terms included:

- Physician assistants
- Nurse practitioners
- Certified nurse midwife
- Midlevel providers

CPHHP staff conducted independent literature searches using PubMed and Google using similar search terms used by the UCHC medical librarians and also including the term “Certified psychiatric-mental health clinical nurse specialists.” Where available, articles published in peer-reviewed journals are cited to support

⁴⁵⁶ Bednar S, Atwater A, Keough V. 2007. Educational preparation of nurse practitioners and physician assistants: an exploratory review. *Advanced Emergency Nursing Journal* Apr-Jun 29(2): 158-71.

⁴⁵⁷ Connecticut Department of Public Health. Midwife Licensure Requirements. Available at <http://www.ct.gov/dph/cwp/view.asp?a=3121&cq=389420>. Accessed December 1, 2010.

⁴⁵⁸ Everett CM, Schumacher JR, Wright A, et al. 2009. Physician assistants and nurse practitioners as a usual source of care. *Journal of Rural Health* Fall 25(4):407-14.

⁴⁵⁹ Carter AJ, Chochinov AH. 2007. A systematic review of the impact of nurse practitioners on cost, quality of care, satisfaction and wait times in the emergency department. *Canadian Journal of Emergency Medical Care* July 9(4):286-95.

⁴⁶⁰ Hooker RS. 2006. Physician assistants and nurse practitioner: the United States experience. *The Medical Journal of Australia* 185(1):4-7.

⁴⁶¹ Bureau of Labor and Statistics. Occupational Outlook Handbook 2010. Physician Assistants. Available at <http://www.bls.gov/oco/ocos081.htm>. Accessed December 1, 2010.

the analysis. Other sources of information may also be cited in the absence of peer-reviewed journal articles. Content from such sources may or may not be based on scientific evidence.

CPHHP staff may have consulted with clinical faculty from the University of Connecticut School of Medicine on matters pertaining to medical standards of care, traditional, current and emerging practices, and evidence-based medicine related to the benefit. Additionally, staff may have consulted practitioners in the community for additional and/or specialized information if necessary.

Staff gathered additional information through telephone and e-mail inquiries to appropriate state, federal, municipal, and non-profit entities and from internet sources such as the State of Connecticut website, Centers for Medicare and Medicaid (CMS) website, other states' websites, professional organizations' websites, and non-profit and community-based organization websites.

With the assistance of the Connecticut Insurance Department (CID), CPHHP and Ingenix Consulting requested and received 2007 and 2008 claims data from insurance companies and MCOs domiciled in Connecticut. Six insurers/MCOs provided claims data for their fully insured group and individual plan participants. Five insurers/MCOs also provided information about coverage for PAs and certain nurses in the self-funded plans they administer.

CPHHP and the CID contracted with Ingenix Consulting (IC) to provide actuarial and economic analyses of the mandated benefit. Further details regarding the insurer/MCO claims data and actuarial methods used to estimate the cost of the benefit and economic methods used to estimate financial burden may be found in Appendix II.

IV. Social Impact

1. The extent to which the services of PAs and certain nurses as defined in the statute are utilized by a significant portion of the population.

The estimated 1,393,444 persons in Connecticut in fully insured group and individual health insurance plans would have access to insurance coverage for services provided by mandated providers.⁴⁶² Due to the variation of services provided, locations of service provision, and types of providers included in the mandate, precise estimates of utilization rates and medical services provided for all the providers included in this mandate are unknown.

Total costs associated with the providers included in this mandate are not insignificant, which suggests that services of PAs and certain nurses as defined in the statute are utilized by many persons in fully insured group and individual health insurance plans. For further information, please see Appendix II: Ingenix Consulting Actuarial and Economic Report, pages 19-20 and 25.

2. The extent to which the services of PAs and certain nurses as defined in the statute are available to the population, including, but not limited to, coverage under Medicare, or through public programs administered by charities, public schools, the Department of Public Health, municipal health departments or health districts or the Department of Social Services.

Medicare

Medicare covers the services of specially qualified non-physician practitioners such as clinical psychologists, clinical social workers, nurse practitioners, clinical nurse specialists, physician assistants, certified registered

⁴⁶² University of Connecticut, Center for Public Health and Health Policy. 2009. Review and Evaluation of Public Act 09-188, An Act Concerning Wellness Programs and Expansion of health insurance coverage. University of Connecticut. Available at: <http://publichealth.uconn.edu/images/reports/InsuranceReview09.pdf>. Accessed October 8, 2010.

nurse anesthetists, speech-language pathologists, and certified nurse midwives, as allowed by state and local law for medically necessary services.⁴⁶³ Specific authorization of coverage for services provided by PAs is also found under the Balanced Budget Act of 1997.⁴⁶⁴

Some differences exist in Medicare coverage policies for mental health services that may be provided by certified psychiatric-mental health clinical nurse specialists. Patients are responsible for 20 percent of the Medicare-approved amount for some services (e.g., medication management and diagnostic testing); however, patients must pay 50 percent of the Medicare-approved amounts for mental health therapy services.⁴⁶⁵

Public Programs Administered by Charities

No information was found regarding the availability of health services provided by PAs and certain nurses as defined in the statute through public programs administered by charities. It is likely that charitable health organizations that provide free or low-cost health care utilize lower-cost providers, including mid-level providers listed in the statute. Inquiries to several Federally Qualified Health Centers (FQHCs) in Connecticut showed that they employ PAs and APRNs.

Public Programs Administered by Public Schools

Connecticut school districts care for children with a wide range of physical, developmental, behavioral and emotional conditions and provide a wide range of treatments for students with special needs. Registered Nurses (RNs) are the most common type of employee in public schools; however there are 14.0 FTE nurse practitioners working in Connecticut public schools.⁴⁶⁶ No information was found that would indicate PAs or nurse midwives are currently providing health services in public schools in Connecticut.

The Department of Public Health (DPH)

No information was found regarding the availability of funding for health services provided by physician assistants and certain nurses as defined in the statute through the Connecticut Department of Public Health. There is information regarding practitioner licensing related to physician assistants and certain nurses as defined in the statute on the DPH website.

Municipal Health Departments

No information was found regarding the availability of funding for health services provided by physician assistants and certain nurses as defined in the statute through local and municipal health departments in Connecticut.

The Department of Social Services (DSS)⁴⁶⁷

Medicaid does not directly enroll physician assistants but PAs may provide services and bill for them on behalf of an enrolled physician. Medicaid enrolls APRNs from various specialty areas including psychiatry and directly enrolls and covers the services of nurse midwives.

⁴⁶³ Medicare Coverage Guidelines for Non-Physician Health Care Provider Services (State of Connecticut).

⁴⁶⁴ Balanced Budget Act of 1997, § 4512. Available at https://www.cms.gov/DemoProjectsEvalRpts/downloads/CC_Section4016_BBA_1997.pdf. Accessed August 11, 2010). See also American Academy of Physician Assistants website, <http://www.aapa.org/advocacy-and-practice-resources/issue-briefs/504-medicare-provisions-affecting-physician-assistants-in-the-balanced-budget-act-of-1997-public-law-105-217>. Accessed August 11, 2010.

⁴⁶⁵ Medicare Coverage Guidelines for Non-Physician Health Care Provider Services (State of Connecticut).

⁴⁶⁶ Newsom-Stewart M. 2009. Connecticut State Department of Education, Health services program information survey report. Education Connection: Litchfield, Connecticut.

⁴⁶⁷ Personal communication. Nina Holmes, DSS Medical Policy Unit. July 16, 2010.

3. *The extent to which insurance coverage is already available for the services provided by PAs and certain nurses as defined in the statute.*

Connecticut law requires coverage for services provided by physician assistants and certain nurses as defined in the statute in fully insured group and individual health insurance plans as of October 1, 1984 for certain nurses as defined in the statute and for physician assistants as of July 1, 1995.⁴⁶⁸ 2007 and 2008 claims data from six insurers/MCOs that cover 90 percent of the population in fully insured group and individual insurance plans in Connecticut showed evidence that claims are paid for services provided by the mandated providers. Information received from five insurers/MCOs domiciled in Connecticut which represents an estimated 47 percent of the total population in self-funded plans in Connecticut shows that 77 percent of members in these self-funded plans have coverage for the benefit.

4. *If the coverage is not generally available, the extent to which such lack of coverage results in persons being unable to obtain necessary health care treatment.*

Coverage is required and generally available for persons enrolled in fully insured group and individual health insurance plans. Information received indicates that coverage is also generally available for persons covered by self-funded plans as well as for persons enrolled in Medicare and Medicaid. Persons covered through fully insured and self-funded group plans represent the majority of the insured population under age 65 in Connecticut.

5. *If the coverage is not generally available, the extent to which such a lack of coverage results in unreasonable financial hardships on those persons needing treatment.*

As noted above, coverage for services provided by physician assistants and certain nurses, as defined in the statute, is required to be part of fully insured group and individual policies purchased in Connecticut. Coverage is routinely included in most self-funded plans, and is therefore generally available. Fees for services provided by physician assistants and certain nurses, as defined in the statute, may be lower than fees for equivalent services provided by physicians, which may result in reduced financial hardships on those persons receiving treatment who are uninsured or underinsured.

Further discussion of financial and socioeconomic effects of the mandated benefit may be found in Appendix II: Ingenix Consulting Actuarial and Economic Report, pages 36-39, 48-49.

6. *The level of public demand and the level of demand from providers for the service.*

Medical librarians and CPHHP staff found no published literature regarding the level of public demand or level of demand from providers for services provided by physician assistants and certain nurses as defined in the statute. Demand is indicated by estimates of future healthcare workforce shortages, including shortages for PAs and APRNs.

7. *The level of public demand and the level of demand from providers for insurance coverage for the service.*

CPHHP staff found no public testimony in favor of or opposed to insurance coverage for services provided by physician assistants during the time legislation for the mandated benefit was under consideration by the Connecticut General Assembly in March 1995.⁴⁶⁹

CPHHP staff found no public testimony related to insurance coverage for services provided by certain nurses as defined in the statute.

⁴⁶⁸ CONNECTICUT GENERAL STATUTES ANNOTATED § 38A-530D (INDIVIDUAL INSURANCE POLICIES); § 38A-503D (GROUP INSURANCE POLICIES).

⁴⁶⁹ Connecticut General Assembly. Report on Bills Favorably Reported By Committee. Public Health Committee. HB-5962. March 16, 1995.

8. The likelihood of achieving the objectives of meeting a consumer need as evidenced by the experience of other states.

According to the National Association of Insurance Commissioners, 22 states (including Connecticut) require some health insurance policies to cover services provided by certain nurses including those as defined in the Connecticut statute and five states (not including Connecticut) require coverage of services provided by physician assistants.⁴⁷⁰ The Council for Affordable Health Insurance reports that 16 states have provider mandates for services provided by physician assistants; 28 states have provider mandates for nurse midwives; 31 states have provider mandates for nurse practitioner; and 17 states have provider mandates for psychiatric nurses.⁴⁷¹ For details please see Table III.7.1.

Provider Type	States listed by NAIC	States listed by CAHI
Physician Assistants	Alaska, Montana, Oregon, North Carolina, Texas	Alaska, Alabama, Delaware, Florida, Iowa, Kansas, Kentucky, Maryland, Michigan, Montana, North Carolina, Nevada, Pennsylvania, Texas, Washington, Wyoming
Nurse midwife	Alaska, California, Connecticut, Delaware, Florida, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New Mexico, New York, Ohio, Pennsylvania, Rhode Island, West Virginia	Alaska, California, Colorado, Connecticut, Delaware, Florida, Massachusetts, Maryland, Maine, Michigan, Minnesota, Mississippi, Montana, North Carolina, North Dakota, New Hampshire, New Jersey, New Mexico, Nevada, New York, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Virginia, Washington, West Virginia
Nurse practitioner or Advanced Practice Registered Nurse	Alaska, Arizona, California, Connecticut, Delaware, Hawaii, Iowa, Kansas, Maine, Maryland, Massachusetts, Minnesota, Montana, New Hampshire, New Mexico, North Carolina, North Dakota, Oregon, Pennsylvania, Rhode Island, Texas, West Virginia	Alaska, Arizona, California, Colorado, Connecticut, Delaware, Hawaii, Iowa, Kansas, Massachusetts, Maryland, Maine, Minnesota, Missouri, Mississippi, Montana, North Carolina, North Dakota, New Hampshire, New Mexico, Nevada, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Washington, Wisconsin, West Virginia, Wyoming
Psychiatric Nurse	California, Connecticut, Maine, Minnesota, New Hampshire, Pennsylvania, Rhode Island, Virginia	California, Colorado, Connecticut, Florida, Massachusetts, Maine, Minnesota, Mississippi, North Carolina, North Dakota, Nevada, Ohio, Pennsylvania, Rhode Island, Virginia, West Virginia, Wyoming

⁴⁷⁰ NAIC Compendium of State Laws on Insurance Topics. National Association of Insurance Commissioners. August 2008.

⁴⁷¹ Bunce VC, Wieske JP. 2009. Health insurance mandates in the states 2009. Council for Affordable Health Insurance. Available at: http://www.cahi.org/cahi_contents/resources/pdf/HealthInsuranceMandates2009.pdf. Accessed May 6, 2010.

9. *The relevant findings of state agencies or other appropriate public organizations relating to the social impact of the mandated health benefit.*

Thirty states now require a fiscal note or an additional review process for any new required health insurance benefit prior to enactment.⁴⁷² Internet searches and telephone inquiries found no studies from state agencies and public organizations related to the social impact of mandated insurance coverage for services provided by physician assistants and nurses. One state reviewed the financial impact of coverage for services provided by some of the provider types listed in the Connecticut statute. In December 2009, the Maine Bureau of Insurance reported that mandated coverage for services provided by nurse practitioners and nurse midwives increased premiums by 0.16 percent.⁴⁷³

States searched for which no evidence of a review was found include California, Colorado, Maryland, Massachusetts, Virginia, Wisconsin, Louisiana, New Jersey, Pennsylvania, Washington and Texas.

10. *The alternatives to meeting the identified need, including but not limited to, other treatments, methods or procedures.*

Some services performed by physician assistants and certain nurses as defined in the statute may also be performed by other medical providers such as physicians, registered nurses, psychologists, social workers, or medical assistants. Alternatives to the services provided by physician assistants and certain nurses as defined in the statute might include provision of such services by these other types of providers depending on the service provided. Costs of such services if provided by physicians may be higher than costs for the same services when provided by the mid-level providers listed in the statute. Costs of such services if provided by registered nurses or medical assistants may be lower in cost.

11. *Whether the benefit is a medical or broader social need and whether it is consistent with the role of health insurance and the concept of managed care.*

As medical providers, physician assistants and certain nurses as defined in the statute fulfill medical needs. Provision of care by such medical providers is consistent with the role of health insurance and appropriate care delivered by mid-level providers is consistent with the concept of managed care.

12. *The potential social implications of the coverage with respect to the direct or specific creation of a comparable mandated benefit for similar diseases, illnesses, or conditions.*

It is possible that a comparable mandated benefit could be enacted for other types of providers. If denials of insurance claims or coverage for a medical services provided by a particular type of provider restricted access for a particular constituency or if mandating coverage for a particular type of provider were viewed as a means of increasing access and improving the effectiveness and efficiency of the health care system in the state, it is possible that mandated coverage could be enacted where currently mandated coverage does not exist.

13. *The impact of the benefit on the availability of other benefits currently offered.*

The benefit is expected to have little to no impact on the availability of other benefits currently offered. Physician assistants and certain nurses as defined in the statute are recognized medical providers by insurers/MCOs and the benefit is included in most self-funded plans, which suggests it is likely that coverage would

⁴⁷² National Conference of State Legislatures. 2009. Health insurance coverage mandates: Are they too costly? Presentation at the Louisiana Department of Insurance 2009 Annual Health Care Conference. May 28, 2009. Available at: <http://www.ncsl.org/portals/1/documents/health/MandatesCauchi09.pdf>. Accessed May 7, 2010.

⁴⁷³ Maine Bureau of Insurance, 2009. Cumulative Impact of Mandates in Maine. Available at: <http://www.maine.gov/pfr/legislative/documents/mandatecumcost2009.pdf>. Accessed December 14, 2010.

be included in plans and policies in the absence of an insurance mandate. Furthermore, the net effect of the mandate is expected to be minimal in both financial terms (for insurers) and medical terms (for patients). It is likely that the services provided by physician assistants and certain nurses as defined in the statute would be provided by other types of providers in the absence of coverage for physician assistants and certain nurses and that claims for such services would be covered by insurers.

14. The impact of the benefit as it relates to employers shifting to self-insured plans and the extent to which the benefit is currently being offered by employers with self-insured plans.

Because the expected net new financial impact of the mandate is zero, it is not anticipated that employers shifted or will shift to self-funded plans as a result of this single mandated benefit. It is also not anticipated that repeal of this single mandated benefit would lead to a shift from self-funded plans to fully insured plans among employers. Employers cognizant of the cumulative financial effects of mandated benefits and large enough to assume the risk of employee health care costs are more likely to consider shifting to self-funded plans.

There are several reasons for health insurance premium increases, including medical cost inflation, an aging population and an aging workforce, and required benefits or “mandates.” Employers contemplating a shift to self-funded plans are likely to weigh these and other factors. Employers also may shift to plans with higher coinsurance amounts to keep premiums at a more affordable level (“benefit buy down”). Benefit buy down can result in employees not taking up coverage and thus being uninsured or not accessing care when it is needed because of high deductibles.

Five health insurers/MCOs domiciled in Connecticut provided information about their self-funded plans, which represents an estimated 47 percent of the total population in self-funded plans in Connecticut. These five insurers/MCOs report that 77 percent of enrollees in their self-funded plans have coverage for the mandated providers.

15. The impact of making the benefit applicable to the state employee health insurance or health benefits plan.

The provider mandate for services provided by physician assistants, nurse practitioners, certified psychiatric-mental health clinical nurse specialists and nurse midwives is a current benefit that has been included in the state employee health insurance and health benefits plans at least in part since 1995. Thus the social impact of the benefit for the approximately 134,344 covered lives in state employee plans and 30,000 state retirees not enrolled in Medicare⁴⁷⁴ is expected to be the same or similar to the social impact for persons covered in non-state employee health insurance plans as discussed throughout Section IV of this report.

State employee claims are included in the 2007 and 2008 claims data provided by insurers/MCOs for their fully insured group insurance enrollees. Because the state shifted to self-funded status on July 1, 2010 (during the time this report was being written), utilization under self-funded status is unknown. Self-funded plans, including those that provide coverage for state employees, are not regulated by the state insurance department and are exempt from state health insurance required benefit statutes.

In terms of financial impact, if the state employee health insurance/benefit plans continue to provide coverage for the required benefit, the IC actuarial analysis estimates the medical cost to the state employee health insurance plan will be a net cost of \$0 in 2010 due to the substitution effect. In 2008, six insurers/MCOs domiciled in Connecticut paid claims totaling an estimated \$4,003,176 for Connecticut state employee claims for services provided by PAs, APRNs, Certified Psychiatric-Mental Health Clinical Nurse

⁴⁷⁴ Personal communication. Scott Anderson, State of Connecticut Comptroller’s Office. September 14, 2010.

Specialists, and Nurse Midwives. For further details, please see Appendix II, Ingenix Consulting Actuarial and Economic Report, page 25.

16. *The extent to which credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community determines the service to be safe and effective.*

The safety and effectiveness of services provided by PAs and certain nurses as defined in the statute is well-documented in the medical literature.

Safety

The care provided by these providers is as safe as or safer than care delivered by physicians according to numerous research studies and evaluations conducted during the past fifteen years.⁴⁷⁵ Research suggests that strong professional regulation, rigorous review and improvement of scope-of-practice standards by academic training programs, diligent adherence to scope-of-practice standards in health care settings, and state licensure and certification requirements contribute to this safety record.^{476,477} In addition, scope-of-training and efficiency standards call for PAs and certain nurses, as defined in the statute, to refer most high acuity patients and those with severe complications to physician specialists.^{478,479,480}

During the 1970s and 1980s, physician assistants and certain nurses, as defined in the statute, practiced primarily in primary care settings. More recently these providers are acquiring specialty training and credentials, and moving into specialty settings.^{481,482,483} Published data on outcomes of care delivered by physician assistants and certain nurses in specialty care settings is limited; and, the findings are consistent with regard to care provided in primary care settings, which are that the care provided is comparable to the care provided by physicians in terms of safety.⁴⁸⁴

Effectiveness

For the purposes of this review, we define effectiveness in terms of patient care outcomes, health system outcomes, and satisfaction with care.

Research results reported during the past twenty years demonstrates the effectiveness of services provided by PAs and certain nurses as defined in the statute. An extensive review of existing research found no appreciable differences in efficacy of care by nurse practitioners when compared to physicians in health outcomes for patients, process of care, resource utilization, or cost. Patient satisfaction was higher with nurse practitioner-led care. The review found that nurse practitioners provided more time with patients, gave

⁴⁷⁵ Laurant M, Reeves D, Hermens R, *et al.* 2005. Substitution of doctors by nurses in primary care. *Cochrane Database of Systematic Reviews*, Issue 2, Article No.: CD001271. DOI: 10.1002/14651858.CD001271.pub2

⁴⁷⁶ US DHHS HRSA Bureau of Health Professions. 2005. National Practitioner Data Bank 2005 Annual Report. Available at: www.npdb-hipdb.hrsa.gov/resources/reports/2005NPDBAnnualReport.pdf. Accessed December 8, 2010.

⁴⁷⁷ Davis A, Powe ML. 2002. Physician assistants: scope of practice, regulation and reimbursement. *Journal of Medical Practice Management* 18(2): 81-5.

⁴⁷⁸ *Ibid.*

⁴⁷⁹ Thomas LH, Cullum NA, McColl E, *et al.* 1999. Guidelines in professions allied to medicine. *Cochrane Database of Systematic Reviews*, Issue 1, Article No.: CD000349. DOI: 10.1002/14651858.CD000349

⁴⁸⁰ Hooker RS, Berlin LE. 2002. Trends in the supply of physician assistants and nurse practitioners in the U.S. *Health Affairs* 21(5): 174-81.

⁴⁸¹ Dower C, Christian J. 2009. Physician assistants and nurse practitioners in specialty care: six practices make it work. California Healthcare Foundation. Available at <http://www.chcf.org>. Accessed December 15, 2010.

⁴⁸² Oswanski ME, Sharma OP, Shekar, SR. 2004. Comparative review of use of physician assistants in a level 1 trauma center. *The American Surgeon* (70)3: 272-9.

⁴⁸³ Ahern M, Imperial J, *et al.* 2004. Impact of a designated hepatology nurse on the clinical course and quality of life of patients treated with rebetron therapy for chronic hepatitis. *Gerontology Nursing* 27(4): 149-55.

⁴⁸⁴ Dower C, Christian J. 2009.

them more information, and recalled more details about their patients than did doctors.⁴⁸⁵

Another meta-analysis involving more than 467 health care professionals found no difference between care given by nurse practitioners using clinical guidelines and standard physician care, and found that PAs deliver highly effective patient care and perform similar tasks to those of physicians, including examination, diagnosis, diagnostic testing, treatment, referrals, and prescribing.⁴⁸⁶ Other studies have demonstrated greater levels of patient satisfaction with care delivered by nurse practitioners when compared to physicians and high physician satisfaction with referrals to PAs and nurse practitioners of all types.^{487,488,489,490} In addition, satisfaction with care delivered by PAs is on par with that delivered by physicians.⁴⁹¹

Recent research documents that physician assistants and certain nurses as defined in the statute improve access to health care for rural, inner city, and other medically underserved populations.^{492,493,494,495} Physician assistants are a viable alternative to physicians in areas with shortages of doctors.⁴⁹⁶ Nurse practitioners and PAs are well distributed throughout primary care and specialty care practices, and are more likely than physicians to practice in rural areas and where vulnerable populations exist.⁴⁹⁷

IV. Financial Impact

1. The extent to which the mandated health benefit may increase or decrease the cost of the service over the next five years.

The mandate is not expected to materially alter the cost or availability of services provided by physician assistants and certain nurses as defined in the statute over the next five years. Costs of services provided by mandated providers are likely to increase (or decrease) at the same rate as any other medical service.

2. The extent to which the mandated health benefit may increase the appropriate or inappropriate use of the service over the next five years.

Services provided by physician assistants and certain nurses as defined in the statute would seem to increase appropriate use if insurers did not cover such services in the absence of the mandate. As noted, it is not uncommon for mandated benefits to be included in self-funded plans that are not subject to state benefit

⁴⁸⁵ Laurant M, Reeves D, Hermens R, *et al.* 2005.

⁴⁸⁶ Thomas LH, Cullum, NA, McColl E, *et al.* 1999.

⁴⁸⁷ Carter AJ, Chochinov AH. 2007. A systematic review of the impact of nurse practitioners on cost, quality of care, satisfaction and wait times in the emergency department. *CJEM*. 9(4):286-295.

⁴⁸⁸ Hayes E. 2007. Nurse practitioners and managed care: patient satisfaction and intention to adhere to nurse practitioner plan of care. *Journal of the American Academy of Nurse Practitioners* 19(8): 418-26.

⁴⁸⁹ Coddington JA, Sands LP. 2008. Cost of health care and quality outcomes of patients at nurse-managed clinics. *Nursing Economics* 26(2): 75-83.

⁴⁹⁰ Weiland SA. 2008. Reflections on independence in nurse practitioner practice. *Journal of the American Academy of Nurse Practitioners* 20(7): 345-52.

⁴⁹¹ Larsen EH, Hart LG. 2007. Growth and change in the physician assistant workforce in the United States, 1967-2000. *Journal of Allied Health* 36(3): 121-30.

⁴⁹² Kleinpell RM, Ely EW, Grabenkort R. 2008. Nurse practitioners and physician assistants in the intensive care unit: an evidence-based review. *Critical Care Medicine* 36(10): 2888-97.

⁴⁹³ Paine LL, Johnson TRB, Lang JM, *et al.* 2000. A comparison of visits and practices of nurse-midwives and obstetrical-gynecologists in ambulatory care settings. *Journal of Midwifery and Women's Health* 45(1): 37-44.

⁴⁹⁴ Grumbach K, Hart LG, Mertz E, *et al.* 2003. Who is caring for the underserved? A comparison of primary care physician and nonphysician clinicians in California and Washington. *Annals of Family Medicine* 1: 97-104.

⁴⁹⁵ Hanrahan NP, Hartley D. 2008. Employment of advanced-practice psychiatric nurses to stem rural mental health workforce shortages. *Psychiatric Services* 59(1): 109-11.

⁴⁹⁶ Staton FS, Bhosle MJ, Camacho FT, *et al.* 2007. How PAs improve access to care for the underserved.

⁴⁹⁷ Hooker RS. 2006. Physician assistants and nurse practitioners: the United States experience. *Medical Journal of Australia* 185(1): 4-7.

mandates. For those who use out-of-pocket funds to cover services provided by physician assistants and certain nurses as defined in the statute or receive them from other sources, a mandated benefit may not increase appropriate use. Overutilization is not expected to be a concern due to the nature of the mandate and the limited supply of the mandated providers.

3. *The extent to which the mandated health benefit may serve as an alternative for more expensive or less expensive treatment, service or drug(s).*

The actuarial analysis concludes that the net new cost of the mandate is *de minimus* due to a substitution effect. The mandate has not added any new cost to the healthcare system and without these providers there could be more care provided by primary care and specialty physicians, which would likely add expense to the health system.

4. *The methods that will be implemented to manage the utilization and costs of the mandated health benefit.*

It is anticipated that insurers and MCOs utilize the same utilization management methods and cost controls that are used for other covered benefits. The legislation does not prohibit insurers and MCOs from employing utilization management, prior authorization, or other utilization tools at their discretion.

5. *The extent to which insurance coverage for the service may be reasonably expected to increase or decrease the insurance premiums and administrative expenses for policyholders.*

Insurance premiums include medical cost and retention costs. Medical cost accounts for medical services. Retention costs include administrative cost and profit (for for-profit insurers/MCOs) or contribution to surplus (for not-for-profit insurers/MCOs). (For further discussion, please see Appendix II, Ingenix Consulting Actuarial and Economic Report, pages 13-15).

Connecticut insurers/MCOs reported costs of the mandate at \$2.03 per member per month (PMPM) in 2008. The actuarial analysis concludes that the net new cost of the mandate is *de minimus* due to a substitution effect. The mandate has not added any new cost to the healthcare system and without these providers there could be more care provided by primary care and specialty physicians, which could potentially increase insurance premiums and administrative expenses for policyholders.

For further information, please see Appendix II: Ingenix Consulting Actuarial and Economic Report.

6. *The extent to which the service is more or less expensive than an existing treatment, service or drug(s), that is determined to be equally safe and effective by credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community.*

According to numerous research studies and evaluations conducted during the past fifteen years, services provided by physician assistants and certain nurses as defined in the statute are equally safe and effective to care provided by physicians.⁴⁹⁸ The actuarial analysis concludes that the net new cost of the mandate is *de minimus* and without these providers there could be more care provided by primary care and specialty physicians, which could potentially be more expensive than the care provided by the mandated providers.

⁴⁹⁸ Laurant M, Reeves D, Hermens R, *et al.* 2005. Substitution of doctors by nurses in primary care. *Cochrane Database of Systematic Reviews*, Issue 2, Article No.: CD001271. DOI: 10.1002/14651858.CD001271.pub2.

7. *The impact of insurance coverage for the service on the total cost of health care, including potential benefits or savings to insurers and employers resulting from prevention or early detection of disease or illness related to such coverage.*

The total cost of health care is understood to be the funds flowing into the medical system, which are the medical costs of insurance premiums and cost sharing. Actuarial analysis of claims data received from insurers/MCOs in Connecticut shows claims cost in 2008 of \$37,787,111 for services provided by physician assistants and certain nurses as defined in the statute for Connecticut residents covered by fully insured group and individual health insurance plans.

To the extent that physician assistants and certain nurses as defined in the statute provide prevention or early detection services, potential benefits or savings to insurers and employers would result. For example, provision of pre-natal care by nurse midwives contributes to healthy pregnancies and newborns, preventing complications that can carry substantial health care costs and future social costs.

8. *The impact of the mandated health care benefit on the cost of health care for small employers, as defined in § 38a-564 of the general statutes, and for employers other than small employers.*

No published literature was found regarding the effect of mandated coverage of services provided by physician assistants and certain nurses as defined in the statute on the cost of health care for small employers. Because actuarial analysis estimates the net cost of the mandate to be *de minimus*, no difference in effects among different types of employers is expected.

For further information regarding the differential effect of the mandates on small group versus large group insurance, please see Appendix II: Ingenix Consulting Actuarial and Economic Report, pages 29-30.

9. *The impact of the mandated health benefit on cost-shifting between private and public payers of health care coverage and on the overall cost of the health care delivery system in the state.*

Cost-shifting between private and public payers of health care coverage generally occurs when formerly privately insured persons, after enrolling in a public program or becoming un- or underinsured, require and are provided health care services. Cost-shifting also occurs when a formerly publicly-funded service becomes the responsibility of private payers, which can result following enactment of a health insurance mandate.

Most persons formerly covered under private payers lose such coverage due to a change in employer, change in employment status, or when private payers discontinue offering health care coverage as an employee benefit or require employee contributions to premiums that are not affordable. Because this required benefit became effective approximately sixteen years ago, it is unlikely that the mandate, taken individually, has any impact on cost-shifting between private and public payers of health care coverage at present.

The overall cost of the health delivery system in the state is understood to include total insurance premiums (medical costs and retention) and cost sharing. Actuarial analysis of claims data received from insurers/MCOs in Connecticut shows claims costs in 2008 of \$44,332,956 for services provided by physician assistants, nurse practitioners, certified psychiatric-mental health clinical nurse specialists and nurse midwives for Connecticut residents covered by fully insured group and individual health insurance plans. However, actuarial analysis concludes that the cost of the mandate is *de minimus* due to the substitution effect as described above and in the actuarial report.

For further information, please see Appendix II, Ingenix Consulting Actuarial and Economic Report.

Volume III

Chapter 8

Services Provided by the Veterans' Home

Review and evaluation of CGSA §§ 38a-502 and 38a-529

Mandatory coverage for services provided by the Veterans' Home

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Chapter 8. Table of Contents

- I. Overview..... 149
- II. Background..... 150
- III. Methods..... 150
- IV. Social Impact..... 151
- V. Financial Impact..... 154

I. Overview

In Public Act 09-179, An Act Concerning Reviews of Health Insurance Benefits Mandated in this State, the Connecticut General Assembly directed the Connecticut Insurance Department to review statutorily mandated health benefits existing on or effective on July 1, 2009. This report is a part of that review and was conducted following the requirements stipulated under Public Act 09-179. The review is a collaborative effort of the Connecticut Insurance Department and the University of Connecticut Center for Public Health and Health Policy.

CGSA §§ 38a-529 and 38a-502 mandate that group and individual health insurance policies issued, renewed or continued in this state provide coverage for services provided by the Connecticut Veterans' Home. Specifically, CGSA § 38a-529 provides that...

No group health insurance policy delivered, issued for delivery or renewed in this state on or after October 1, 1988, may exclude coverage for services provided by the Veterans' Home. (P.A. 90-243, S. 113; P.A. 04-169, S. 19).

§ 38a-502 mandates the same coverage in individual health insurance policies delivered, issued for delivery, renewed or continued in Connecticut.

In March 2010, CPHHP and Ingenix Consulting (IC) requested and received 2007 and 2008 claims data related to the mandated benefit from six insurers and managed care organizations (MCOs) domiciled in Connecticut that cover approximately 90 percent of the population in fully insured group and individual health insurance plans in Connecticut (1.25 million persons). Based on that claims data, a review of the legislative history, reviews of pertinent literature and the Ingenix Consulting report, this review found the following:

Current coverage

This mandate has been in effect since 1990 (P.A. 90-243).

Premium impact

Group plans: On a 2010 basis, the medical cost of this mandate is estimated to be \$0.33 PMPM. Estimated total cost (insurance premium, administrative fees, and profit) of the mandated services on a 2010 basis in group plans is \$0.40 PMPM, which is 0.1 percent of estimated total premium costs in group plans. Estimated cost sharing on a 2010 basis in group plans is \$ 0.12 PMPM.

Individual policies: Four of the six insurers/MCOs provided claims data for individual health insurance policies. On a 2010 basis, medical cost is estimated to be \$0.14 PMPM. Estimated total cost (insurance premium, administrative fees, and profit) of the mandated services in 2010 in individual policies is \$0.18 PMPM, which is 0.1 percent of estimated total premiums in individual policies. Estimated cost sharing on a 2010 basis in individual policies is \$0.15 PMPM. (Note: Individual data is less credible than group data primarily due to small sample size).

Self-funded plans

Five health insurers/MCOs domiciled in Connecticut provided information about their self-funded plans, which represents an estimated 47 percent of the total population in self-funded plans in Connecticut. These five insurers/MCOs report that 71 percent of enrollees in their self-funded plans have coverage for the mandated services.

II. Background

The Connecticut Veterans' Home and Hospital was opened in Rocky Hill in 1940. In 2004 it was renamed the Connecticut Veterans' Home.

The Connecticut Veterans' Home provides general medical care for veterans honorably discharged from the Armed Forces. It has a health care facility with approximately 180 beds that provides extended health care to veterans with chronic and disabling medical conditions through physical therapy, occupational therapy, respiratory therapy, an Alzheimers unit, and hospice care. It is licensed by the Connecticut Department of Public Health as a Chronic Disease Hospital.⁴⁹⁹ The CT DPH defines a chronic disease hospital as a long-term hospital having facilities, medical staff and all necessary personnel for the diagnosis, care and treatment of a wide range of chronic diseases.⁵⁰⁰

Any veteran, as defined in subsection (a) of § 27-103, who meets active military, naval or air service requirements, as defined by 38 USC 101, may apply for admission to the home. Any member or former member of the armed forces, as defined in subsection (a) of § 27-103, who is a resident of this state and is entitled to retirement pay under 10 USC Chapter 1223, may apply for admission to the home.⁵⁰¹ Veterans who can afford to pay for their care are required to do so.⁵⁰² In 1988, the Connecticut General Assembly mandated that hospital and medical expense policies cover services provided at the Veterans' Home (P.A. 88-68). In 1990 the Connecticut General Assembly changed the reference to health insurance policies (P.A. 90-243). 2004 legislation incorporated the name change from the Veterans Home and Hospital to the Veterans' Home (P.A. 04-169).

III. Methods

CPHHP staff gathered information on the Veterans' Home through telephone and e-mail inquiries to appropriate state, federal, municipal, and non-profit entities and from internet sources such as the State of Connecticut website, Centers for Medicare and Medicaid (CMS) website, other states' websites, professional organizations' websites, and non-profit and community-based organization websites.

With the assistance of the Connecticut Insurance Department (CID), CPHHP and Ingenix Consulting requested and received 2007 and 2008 claims data from insurance companies and MCOs domiciled in Connecticut. Six insurers/MCOs provided claims data for their fully insured group participants and four insurers/MCOs provided claims data for their individual plan participants. Five insurers/MCOs also provided information about coverage in the self-funded plans they administer.

CPHHP and the CID contracted with Ingenix Consulting (IC) to provide actuarial and economic analyses of the mandated benefit. Further details regarding the insurer/MCO claims data and actuarial methods used to estimate the cost of the benefit and economic methods used to estimate financial burden may be found in Appendix II.

⁴⁹⁹ Connecticut Department of Veterans' Affairs. 2008. History of Connecticut Veterans' Home. Available at <http://www.ct.gov/ctva/cwp/view.asp?a=2005&tq=290842>. Accessed on November 18, 2010.

⁵⁰⁰ Connecticut Department of Public Health. Regulation 19-13-D1 (b) (2).

⁵⁰¹ CGSA § 27-108.

⁵⁰² CGSA § 27-108(D).

IV. Social Impact

1. The extent to which the treatment, service or equipment, supplies or drugs, as applicable, is utilized by a significant portion of the population.

The Veterans' Health Care Center at the Veterans' Home has 125 beds and provides long-term quality healthcare to veterans with chronic and disabling medical conditions.⁵⁰³ According to the U.S. Census Bureau, Connecticut has 246,000 veterans⁵⁰⁴ who would be eligible for services at the Veterans' Home; however, many of these get medical services elsewhere.

2. The extent to which the treatment, service or equipment, supplies or drugs, as applicable, is available to the population, including, but not limited to, coverage under Medicare, or through public programs administered by charities, public schools, the Department of Public Health, municipal health departments or health districts or the Department of Social Services.

Medicare

If a veteran is enrolled in Medicare, the Veterans' Home can receive reimbursement from Medicare, to the extent Medicare covers its services.

Medicaid

Veterans who meet the applicable eligibility rules for Medicaid are required to apply for it if they are unable to pay for their care at the Veterans' Home themselves. The following language is taken from the Guidelines for Submitting an Application for admission to the Veterans' Home Health Care Center:⁵⁰⁵

According to Connecticut General Statute (CGS) 27-108 if a veteran is unable to pay healthcare costs, the veteran is required to have a completed and filed "pending" Medicaid (a/k/a Title XIX) application. The financially responsible party is required to pay charges assessed by the Department of Veterans Affairs until such time the veteran is eligible for Medicaid. Once Medicaid eligibility is determined, Medicaid assumes the primary responsibility for paying the veteran's cost of care; however, the veteran remains responsible for contributing their "applied income" towards the cost of care as computed by Department of Social Services.

Medicaid is considered the payer of last resort. Other third party reimbursement is accessed first.

U.S. Department of Veteran Affairs

Veterans who have a service-related disability may be eligible for federal Department of Veterans' Affairs benefits.

3. The extent to which insurance coverage is already available for the treatment, service or equipment, supplies or drugs, as applicable.

These services have been mandated since 1988 in individual and group health insurance policies delivered, renewed or amended in Connecticut.

⁵⁰³ Connecticut Department of Veterans' Affairs. Health Care Facility brochure. Available at http://www.ct.gov/ctva/lib/ctva/HCF_BROCHURE_Revised2010.pdf. Accessed on November 18, 2010.

⁵⁰⁴ U.S. Census Bureau. Veterans by Sex, Selected Period of Service, and State: 2008. <http://www.census.gov/compendia/statab/2010/tables/10s0508.pdf>. Accessed on November 18, 2010.

⁵⁰⁵ Connecticut Department of Veterans' Affairs. Guidelines for Submitting an Application, p19. Available at http://www.ct.gov/ctva/lib/ctva/CT_DVA_Admissions_Application.pdf. Accessed on November 19, 2010.

4. If the coverage is not generally available, the extent to which such lack of coverage results in persons being unable to obtain necessary health care treatment.

The veteran is responsible for the cost of his/her care until he/she becomes eligible for Medicaid Title XIX. Lack of private insurance coverage could pose a barrier to care for those who cannot qualify for Medicaid Title XIX because they have assets in excess of Medicaid Title XIX limits (\$2,000).

5. If the coverage is not generally available, the extent to which such a lack of coverage results in unreasonable financial hardships on those persons needing treatment.

The level of hardship that might be incurred by a veteran who does not have private insurance depends on whether that veteran can qualify for Medicaid Title XIX and on the level of services needed by the veteran. Veterans who have a service-related disability may be eligible for federal Department of Veterans' Affairs benefits. The Veterans' Home Health Care Center is a long-term care facility and charges for care at the current allowable Medicaid rate.⁵⁰⁶

6. The level of public demand and the level of demand from providers for the treatment, service or equipment, supplies or drugs, as applicable.

The Veterans' Home is only available to Connecticut residents who are veterans and who have chronic or disabling conditions. According to the U.S. Census Bureau, there are approximately 246,000 veterans living in Connecticut.

7. The level of public demand and the level of demand from providers for insurance coverage for the treatment, service or equipment, supplies or drugs, as applicable.

The demand for insurance coverage stems from the requirement that veterans pay for the cost of their care at the Veterans' Home, until they become eligible for Medicaid.

8. The likelihood of achieving the objectives of meeting a consumer need as evidenced by the experience of other states.

No information was found that would indicate other states have a similar mandate.

9. The relevant findings of state agencies or other appropriate public organizations relating to the social impact of the mandated health benefit.

No information was found on state agency websites concerning the impact of this mandate.

10. The alternatives to meeting the identified need, including but not limited to, other treatments, methods or procedures.

Other chronic disease hospitals and skilled nursing facilities are alternatives to the Veterans' Home. It is also possible, depending on the disability and level of care needed, that home health care might be an alternative to long-term hospitalization.

11. Whether the benefit is a medical or broader social need and whether it is consistent with the role of health insurance and the concept of managed care.

The Veterans' Home Health Care Center provides general medical care for honorably discharged veterans. As such, it meets a medical need of these veterans.

⁵⁰⁶ Connecticut Department of Veterans' Affairs. Guidelines for Submitting an Application, p19. Available at http://www.ct.gov/ctva/lib/ctva/CT_DVA_Admissions_Application.pdf. Accessed on November 19, 2010.

12. *The potential social implications of the coverage with respect to the direct or specific creation of a comparable mandated benefit for similar diseases, illnesses, or conditions.*

This mandate does not require coverage of any particular disease, illness or condition.

13. *The impact of the benefit on the availability of other benefits currently offered.*

Mandates generally increase the cost of insurance, in conjunction with medical trend. Individuals and groups may respond at time of renewal by purchasing a lower level of coverage with increased member cost-sharing, rather than by dropping coverage altogether. High levels of member cost-sharing can act as a barrier to access, especially for low-income members.⁵⁰⁷ The impact of this mandate is relatively small and is unlikely to affect the availability of other benefits on its own. However, the cumulative impact of all mandates may cause plans to make changes in their levels of coverage.

14. *The impact of the benefit as it relates to employers shifting to self-insured plans and the extent to which the benefit is currently being offered by employers with self-insured plans.*

Five health insurers/MCOs domiciled in Connecticut provided information about their self-funded plans, which represents an estimated 47 percent of the total population in self-funded plans in Connecticut. These five insurers/MCOs report that 71 percent of enrollees in their self-funded plans have coverage for the mandated services.

15. *The impact of making the benefit applicable to the state employee health insurance or health benefits plan.*

Because the State plans were fully insured in 2007 and 2008, the claims data from the carriers and the cost projections which are based on that data include the data from the State plans. Assuming that the State plans will continue to comply with this mandated health benefit, the total annual cost for this mandate in 2010 is estimated to be \$650,763. This has been calculated by multiplying the 2010 PMPM cost by 12 to get an annual cost per insured life, and then multiplying that product by 163,334 covered lives, as reported by the State Comptroller's office. (This includes those retirees and their dependents who are not receiving Medicare.)⁵⁰⁸

Caveat: This estimate is calculated using weighted averages for all claims paid by Connecticut-domiciled insurers and health maintenance organizations in the State. The actual cost of this mandate to the State plans may be higher or lower, based on the actual benefit design of the State plans and the demographics of the covered lives (e.g., level of cost-sharing, average age of members, etc.).

Retention costs are not included in this estimate because the State is now self-funded and the traditional elements of retention do not apply. State costs for administration of the plans would be in addition to the above amount.

16. *The extent to which credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community determines the treatment, service or equipment, supplies or drugs, as applicable, to be safe and effective.*

This question is not applicable to this mandate. The mandate requires payment to a particular provider for covered services. It does not mandate payment for a particular treatment, service or equipment, supplies or drugs.

⁵⁰⁷ Ingenix Consulting report, Appendix II, p. 30.

⁵⁰⁸ Personal communication with Scott Anderson, State Comptroller's office, September 14, 2010.

V. Financial Impact

1. The extent to which the mandated health benefit may increase or decrease the cost of the treatment, service or equipment, supplies or drugs, as applicable, over the next five years.

According to the Guidelines for Submission of an Application for admission to the Veterans' Home, the rates for treatment in the Health Care Center are based on current Medicaid rates. Therefore, the impact of this mandate on the rates is likely to be minimal.

2. The extent to which the mandated health benefit may increase the appropriate or inappropriate use of the treatment, service or equipment, supplies or drugs, as applicable, over the next five years.

This mandate does not apply to any treatment, service or equipment, supplies or drugs. It is limited by definition to a discreet subset of the general population and is not likely to increase either the appropriate or inappropriate use of the Veterans' Home.

3. The extent to which the mandated health benefit may serve as an alternative for more expensive or less expensive treatment, service or equipment, supplies or drugs, as applicable.

The Veterans' Home is a chronic disease hospital for veterans. As such, it may serve as an alternative service provider for this population to other facilities and health care providers. Since the Veterans' Home charges for its services at the Medicaid rate, treatment at the Veterans' Home is likely to be less expensive than treatment by other providers.

4. The methods that will be implemented to manage the utilization and costs of the mandated health benefit.

The mandate is limited to care that is prescribed by a licensed health care provider. It is also limited as to the circumstances under which it may be prescribed. In addition, all other terms of the policy apply, so that utilization review can be exercised by the carriers to avoid inappropriate use of the benefit.

5. The extent to which insurance coverage for the treatment, service or equipment, supplies or drugs, as applicable, may be reasonably expected to increase or decrease the insurance premiums and administrative expenses for policyholders.

Insurance premiums include medical cost and retention costs. Medical cost accounts for medical services. Retention costs include administrative cost and profit (for for-profit insurers/MCOs) or contribution to surplus (for not-for-profit insurers/MCOs). (For further discussion, please see Appendix II, Ingenix Consulting Actuarial and Economic Report, pages 13-14).

Group plans: When the medical cost of the mandate is spread to all insureds in group plans, medical costs are estimated to be \$0.33 PMPM and retention costs are estimated to be \$0.07 PMPM in 2010. Thus the total effect on insurance premiums is estimated at \$0.40 PMPM in 2010.

Individual policies: When the medical cost of the mandate is spread to all insureds in individual policies, medical costs are estimated to be \$0.14 PMPM and retention costs are estimated to be \$0.04 PMPM in 2010. Thus the total effect on insurance premiums is estimated at \$0.18 PMPM in 2010.

For further information, please see the Appendix II: Ingenix Consulting Actuarial and Economic Report.

6. *The extent to which the treatment, service or equipment, supplies or drugs, as applicable, is more or less expensive than an existing treatment, service or equipment, supplies or drugs, as applicable, that is determined to be equally safe and effective by credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community.*

This mandate does not apply to any particular treatment, service or equipment, supplies or drugs. It mandates payment to the Veterans' Home for services covered by the policy. Since its rates are set by the Medicaid rates, it is unlikely to be more expensive than other licensed chronic disease hospitals, and may be less expensive.

7. *The impact of insurance coverage for the treatment, service or equipment, supplies or drugs, as applicable, on the total cost of health care, including potential benefits or savings to insurers and employers resulting from prevention or early detection of disease or illness related to such coverage.*

The total cost of health care is understood to be the funds flowing into the medical system, which are the medical costs portion of insurance premiums and the cost sharing of the insureds. Actuarial analysis of claims data received from insurers/MCOs in Connecticut shows an expected impact in 2010 of \$7,201,847 for payments to the Veterans' Home by fully insured group and individual health insurance plans.

8. *The impact of the mandated health care benefit on the cost of health care for small employers, as defined in § 38a-564 of the general statutes, and for employers other than small employers.*

According to the Ingenix Consulting report, this mandate is expected to have roughly the same effect on the medical cost of small group plans as on large group plans, approximately \$0.33 PMPM.⁵⁰⁹ However, because small employers often purchase smaller, leaner plans and require employees to pay a larger share of the premium, the cost of this mandate as a percentage of total paid medical cost may be somewhat higher than it is for large plans.⁵¹⁰

9. *The impact of the mandated health benefit on cost-shifting between private and public payers of health care coverage and on the overall cost of the health care delivery system in the state.*

The overall cost of the health delivery system in Connecticut is understood to include total insurance premiums (medical costs and retention) and cost sharing. Actuarial analysis of claims data received from insurers/MCOs in Connecticut shows an expected cost in 2010 of \$8,255,382 for service provided by the Veterans' Home for Connecticut residents covered by fully insured group and individual health insurance plans.⁵¹¹ This estimated impact assumes that the State of Connecticut plans continue to comply with this mandate even though these plans are now self-funded and therefore are not required to include it.

To the extent that this mandated benefit allows veterans to delay the need to apply for Medicaid Title XIX by extending the time it takes them to spend down their assets to the Medicaid eligibility level, it can result in a shift from a public payer to private payers.

⁵⁰⁹ Ingenix Consulting report, Appendix II, p. 29.

⁵¹⁰ Ingenix Consulting report, Appendix II, p. 29.

⁵¹¹ Ingenix Consulting Summary Report.

Volume III

Chapter 9

Direct Access to Obstetricians and Gynecologists (OB/GYNs)

Review and evaluation of CGSA §§38a-530b and 38a-503b

Mandate to permit direct access to obstetricians and gynecologists

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Chapter 9. Table of Contents

- I. Overview..... 159
- II. Background..... 160
- III. Methods..... 161
- IV. Social Impact..... 161
- V. Financial Impact..... 165

I. Overview

In Public Act 09-179, An Act Concerning Reviews of Health Insurance Benefits Mandated in this State, the Connecticut General Assembly directed the Connecticut Insurance Department to review statutorily mandated health benefits existing on or effective on July 1, 2009. This report is a part of that review and was conducted following the requirements stipulated under Public Act 09-179. The review is a collaborative effort of the Connecticut Insurance Department and the University of Connecticut Center for Public Health and Health Policy.

CGSA §§ 38a-530b and 38a-503b mandate that group and individual health insurance policies issued, renewed or continued in this state permit their members to have direct access to obstetricians, gynecologists, nurse mid-wives and advance practice nurses for obstetrical and gynecologic services without the need for a referral from their primary care providers. It also permits women enrollees to name an obstetrician or gynecologist as her primary care physician if she so chooses.

Specifically, CGSA § 38a-530b provides that...

(a) As used in this section, “carrier” means each insurer, health care center, hospital and medical service corporation, or other entity delivering, issuing for delivery, renewing or amending any group health insurance policy in this state on or after October 1, 1995, providing coverage of the type specified in subdivisions (1), (2), (4), (6), (11) and (12) of § 38a-469.

(b) Each carrier shall permit a female enrollee direct access to a participating in-network obstetrician-gynecologist for any gynecological examination or care related to pregnancy and shall allow direct access to a participating in-network obstetrician-gynecologist for primary and preventive obstetric and gynecologic services required as a result of any gynecological examination or as a result of a gynecological condition. Such obstetric and gynecologic services include, but are not limited to, pap smear tests. The plan may require the participating in-network obstetrician-gynecologist to discuss such services and any treatment plan with the female enrollee’s primary care provider. Nothing in this section shall preclude access to an in-network nurse-midwife as licensed pursuant to § 20-86c and 20-86g and in-network advanced practice nurses, as licensed pursuant to § 20-93 and 20-94a for obstetrical and gynecological services within their scope of practice.

(c) Each carrier may allow a female enrollee to designate either a participating, in-network obstetrician-gynecologist or any other in-network physician designated by the carrier as a primary care provider, or both, and may offer the same choice to all female enrollees. (P.A. 95-199, S. 2; P.A. 96-227, S. 15; P.A. 01-171, S. 19)

§ 38a-503b mandates the same coverage in individual health insurance policies delivered, issued for delivery, renewed or continued in Connecticut.

In March 2010, CPHHP and Ingenix Consulting (IC) requested and received 2007 and 2008 claims data related to the mandated benefit from six insurers and managed care organizations (MCOs) domiciled in Connecticut that cover approximately 90 percent of the population in fully insured group and individual health insurance plans in Connecticut (1.25 million persons). Based on that claims data, a review of the legislative history, reviews of pertinent literature and the Ingenix Consulting report, this review found the following:

Current coverage

This mandate has been in effect since 1995 (P.A. 95-199).

Premium impact

On a 2010 basis, the medical cost of this mandate is estimated to be *de minimis* for both group and individual health insurance plans.

Self-funded plans

Information received from five insurers/MCOs domiciled in Connecticut representing an estimated 47 percent of the total self-funded population in Connecticut shows that 99 percent of members in self-funded plans have coverage for the benefit.

This report is intended to be read in conjunction with the General Introduction to this volume and the Ingenix Consulting Actuarial and Economic Report that is included as Appendix II.

II. Background

An obstetrician is a physician who has successfully completed specialized education and training in the management of pregnancy, labor, and puerperium (the time-period directly following childbirth). A gynecologist is a physician who has a successfully completed specialized education and training in the health of the female reproductive system, including the diagnosis and treatment of disorders and diseases.⁵¹² Many physicians in this field practice both obstetrics and gynecology and are referred to as OB/GYNs.

Resident education in obstetrics-gynecology includes four years of clinically oriented graduate medical education focusing on reproductive health care and ambulatory primary health care for women, including health maintenance, disease prevention, diagnosis, treatment, consultation, and referral.⁵¹³ Physicians can also become board-certified in obstetrics and gynecology by meeting the requirements of the American Board of Obstetrics and Gynecology.⁵¹⁴

In the 1990s, as managed care plans gained a larger share of the health insurance business nation-wide, many carriers developed “gate-keeper” plans that required members to select a primary care provider for general health services and preventive care and to obtain referrals from their primary care providers prior to seeing a specialist. OB/GYNs were often considered as specialists, and women objected to having to get referrals from their primary care providers in order to see their OB/GYNs, especially for pregnancy and routine gynecologic care.⁵¹⁵

Since 1994, 38 states and the District of Columbia have responded by mandating that plans allow direct access to OB/GYNs and/or that plans allow female members to designate OB/GYNs as their primary care providers.⁵¹⁶ These mandates do not change the services that are covered under the plans or any of the other terms of the health insurance plans.

⁵¹² Health Communities.com. What is an Obstetrician/gynecologist (OB/GYN)? Available at <http://www.womenshealthchannel.com/obgyn.shtml>. Accessed on November 29, 2010.

⁵¹³ American Council on Graduate Medical Education. 2008. ACGME Program Requirements for Graduate Medical Education in Obstetrics and Gynecology. Available at http://www.acgme.org/acWebsite/downloads/RRC_progReq/220obstetricsandgynecology01012008.pdf. Accessed on December 9, 2010.

⁵¹⁴ American Board of Obstetrics and Gynecology. <http://www.abog.org/> Accessed on December 10, 2010.

⁵¹⁵ Kaiser Family Foundation. 2000. Issue Brief: State Policies on Access to Gynecological Care and Contraception. Available at: <http://www.kff.org/womenshealth/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=13346>. Accessed on December 8, 2010.

⁵¹⁶ *Ibid.*

III. Methods

Under the direction of CPHHP, medical librarians at the Lyman Maynard Stowe Library at the University of Connecticut Health Center (UCHC) gathered published articles and other information related to medical, social, economic, and financial aspects of allowing direct access to obstetricians/gynecologists. Medical librarians conducted literature searches using: PubMed, Scopus, DynaMed, Cochrane Database, EMedicine, and web searches with Google.

General search terms used included: obstetrician-gynecologist, OB-GYN, obstetrics-gynecology, economics, insurance coverage, and Medicare/Medicaid.

CPHHP staff conducted independent literature searches using similar search terms used by the UCHC medical librarians. Where available, articles published in peer-reviewed journals are cited to support the analysis. Other sources of information may also be cited in the absence of peer-reviewed journal articles. Content from such sources may or may not be based on scientific evidence.

CPHHP staff consulted with clinical faculty from the University of Connecticut School of Medicine on matters pertaining to medical standards of care, traditional, current and emerging practices, and evidence-based medicine related to the benefit.

Staff gathered additional information through telephone and e-mail inquiries to appropriate state, federal, municipal, and non-profit entities and from internet sources such as the State of Connecticut website, Centers for Medicare and Medicaid (CMS) website, other states' websites, professional organizations' websites, and non-profit and community-based organization websites.

With the assistance of the Connecticut Insurance Department (CID), CPHHP and Ingenix Consulting requested and received 2007 and 2008 claims data from insurance companies and MCOs domiciled in Connecticut. Six insurers/MCOs provided claims data for their fully insured group and individual plan participants. Five insurers/MCOs also provided information about coverage in the self-funded plans they administer.

CPHHP and the CID contracted with Ingenix Consulting (IC) to provide actuarial and economic analyses of the mandated benefit. Further details regarding the insurer/MCO claims data and actuarial methods used to estimate the cost of the benefit and economic methods used to estimate financial burden may be found in Appendix II.

IV. Social Impact

1. The extent to which the treatment, service or equipment, supplies or drugs, as applicable, is utilized by a significant portion of the population.

According to 2009 estimated population data from the U.S. Census Bureau, women represent 51 percent of Connecticut's population. An estimated 1.5 million Connecticut residents are women between the aged 16 or older.⁵¹⁷ 1.2 million female residents are between the ages of 14-64, which are the ages at which women are most likely to seek the services of an obstetrician or gynecologist.

⁵¹⁷ U.S. Census Bureau. 2009. Population estimates. Available at: <http://www.census.gov/popest/states/asrh/SC-EST2009-02.html>. Accessed on December 9, 2010.

2. The extent to which the treatment, service or equipment, supplies or drugs, as applicable, is available to the population, including, but not limited to, coverage under Medicare, or through public programs administered by charities, public schools, the Department of Public Health, municipal health departments or health districts or the Department of Social Services.

Medicare

Medicare Part B covers medically necessary services or supplies that are needed to diagnose or treat your medical condition and that meet accepted standards of medical practice. It also covers certain preventive services, including pap smears, pelvic exams and breast exams.⁵¹⁸ Part B does not cover routine physicals or gynecological exams. Patients pay 20 percent of the Medicare-approved amount for the exam. They do not pay for the lab Pap test.

Medicare Parts A and B do not require referrals in order to see a specialist for covered services. However, Medicare Advantage (Part C) plans may require referrals, depending on the particular plan.⁵¹⁹

Medicaid

Medicaid provides clients direct access to OB/GYNs, with no need for a referral.⁵²⁰

Connecticut Department of Public Health

The Connecticut Department of Public Health funds the Connecticut Breast and Cervical Cancer Early Detection Program through contracts with health care providers throughout the state for women at or below 200 percent of the Federal Poverty Level who have no health insurance or whose health insurance excludes coverage for routine Pap smears or mammograms.⁵²¹ It also funds the WISEWOMAN program at eight contracted health care provider sites throughout the state, which provides cardiovascular disease screening for women enrolled in the Connecticut Breast and Cervical Cancer Early Detection Program.⁵²²

3. The extent to which insurance coverage is already available for the treatment, service or equipment, supplies or drugs, as applicable.

Direct access to obstetricians and gynecologists has been mandated since 1995 in individual and group health insurance policies delivered, renewed or amended in Connecticut.

4. If the coverage is not generally available, the extent to which such lack of coverage results in persons being unable to obtain necessary health care treatment.

Lack of direct access to OB/GYNs does not prevent women from obtaining obstetric or gynecological services nor does it affect whether or not routine OB/GYN services are covered under a particular health insurance policy. In the absence of this mandate, carriers could require women to get a referral from their primary care provider before accessing an OB/GYN.

5. If the coverage is not generally available, the extent to which such a lack of coverage results in unreasonable financial hardships on those persons needing treatment.

⁵¹⁸ Medicare.gov. Medicare Part B (Medical Services). Available at <http://www.medicare.gov/navigation/medicare-basics/medicare-benefits/part-b.aspx>. Accessed on December 8, 2010.

⁵¹⁹ Medicare.gov. Medicare Advantage (Part C). Available at <http://www.medicare.gov/navigation/medicare-basics/medicare-benefits/part-c.aspx>. Accessed on December 8, 2010.

⁵²⁰ Personal correspondence with Nina Holmes, DSS Medical Policy Unit. 7/16/10.

⁵²¹ Connecticut Department of Public Health. 2010. The Connecticut Breast and Cervical Cancer Early Detection Program. Available at [http://www.ct.gov/dph/cwp/view.asp?a=3124&q=388824&dphPNavCtr=\[47735\]#47737](http://www.ct.gov/dph/cwp/view.asp?a=3124&q=388824&dphPNavCtr=[47735]#47737). Accessed on December 8, 2010.

⁵²² Connecticut Department of Public Health. 2010. WISEWOMAN Program. Available at [http://www.ct.gov/dph/cwp/view.asp?a=3124&q=388828&dphPNavCtr=\[47531\]#47531](http://www.ct.gov/dph/cwp/view.asp?a=3124&q=388828&dphPNavCtr=[47531]#47531). Accessed on December 8, 2010.

Lack of direct access to OB/GYNs does not pose a financial hardship on women needing obstetric or gynecologic services. It may make them go through an additional step to get a referral from a primary care provider to their OB/GYN if their health insurance plan requires a referral for specialist care.

6. *The level of public demand and the level of demand from providers for the treatment, service or equipment, supplies or drugs, as applicable.*

As many as 48 percent of women between the ages of 18 and 64 get all or some of their regular medical care from OB/GYNs.⁵²³

7. *The level of public demand and the level of demand from providers for insurance coverage for the treatment, service or equipment, supplies or drugs, as applicable.*

Surveys done by the Kaiser Family Foundation in 1998 and 2000 found substantial support for laws requiring health plans to allow a woman to see a gynecologist without pre-approval, even if it meant that insurance premiums would go up.⁵²⁴

8. *The likelihood of achieving the objectives of meeting a consumer need as evidenced by the experience of other states.*

Forty-one states and the District of Columbia mandate some form of direct access to obstetricians and gynecologists.⁵²⁵ In addition, as of 2001, sixteen states and the District of Columbia required health insurance plans to permit women to choose an OB/GYN as their primary care provider.⁵²⁶

Maryland mandates that insurance plans permit standing referrals to an obstetrician for women members who are pregnant. A standing referral means that the woman does not have to get a new referral for each appointment with the obstetrician. The Maryland Health Care Commission found that this mandate added no cost to Maryland health care insurance premiums.⁵²⁷

9. *The relevant findings of state agencies or other appropriate public organizations relating to the social impact of the mandated health benefit.*

The Connecticut Department of Public Health issued a report entitled “Connecticut Women’s Health” in 2001. This report found that several areas in Connecticut have been designated as shortage areas for primary care services and that OB/GYNs function as important providers of primary care services for women in the United States, with 41 percent of women between ages 18–64 splitting their care between an OB/GYN and a family or general practitioner.⁵²⁸ The report also found that OB/GYNs are more likely to give gynecological preventive services to women, including pap smears and pelvic exams, than other primary care providers. The report stated that direct access to OB/GYNs for preventive services is important.

⁵²³ Kaiser Family Foundation. 2000. Issue Brief: State Policies on Access to Gynecological Care and Contraception. Available at <http://www.kff.org/womenshealth/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=13346>. Accessed on December 8, 2010

⁵²⁴ *Ibid.*

⁵²⁵ National Council of State Legislators. 2008. Managed Care State Laws and Regulations, Including Consumer and Provider Protections. Available at <http://www.ncsl.org/default.aspx?tabid=14320>. Accessed on December 8, 2010.

⁵²⁶ Kaiser Family Foundation. 2000. Issue Brief: State Policies on Access to Gynecological Care and Contraception. Available at <http://www.kff.org/womenshealth/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=13346>. Accessed on December 8, 2010.

⁵²⁷ Maryland Health Care Commission. 2008. Study of Mandated Health Insurance Services: A Comparative Evaluation. Available at: http://mhcc.maryland.gov/health_insurance/mandated_1207.pdf. Accessed on December 9, 2010.

⁵²⁸ Connecticut Department of Public Health. 2001. Connecticut Women’s Health. Available at http://www.ct.gov/dph/lib/dph/state_health_planning/dphplans/wom_hlth_2001.pdf. Accessed on December 8, 2010.

10. *The alternatives to meeting the identified need, including but not limited to, other treatments, methods or procedures.*

Other types of physicians can provide obstetric and gynecological services, including family practice physicians and general practice physicians.

Obtaining referrals from other primary care providers to an OB/GYN is an alternative to allowing direct access and designation of OB/GYNs as primary care providers.

11. *Whether the benefit is a medical or broader social need and whether it is consistent with the role of health insurance and the concept of managed care.*

OB/GYNs provide medical care for women, particularly medical care related to reproductive organs and pregnancy. Allowing direct access to OB/GYNs meets a medical need.

12. *The potential social implications of the coverage with respect to the direct or specific creation of a comparable mandated benefit for similar diseases, illnesses, or conditions.*

This mandate may have implications for direct access to other specialties in “gate keeper” insurance plans. Many states mandate that plans allow a primary care provider to make a “standing referral” to a specialist providing on-going care for a chronic condition or for a pregnancy.⁵²⁹

13. *The impact of the benefit on the availability of other benefits currently offered.*

This mandate has a *de minimis* cost and is unlikely to have any impact on the availability of other benefits.

14. *The impact of the benefit as it relates to employers shifting to self-insured plans and the extent to which the benefit is currently being offered by employers with self-insured plans.*

Information received from five insurers/MCOs domiciled in Connecticut representing an estimated 47 percent of the total self-funded population in Connecticut shows that 99 percent of members in self-funded plans have coverage for the benefit.

15. *The impact of making the benefit applicable to the state employee health insurance or health benefits plan.*

Because the State plans were fully insured in 2007 and 2008, the claims data from the carriers and the cost projections that are based on that data include the data from the State plans. Assuming that the State plans will continue to comply with this mandated health benefit, the total annual cost for this mandate in 2010 is estimated to be *de minimis*.

16. *The extent to which credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community determines the treatment, service or equipment, supplies or drugs, as applicable, to be safe and effective.*

This mandate does not apply to any particular treatment, service or equipment.

⁵²⁹ National Council on State Legislatures. Managed Care State Laws and Regulations, Including Consumer and Provider Protections. Available at: <http://www.ncsl.org/default.aspx?tabid=14320>. Accessed on December 8, 2010.

V. Financial Impact

- 1. The extent to which the mandated health benefit may increase or decrease the cost of the treatment, service or equipment, supplies or drugs, as applicable, over the next five years***

This mandate is unlikely to have any impact on the cost of obstetrical or gynecological services.

- 2. The extent to which the mandated health benefit may increase the appropriate or inappropriate use of the treatment, service or equipment, supplies or drugs, as applicable, over the next five years.***

This mandate has been in effect since 1995 and is unlikely to increase either the appropriate or inappropriate use of obstetrical or gynecological services over the next five years.

- 3. The extent to which the mandated health benefit may serve as an alternative for more expensive or less expensive treatment, service or equipment, supplies or drugs, as applicable.***

The mandate for direct access to an OB/GYN and the ability to designate an OB/GYN as a primary care provider does not serve as an alternative form of treatment, service or equipment. It merely removes the requirement to get a referral from a primary care provider before obtaining services from an OB/GYN.

- 4. The methods that will be implemented to manage the utilization and costs of the mandated health benefit.***

The mandate is limited to obstetric and gynecological care provided by an OB/GYN and to other primary care services if the OB/GYN is designated as the member's primary care provider. In addition, all other terms of the policy apply, so that utilization review can be exercised by the carriers to avoid inappropriate use of the benefit.

- 5. The extent to which insurance coverage for the treatment, service or equipment, supplies or drugs, as applicable, may be reasonably expected to increase or decrease the insurance premiums and administrative expenses for policyholders.***

This mandate has a *de minimis* impact on premiums and administrative expenses.⁵³⁰

- 6. The extent to which the treatment, service or equipment, supplies or drugs, as applicable, is more or less expensive than an existing treatment, service or equipment, supplies or drugs, as applicable, that is determined to be equally safe and effective by credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community.***

This mandate does not apply to any treatment, service or equipment, supplies, or drugs.

- 7. The impact of insurance coverage for the treatment, service or equipment, supplies or drugs, as applicable, on the total cost of health care, including potential benefits or savings to insurers and employers resulting from prevention or early detection of disease or illness related to such coverage.***

Direct access to OB/GYNs and designation of OB/GYNs as primary care providers has a *de minimis* impact on the total cost of health care in Connecticut.

⁵³⁰ Ingenix Consulting report, Appendix II, p. 10

8. *The impact of the mandated health care benefit on the cost of health care for small employers, as defined in § 38a-564 of the general statutes, and for employers other than small employers.*

This mandate has a *de minimis* impact on the cost of group insurance coverage for both small employers and other employers.^{531, 532}

9. *The impact of the mandated health benefit on cost-shifting between private and public payers of health care coverage and on the overall cost of the health care delivery system in the state.*

This mandate is not expected to result in cost-shifting between private and public payers of health care coverage.

⁵³¹ Ingenix Consulting report, Appendix II, p. 10

⁵³² Ingenix Consulting report, Appendix II, p.27.

Volume III
Chapter 10
Chiropractic Services

Review and evaluation of Connecticut General Statutes,
Chapter 700, §§ 38a-507 and 38a-534
Mandatory coverage for chiropractic services

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Chapter 10. Table of Contents

- I. Overview..... 169
- II. Background..... 170
- III. Methods..... 172
- IV. Social Impact..... 173
- V. Financial Impact..... 182

I. Overview

The Connecticut General Assembly directed the Connecticut Insurance Department to review statutorily mandated health benefits existing on or effective on July 1, 2009, pursuant to section (b) of Public Act 09-179, An Act Concerning Reviews of Health Insurance Benefits Mandated in this State. Each review was conducted following the requirements stipulated under Public Act 09-179 as a collaborative effort of Connecticut Insurance Department (CID) and the University of Connecticut's Center for Public Health and Health Policy (CPHHP). The CID and CPHHP contracted with the actuarial firm Ingenix Consulting (IC) to conduct an actuarial and economic analysis for each mandate.

This chapter evaluates the financial and social impact of the requirement for fully insured group and individual health insurance policies to cover chiropractic services as specified under Connecticut General Statutes, Chapter 700, §§ 38a-507 and 38a-534. The statutory language requires fully insured health plans in Connecticut to cover delivery of services by a licensed chiropractor to the extent that coverage is provided for services carried out by a physician.⁵³³ Specifically, §§ 38a-507 and 38a-534 state that each group or individual health insurance policy...

...delivered, issued for delivery or renewed in this state on or after October 1, 1989, shall provide coverage for services rendered by a chiropractor licensed under chapter 372 to the same extent coverage is provided for services rendered by a physician, if such chiropractic services (1) treat a condition covered under such policy and (2) are within those services a chiropractor is licensed to perform.

Under Chapter 372 § 20-24 chiropractic is defined as: “The practice of that branch of the healing arts consisting of the science of adjustment, manipulation, and treatment of the human body in which vertebral subluxations and other malpositioned articulations and structures that may interfere with the normal generation, transmission, and expression of nerve impulse between the brain, organs, and tissue cells of the body, which may be a cause of disease, are adjusted, manipulated or treated.”⁵³⁴

To evaluate this mandate, in March 2010, CPHHP and IC requested and received 2007 and 2008 claims data related to the mandated benefit from six insurers and managed care organizations (MCOs) domiciled in Connecticut that cover approximately 90 percent of the population in fully insured health insurance plans in Connecticut (1.25 million persons). Six insurers/MCOs (carriers) provided data for group plans and four of the six carriers provided claims data for individual policies. The claims data for individual policies is considered less credible than the group plan data due to the lower response rate and fewer covered lives represented by the claims. Five carriers also provided information about the extent to which chiropractic services is included under their self-funded plans. It is anticipated that the self-funded plans managed by the sixth carrier offer coverage comparable to the other five carriers. Projected costs for 2010 were estimated from the IC actuarial analysis of carrier claims data from 2007 and 2008. The financial impacts presented likely overstate the impact of the mandate on premiums and the total cost because the claims data reflects all chiropractic services among the fully insured, rather than the change in utilization and cost of the benefit following implementation of the mandate.

Current coverage

The mandate went into effect on October 1, 1989 (P.A. 89-112; P.A. 90-242, S. 176). Most Connecticut residents have chiropractic services as a benefit under their health plan.

⁵³³ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. CHAPTER 372.

⁵³⁴ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. CHAPTER 372, § 20-32.

Premium impact

The projected 2010 average per member per month (PMPM) premium for all covered chiropractic care provided to fully insured members is summarized below. The gross cost presented is expected to be more than the “new” cost or change in cost that may have occurred following the mandate. The IC report suggests that the added cost of the mandate may be closer to one-fourth the cost presented below.

Group plans: On a 2010 basis, medical cost is estimated to be \$2.53 PMPM. The estimated total premium (carrier paid medical claims, administrative fees, and profit) of the mandated services in 2010 in group plans is \$3.05 PMPM, which is 0.8 percent of the estimated total cost for group plans. Estimated cost sharing in 2010 group plans is \$1.01 PMPM.

Individual policies: On a 2010 basis, the weighted average paid medical cost of chiropractic claims is estimated to be \$1.23 PMPM. The estimated total premium of the mandated services in 2010 in individual policies is \$1.60 PMPM, which is approximately 0.6 percent of estimated total costs in individual policies. Estimated cost sharing in 2010 individual policies is \$1.24 PMPM.

Self-funded plans

Based on results from a survey of the same six carriers, responses indicate that 86 percent of self-funded members in plans managed by the five responding carriers have coverage for chiropractic care to an equal or greater extent than the Connecticut mandate requires of fully insured groups.

The projected 2010 cost on Connecticut’s health care system for chiropractic care to the fully insured population is \$65,373,895. This amount includes \$39,611,374 in paid medical claims,⁵³⁵ \$17,558,804 of cost sharing and \$25,762,521 of administrative expenses plus profit (referred to as retention). On average, out-of-pocket cost sharing is expected to comprise 26.9 percent of the dollars spent on chiropractic services for the fully insured population.

This report is intended to be read in conjunction with the General Introduction to this volume and the Ingenix Consulting Actuarial Report (Appendix II).

II. Background

Chiropractic services are a medication-free and nonsurgical form of health care considered to be among the health care practices deemed complementary and alternative medicines (CAMs).⁵³⁶ CAMs are generally distinguished from allopathic (conventional or Western) medicine, which is practiced by medical doctors (M.D.), doctors of osteopathy (D.O.) and allied health professionals such as physical therapists, psychologists and registered nurses.⁵³⁷ Chiropractors are not required to hold a traditional medical doctorate (M.D. or D.O.) and are not permitted to prescribe medication under Connecticut General Statutes.⁵³⁸

The use of chiropractic care in the United States has grown substantially since the mid-1990s, with an estimated 5.6 percent (12.6 million) to 7.5 percent of individuals visiting a chiropractor in recent years.⁵³⁹ According to projections from the Bureau of Labor and Statistics (BLS), employment of chiropractors is

⁵³⁵ The use of the term “paid medical claims” or “paid medical cost” refers to the dollar value covered by insurers for the service. The paid medical cost PMPM reflects the dollar value covered by insurers for the health care services spread over the relevant fully insured population.

⁵³⁶ National Board of Chiropractic Examiners. May 2010. Practice Analysis of Chiropractic 2010.

⁵³⁷ National Center for Complementary and Alternative Medicine. November 2010. NCCAM Publication No. D347. Available at: <http://nccam.nih.gov/health/whatisacam/>. Accessed December 7, 2010.

⁵³⁸ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. CHAPTER 370. § 20-14c.

⁵³⁹ Davis MA, Sirovich BE, Weeks WB. 2010. Utilization and expenditures on chiropractic care in the United States from 1997 to 2006. *Health Services Research* 45(3): 748-61.

expected to grow by 20 percent from 2008 to 2018.⁵⁴⁰ As of 2010, within the state of Connecticut there are 1,304 chiropractors licensed by the Department of Public Health.⁵⁴¹

A licensed chiropractor is required to hold a Doctor of Chiropractic (DC) degree from an accredited program and to have successfully completed examinations administered by the National Board of Chiropractic Examiners (NBCE).⁵⁴² The NBCE exam has four parts. Parts I, II, and III consist of a standard written examination of clinical training. Part IV is a practical exam in which diagnostic imaging, chiropractic technique, and case management skills are tested through a series of stations in which the applicant must demonstrate techniques.⁵⁴³ NBCE also administers a written physiotherapy examination of which successful completion is required for licensure in Connecticut.

The role of the chiropractor is described by the Connecticut Chiropractic Association (CCA) as restoring, maintaining and promoting health through the science of locating and removing “structural distortions” referred to as “subluxations” of the spine, which are believed to interfere with the “nerve force” in the human body.⁵⁴⁴ According to the profession, subluxations interrupt the body’s normal function and optimal health state by interfering with nerve signals on their way to and from the brain to other parts of the body. As explained by the CCA, chiropractors are specially trained in the evaluation and treatment of spinal conditions and can provide preventive or condition-specific treatment (e.g., back, neck, headache, carpal tunnel syndrome, jaw, sciatica, tingling in arms and legs).

Nearly all visits to chiropractors are for musculoskeletal complaints. This parallels a population trend where the incidence and prevalence of musculoskeletal condition, including those with specific and non-specific origins, are increasing rapidly. The top three conditions for which chiropractors are sought include back pain, headaches and neck pain.^{545, 546} Some additional conditions for which treatment is commonly sought include carpal tunnel syndrome, cumulative trauma disorders, menstrual pain, and asthma.

The treatment provided by chiropractors may include manipulations or chiropractic adjustments and counseling on diet, nutrition, exercise, healthy habits, and occupational and lifestyle modifications.⁵⁴⁷ The primary chiropractic intervention is generally considered to be spinal manipulation. However, there are two types of spinal manipulation. The first type involves “long lever, low velocity or nonspecific manipulations” where the clinician uses a long limb such as the femur to amplify the load delivered by the clinician’s hand to one or several spinal joints. The second type of adjustment involves a short forceful thrust with a short lever and high velocity manipulation onto a specific vertebral transverse process to move a specific joint in the spine. Osteopaths and physical therapists generally carry out the first type of manipulation whereas the

⁵⁴⁰ Bureau of Labor and Statistics. Occupational Outlook Handbook 2010. Chiropractors. Available at <http://www.bls.gov/oco/ocos071.htm>. Accessed December 1, 2010.

⁵⁴¹ State of Connecticut. November 2010. Office of the Secretary of State. Selected facts about Connecticut. Available at: <http://www.sots.ct.gov/sots/cwp/view.asp?a=3188&q=392592>. Accessed December 8, 2010.

⁵⁴² Connecticut Department of Public Health. Chiropractor Licensure Requirements. Available at <http://www.ct.gov/dph/cwp/view.asp?a=3121&q=389250>. Accessed December 7, 2010.

⁵⁴³ National Board of Chiropractic Examiners. Written Examinations. Available at: <http://www.nbce.org/written/overview.html>. Accessed December 8, 2010.

⁵⁴⁴ Connecticut Chiropractic Association. Frequently Asked Questions. Available at: <http://www.ctchiro.com/FAQ.php>. Accessed December 1, 2010.

⁵⁴⁵ Walker BF, French SD, Grant W, *et al.* 2010. Combined chiropractic interventions for low-back pain. *Cochrane Database of Systematic Reviews* 2010. Issue 4. Art. No.: CD005427.

⁵⁴⁶ Graham N, Gross A, Goldsmith CH, *et al.* 2008. Mechanical traction for neck pain with or without radiculopathy. *Cochrane Database of Systematic Reviews* 2008. Issue 3. Art. No.: CD006408.

⁵⁴⁷ American Chiropractic Association. Frequently Asked Questions. Available at: http://www.acatoday.org/level3_css.cfm?T1ID=13&T2ID=61&T3ID=152. Accessed December 1, 2010.

second type of manipulation is generally associated with adjustments delivered by chiropractors.⁵⁴⁸

Although some chiropractors use only spinal manipulation, chiropractors in the United States tend to also incorporate massage, heat and cold therapies, electrotherapies, the use of mechanical devices, exercise programs, orthotics, and patient education and/or counseling on diet, nutrition, exercise, healthy habits, and occupational lifestyle modifications if indicated.⁵⁴⁹ Comparing the services provided by chiropractors to a number of other providers, some overlap in strategies can be found with physiotherapists, physical therapists, orthopedists, osteopaths and physicians.^{550, 551} Many of these practitioners employ manual therapies (e.g., manipulation and mobilization) and exercise programs to address musculoskeletal conditions.

In general, chiropractic interventions are considered relatively safe.⁵⁵² Systematic reviews of the research report some associations between chiropractic care and minor but common complaints such as headache, fatigue, and local discomfort. Less common issues include dizziness, nausea, and hot skin. In addition, a few rare but serious adverse events including disk herniation, the cauda equine syndrome, and vertebrobasilar accidents following lumbar manipulation have been reported. Cervical (neck) manipulation has also been associated with strokes (vertebrobasilar artery ischemic events). However, causality between chiropractic methods and the adverse events has not been established. In the case of strokes, the rate for vertebrobasilar artery ischemic events following a physician visit is actually higher than that for chiropractic visits.⁵⁵³

III. Methods

Under the direction of CPHHP, medical librarians at the Lyman Maynard Stowe Library at the University of Connecticut Health Center (UCHC) gathered published articles and other information related to medical, social, economic, and financial aspects of the required benefit. Medical librarians conducted literature searches using PubMed, PsycInfo, Scopus, UpToDate, Cochrane Systematic Review, Library's LYMAN Catalog and the internet. Additional sources searched on the internet included the Food and Drug Administration, the Centers for Disease Control and Prevention, CTgov, the Connecticut Chiropractic Association, the American Chiropractic Association and the National Board of Chiropractors. Search terms included: chiropractic, chiropractor, complementary therapies, and musculoskeletal manipulations. Modification terms included: barrier, barriers, adverse effects, statistics and numerical data, wounds and injuries, and etiology.

CPHHP staff conducted independent literature searches using the Cochrane Review, Scopus, and Google Scholar using similar search terms used by the UCHC medical librarians. Additional search terms used included cost, effectiveness, safety, cost effectiveness, and utilization. Where available, articles published in peer-reviewed journals are cited to support the analysis. Other sources of information may also be cited in the absence of peer-reviewed journal articles. Content from such sources may or may not be based on scientific evidence.

⁵⁴⁸ Gross A, Miller J, D'Sylva J, *et al.* Manipulation or Mobilization for Neck Pain. *Cochrane Database of Systematic Reviews* 2010. Issue 1. Art. No.: CD004249.

⁵⁴⁹ Walker BE, French SD, Grant W, *et al.* 2010. Combined chiropractic interventions for low-back pain. *Cochrane Database of Systematic Reviews* 2010. Issue 4. Art. No.: CD005427.

⁵⁵⁰ Santaguída PL, Gross A, Busse J, *et al.* 2009. Agency for Healthcare Research and Quality. Complementary and Alternative Medicine in Back Pain Utilization Report. Evidence Reports/Technology Assessments, No. 177. Report No.: 09-E006.

⁵⁵¹ Hondras MA, Linde K, Jones AP. 2005. Manual therapy for asthma. *Cochrane Database of Systematic Reviews* 2005, Issue 2. Art. No.: CD001002.

⁵⁵² Shekelle P, Atlas SJ, Eamranond P. Spinal manipulation in the treatment of musculoskeletal pain. Last updated June 17, 2010. Last literature review version 18.3: September 2010. *UpToDate* Online 18.3.

⁵⁵³ *Ibid.*

CPHHP researchers gathered additional information through telephone and e-mail inquiries to appropriate state, federal, municipal, and non-profit entities and from internet sources such as the State of Connecticut website, Centers for Medicare and Medicaid (CMS) website, other states' websites, professional organizations' websites, and non-profit and community-based organization websites.

With the assistance of the Connecticut Insurance Department (CID), CPHHP and Ingenix Consulting requested and received 2007 and 2008 claims data from insurance companies and MCOs domiciled in Connecticut. Six carriers provided chiropractic services claims data for their fully insured group plan participants and four provided claims data for their fully insured individual plan participants. However, the claims data for individual policies is considered less credible than the group plan data due to the lower response rate and fewer covered lives represented by the claims. Five carriers also provided information about chiropractic services coverage in the self-funded plans they administer. It is anticipated that the self-funded plans managed by the sixth carrier offer coverage comparable to the other five carriers.

CPHHP and the CID contracted with Ingenix Consulting (IC) to provide actuarial and economic analyses of the mandated benefit. A description of the methods used for the actuarial analysis is available in the Ingenix Consulting report located in Appendix II.

IV. Social Impact

1. The extent to which chiropractic services are utilized by a significant portion of the population.

The total number of ambulatory visits to U.S. chiropractors in 2006 is estimated at 109 million visits.⁵⁵⁴ Past analyses of data from the nationally representative Medical Expenditure Panel Survey suggest chiropractic visits account for 6 percent of all office-based health care visits and nearly 25 percent of visits to offices of health professionals other than physicians.⁵⁵⁵ According to the 2007 National Health Interview Survey, 8.6 percent of American adults and 2.8 percent of children received chiropractic or osteopathic manipulation in the past 12 months.⁵⁵⁶

2. The extent to which chiropractic services are available to the population, including, but not limited to, coverage under Medicare, or through public programs administered by charities, public schools, the Department of Public Health, municipal health departments or health districts or the Department of Social Services.

No information was found that would indicate the Connecticut Department of Public Health, municipal health departments, local health districts, or charities provide chiropractic services. It is possible that students enrolled in public schools may be referred to a chiropractor following scoliosis screening.⁵⁵⁷

In Connecticut, the Medicare and Medicaid programs cover limited chiropractic benefits. Under Section 273 of the 1972 Social Security Act Amendments the Medicare definition of "physician" expanded to include chiropractors.⁵⁵⁸ Medicare Part B covers medically necessary manipulation of the spine to correct

⁵⁵⁴ Davis MA, Sirovich BE, Weeks WB. 2010. Utilization and expenditures on chiropractic care in the United States from 1997 to 2006. *Health Services Research* 45(3): 748-761.

⁵⁵⁵ McCann J, Phillips RL, Green LA, et al. 2004. Chiropractors are not a usual source of primary health care. *American Family Physician* 69(11):2544.

⁵⁵⁶ Barnes PM, Bloom B. Complementary and alternative medicine use among adults and children: United States, 2007. National Health Statistics Report. Number 12. December 10, 2008. Available at: <http://www.cdc.gov/nchs/data/nhsr/nhsr012.pdf>. Accessed November 10, 2010.

⁵⁵⁷ Newsom-Stewart M. November 2009. State of Connecticut Department of Education. Health Services Program Information Survey Report.

⁵⁵⁸ Department of Health and Human Services. 1998 Office of the Inspector General. Chiropractic Care, Medicaid Coverage. Available at: <http://oig.hhs.gov/oei/reports/oei-06-97-00480.pdf>. Accessed November 10, 2010.

a subluxation (the “displacement or misalignment of a joint or body part”),⁵⁵⁹ whereas Medicaid covers “chiropractic manipulative treatment.”⁵⁶⁰ Both Medicare and Medicaid limit coverage of services provided by chiropractors to four diagnostic codes specific to chiropractic manipulative treatment (98940, 98941, 98942 and 98943).⁵⁶¹ X-rays and other services beyond the specified diagnostic codes are not covered. Additional parameters for coverage of chiropractic care, such as the number and frequency of visits, are articulated in the Connecticut interchange MMIS Provider Manual under Chapter 7.

Alternatively, some chiropractic offices provide services on a sliding scale. “For patients who have little or no chiropractic insurance coverage, flexible payment programs can be arranged. If you have no insurance or do not have chiropractic benefits there is still a way for you to receive the care you need.”⁵⁶²

3. The extent to which insurance coverage is already available for chiropractic services.

With the exception of the uninsured population, it appears that Connecticut residents are likely to have coverage for chiropractic care. Approximately 46.6 percent of Connecticut residents under age 65 are enrolled in fully insured group and fully insured individual health policies,⁵⁶³ under which coverage for chiropractic care has been mandated since October 1, 1989.⁵⁶⁴ Based on survey results from five carriers, on average 86 percent of members enrolled in their self-funded plans are expected to have chiropractic care as a benefit. Therefore, the population enrolled in private plans with chiropractic care coverage to the extent of the state mandate captures approximately 67.9 to 71.9 percent of Connecticut residents under age 65.⁵⁶⁵ Some coverage for chiropractic services is also available to residents enrolled in Medicare and Medicaid. However, under both government programs coverage of chiropractic care appears to be more restrictive than the Connecticut chiropractic benefit mandate.

4. If the coverage is not generally available, the extent to which such lack of coverage results in persons being unable to obtain necessary health care treatment.

Chiropractic care is considered a complementary or alternative form of therapy. In the absence of coverage for chiropractic care, an insured individual may have the option of pursuing standard treatments that are reimbursable by their health insurance plan.

There are few studies documenting the influence of insurance coverage on obtaining chiropractic care. A study published by RAND found that when insurers cover all costs, people use chiropractic services freely. Conversely, paying a 25 percent or more co-payment decreased the use of alternative health care by half.⁵⁶⁶ Although utilization is lower when at least 25 percent of the cost of chiropractic care is paid by a patient, a substantial amount of the charges paid for chiropractic care are paid for out of pocket by the patient. Out of pocket payments to chiropractic and osteopathic providers exceeded \$3.9 billion in the United States during

⁵⁵⁹ Medicare Coverage Guidelines. State of Connecticut. Chiropractic Services. Available at: <http://www.medicare.gov/coverage/Search/Results.aspx?State=CT|Connecticut&Coverage=10|Chiropractic+Services&submitState=View+Results+%3E>. Accessed November 10, 2010.

⁵⁶⁰ Connecticut Department of Social Services. Provider Fee Schedule. Chiropractor. Available at: <https://www.ctdssmap.com/CTPortal/Provider/Provider%20Fee%20Schedule%20Download/tabId/52/Default.aspx>. Accessed November 8, 2010.

⁵⁶¹ Connecticut Interchange MMIS Provider Manual. 2008. Chapter 7-Chiropractic. Available at: https://www.ctdssmap.com/CTPortal/Information/Get%20Download%20File/tabid/44/Default.aspx?Filename=ch7_iC_chiropractic_V1.0.pdf&URI=Manuals/ch7_iC_chiropractic_V1.0.pdf&PopUp=Y. Accessed November 10, 2010.

⁵⁶² The Physical Medicine and Chiropractic Center. Payment Options. Available at: http://physmedchiro.com/custom_content/c_90876_payment_options.html. Accessed November 10, 2010.

⁵⁶³ University of Connecticut, Center for Public Health and Health Policy. 2009. Review and Evaluation of Public Act 09-188, An Act Concerning Wellness Programs and Expansion of Health Insurance Coverage. Available at: <http://publichealth.uconn.edu/images/reports/InsuranceReview09.pdf>. Accessed October 8, 2010.

⁵⁶⁴ CONNECTICUT GENERAL STATUTES. Revised January 1, 2010. CHAPTER 372.

⁵⁶⁵ Calculations use data from Table 1: Insurance Status for Connecticut’s Population.

⁵⁶⁶ Is chiropractic care expensive? Yes, overall, for outpatient treatment. People cut their use of chiropractors in half if they have to pay part of the costs of care (Shekelle, Markovich, and Louie, 1995; Shekelle, Rogers, and Newhouse, 1996).

2007.⁵⁶⁷ Furthermore, the 2003 Survey of Chiropractic Practice suggests that 21.2 percent of dollars paid came directly from patients. The substantial proportion of revenue generated from patient dollars may in part be due to 27 percent of responding chiropractors not participating in managed care plans.⁵⁶⁸

The potential challenges faced by lack of coverage or limited coverage may be offset in part by practices allowing for sliding scales or flexible payment plans.⁵⁶⁹ A cursory search of Connecticut chiropractors found several offices that offer alternative payment or sliding fee schedules.⁵⁷⁰ The extent to which chiropractic care is actually obtained through such arrangements is unknown.

5. If the coverage is not generally available, the extent to which such a lack of coverage results in unreasonable financial hardships on those persons needing treatment.

Insurance status, required cost sharing and personal financial resources determine whether a person will face unreasonable financial hardship when needing treatment. Connecticut General Statutes requires chiropractic services to be covered in fully insured group and individual policies as coverage in the same manner that the policy covers physician visits.

The economic analysis section of the Ingenix Consulting report compares by family income level the cost burden under varying co-pay arrangements under fully insured plans and if uninsured. Under the scenario, the assumed cost for a year-long treatment of back pain is \$2,431 (based on the 2009 Mercer Study “Do Chiropractic Services for Treatment of Low Back and Neck Pain Improve the Value of Health Benefit Plans?”). The model family with a \$50,000 income would pay 0.97 percent of their income with a 20 percent co-pay (\$486), 0.49 percent with a 10 percent co-pay (\$243), or 4.86 percent if uninsured (\$2,431). However, the extent to which a person’s treatment is above or below the \$2,431 average cost will also inform whether a financial hardship may occur.

In addition to the direct cost of medical care, some financial hardship may be imposed by the time commitment, transportation costs, or loss of income due to absence from work related to obtaining care.

Further discussion of financial and socioeconomic effects of the mandated benefit can be found in Appendix II: Ingenix Consulting Actuarial Report, pages 50-51, and 60.

6. The level of public demand and the level of demand from providers for chiropractic services.

Public demand for chiropractic services is expected to increase in coming years due to several factors including overall population growth in the United States, the aging of the population, and increased interest in complementary and alternative medicine.^{571, 572} A majority of literature also reveals that chiropractic care is associated with significantly higher patient satisfaction compared with patients who receive conventional treatments.⁵⁷³

⁵⁶⁷ Nahin RL, Barnes PM, Stussman BJ, *et al.* 2009. Costs of Complementary and Alternative Medicine (CAM) and Frequency of Visits to CAM Practitioners: United States, 2007. National Health Statistics Reports. No. 18. Available at: <http://nccam.nih.gov/news/camstats/costs/nhsrn18.pdf>. Accessed November 10, 2010.

⁵⁶⁸ National Board of Chiropractic Examiners. May 2010. Practice Analysis of Chiropractic 2010.

⁵⁶⁹ The Physical Medicine and Chiropractic Center. Payment Options. Available at: http://physmedchiro.com/custom_content/c_90876_payment_options.html. Accessed November 10, 2010.

⁵⁷⁰ *Ibid.*

⁵⁷¹ Day JC. US Census Bureau. Population Profile of the United States. Available at: <http://www.census.gov/population/www/pop-profile/natproj.html>. Accessed November 10, 2010.

⁵⁷² American Chiropractic Association. Chiropractic and Geriatrics: Care for an Aging Population. Available at: http://www.acatoday.org/pdf/WHCoA_FinalPaper.pdf. Accessed November 10, 2010.

⁵⁷³ Legorreta AP, Metz RD, Nelson CF, *et al.* 2004. Comparative Analysis of Individuals With and Without Chiropractic Coverage. Archives of Internal Medicine 164(18):1985-1992.

Evidence of public demand and provider support for chiropractic services can also be found in public hearing testimony. Several representatives from the Connecticut Chiropractic Association and chiropractors discussed complaints from the public regarding being restricted from certain chiropractic services.⁵⁷⁴ The chiropractors also spoke in support of increased use of chiropractic health care rather than conventional treatments.

On the other hand, medical professionals outside of the chiropractic profession may have a lower level of demand for chiropractic services. Reportedly, 9 percent of chiropractic visits occurred as a result of a referral⁵⁷⁵ and, on average, chiropractors received 7.7 patient referrals monthly in 2003.⁵⁷⁶

7. The level of public demand and the level of demand from providers for insurance coverage for chiropractic services.

Evidence of public demand for insurance coverage for chiropractic services can be found in public hearing testimony.⁵⁷⁷ Chiropractors commented that they received several complaints from patients who were restricted from seeking chiropractic care under their insurance plan. State representatives also commented that they received calls directly from constituents who were going for treatment and then found that their health insurance policy had limited the number of visits for chiropractic services.

8. The likelihood of achieving the objectives of meeting a consumer need as evidenced by the experience of other states.

The National Association of Insurance Commissioners (NAIC) Compendium of State Laws on Insurance Topics identifies forty-five states with chiropractic care or chiropractor mandates.⁵⁷⁸ The states without a chiropractic mandate identified include Hawaii, Idaho, Oregon, Utah, and Wyoming. The parameters of coverage vary by state. Variations in mandate language include:

- the same coverage for chiropractors/chiropractic services as physicians/physician provided services;
- the same coverage as under Medicaid;
- a specified number of covered visits;
- reimbursement for chiropractic services;
- chiropractic coverage under the state's Children's Health Insurance Program;
- coverage for chiropractic services within the scope of lawful practice; and
- direct access to chiropractors without a referral.

9. The relevant findings of state agencies or other appropriate public organizations relating to the social impact of the mandated health benefit.

Thirty states now require a fiscal note or an additional review process for any health insurance benefit requirements prior to enactment.⁵⁷⁹ CPHHP staff conducted internet searches, database queries and telephone inquiries to locate reports generated by state agencies or appropriate public organizations on

⁵⁷⁴ Connecticut General Assembly. 1989. Committee on Public Health. Joint Favorable Report. PUBLIC ACT 89-112.

⁵⁷⁵ National Board of Chiropractic Examiners. May 2010. Practice Analysis of Chiropractic 2010. Trends in Chiropractic Practice 1991 through 2009.

⁵⁷⁶ McCann J, Phillips RL, Green LA, et al. 2004. Chiropractors are not a usual source of primary health care. *American Family Physician* 69(11):2544.

⁵⁷⁷ Connecticut General Assembly. 1989. Committee on Public Health. Joint Favorable Report. PUBLIC ACT 89-112.

⁵⁷⁸ NAIC Compendium of State Laws on Insurance Topics. National Association of Insurance Commissioners.

⁵⁷⁹ National Conference of State Legislatures. 2009. Health insurance coverage mandates: Are they too costly? Presentation at the Louisiana Department of Insurance 2009 Annual Health Care Conference. May 28, 2009. Available at: <http://www.ncsl.org/portals/1/documents/health/MandatesCauchi09.pdf>. Accessed May 7, 2010.

the mandate. Mandate reviews on chiropractic benefits were identified for the states of California,⁵⁸⁰ Massachusetts,⁵⁸¹ Nevada, Texas⁵⁸² and Virginia.⁵⁸³ The information available for Nevada was summarized in a Texas report. Only the California review comments on the potential social impacts of a chiropractic mandate.

The California report prospectively evaluates bill number 1185, which would have required health care plans to cover chiropractic services without a referral from a physician. The analysis estimates 27 percent of Californians enrolled in covered plans would gain chiropractic coverage. The 5 percent of Californians enrolled in plans that require a referral would be able to access chiropractic services without a referral if enacted. The report estimates that utilization would increase by 101 visits per 1,000 enrollees, representing a 28 percent increase to the 363 visits per 1,000 enrollees at baseline. The report also finds quantifying the overall impact of the proposed legislation on public health inappropriate due to the methodological limitations in the chiropractic literature. Lastly, the report finds that it is possible that pain reduction and improvement of range of motion, strength, flexibility and increased functional status may occur but insufficient evidence is available to conclude that economic losses may be offset.⁵⁸⁴

10. The alternatives to meeting the identified need, including but not limited to, other treatments, methods or procedures.

Approaches for the treatment of pain can be categorized as medical, ancillary, or complementary and alternative measures. Measures taken also depend on whether the condition is acute or chronic, the source of the pain, and perceived severity. Medical interventions may include over-the counter pain medications such as acetaminophen or ibuprofen or prescription drugs such as an opioid, select anti-depressants or anti-convulsants. A medical history, comprehensive physical exam, and x-rays or imaging studies (magnetic resonance imagery, or computed tomography) may be taken to assess the condition and possible etiology. Corticosteroid injections may also be directed into the source of pain as a means to reduce inflammation, if present. In some instances, surgical interventions may be employed. Alternatively, ancillary care providers such as physical therapists provide manual therapy and may guide patients in posture, body mechanics and exercise to potentially improve function and decrease perceived pain.⁵⁸⁵ Spinal manipulation may also be performed by non-chiropractors such as physical therapists, osteopaths, and some conventional medical doctors.⁵⁸⁶ In addition, other complementary and alternative medicine approaches, such as acupuncture or massage therapy, may be considered treatments for acute or chronic pain.

11. Whether the benefit is a medical or broader social need and whether it is consistent with the role of health insurance and the concept of managed care.

Health care consumers enroll in health insurance plans to protect themselves from the economic uncertainty of potentially costly health problems that may occur. As highlighted in the Ingenix Consulting report, “[The

⁵⁸⁰ California Health Benefits Review Program. 2005. Analysis of Assembly Bill 1185, Chiropractic Services. Available at: http://www.chbrp.org/docs/index.php?action=read&bill_id=80&doc_type=3. Accessed May 7, 2010.

⁵⁸¹ Massachusetts Mandated Benefit Review. 2005. SB 907 HB 2076. Chiropractic Services. Available at: <http://www.mass.gov/Eeohhs2/docs/dhcfp/r/pubs/mandates/chiropractic.pdf>. Accessed May 7, 2010.

⁵⁸² Texas Department of Insurance. 1998. Impact of Mandated Health Benefits. Available at: <http://www.tdi.state.tx.us/reports/documents/benefit.pdf>. Accessed May 7, 2010.

⁵⁸³ Virginia State Corporation Commission of Health Insurance Mandates. 1998. House Report No. 10. Available at: [http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/HD101998/\\$file/HD10_1998.pdf](http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/HD101998/$file/HD10_1998.pdf). Accessed May 7, 2010.

⁵⁸⁴ California Health Benefits Review Program. 2005. Analysis of Assembly Bill 1185, Chiropractic Services. Available at: http://www.chbrp.org/docs/index.php?action=read&bill_id=80&doc_type=3. Accessed May 7, 2010.

⁵⁸⁵ Cleveland Clinic. 2006. Attacking Back Pain with Medical Treatment. Available at: <http://www.revolutionhealth.com/conditions/bones-joints-muscles/back-pain/treatments-medications/medical-treatment>. Accessed May 7, 2010.

⁵⁸⁶ National Center for Complementary and Alternative Medicine. April 2009. NCCAM Publication No. D409. Available at: <http://nccam.nih.gov/health/pain/spinemanipulation.htm>. Accessed December 7, 2010.

insured] believe there is greater utility in paying a certain monthly premium than potentially sustaining the uncertain loss that could occur.” It appears reasonable that the onset or continuation of musculoskeletal conditions and neck or back pain is the type of unexpected condition with potentially high costs that the insured hope to be insulated from through an insurance plan.

Although treating musculoskeletal conditions and neck or back pain appears consistent with the role of insurance and meeting a medical need, it is unclear whether chiropractic services as a treatment is consistent with the concept of managed care. Connecticut requires plans to cover services rendered by a licensed chiropractor to the extent coverage is provided for services rendered by a physician so long as the condition is covered under the policy and the services provided are within the chiropractor license. This language puts chiropractic services on the same level of coverage as physicians, for whom coverage tends to be the most comprehensive and least restrictive. Alternatively, carriers generally employ utilization management techniques when offering coverage for specialist provider visits (e.g., orthopedist) and ancillary services (e.g. physical therapy). These services tend to come with restrictions such as preauthorization, reauthorization, limits on the number of covered visits, limits on the covered amount per visit, co-pays, cost-sharing requirements, and medical necessity or treatment effectiveness language.

Since chiropractic services are required to be covered to the extent that services rendered by a physician are covered, it could be suggested that the level of coverage is inconsistent with how insurance plans and managed care typically offer benefits. This may be the case to the extent that coverage for chiropractic care is mandated, but the medical literature does not clearly demonstrate its effectiveness or comparative effectiveness.

12. The potential social implications of the coverage with respect to the direct or specific creation of a comparable mandated benefit for similar diseases, illnesses, or conditions.

There may be some social implications in future mandate development based on the chiropractic mandate. Future mandates may extend coverage to other forms of complementary or alternative medicine such as massage therapy, acupuncture, or naturopathy. New mandates could also require complementary/alternative providers, specialists or ancillary therapy providers to be covered to the extent physicians are covered under the same health plan.

13. The impact of the benefit on the availability of other benefits currently offered.

Provider supply and medical claims drive the degree to which the mandated benefit may impact the availability of other health benefits. Claims data shows that chiropractic services account for on average, 0.8 percent of the PMPM premium under fully insured group plans in Connecticut. Carriers may elect to cut costs by eliminating or restricting access to, or placing limits on other non-mandated benefits currently offered. However, the availability of any benefits to be restricted may be limited. Existing benefits may be administratively costly to restrict and insurers may be contractually obligated to provide them. Additionally, many of the benefits that could be targets for elimination are included in plans for competitive advantage. However, based on the high rate of chiropractic coverage among self-funded groups as reflected by our survey and surveys conducted in other states,⁵⁸⁷ it appears reasonable that the chiropractic services mandate would have a minimal impact on the availability of other benefits.

14. The impact of the benefit as it relates to employers shifting to self-insured plans and the extent to which the benefit is currently being offered by employers with self-insured plans.

⁵⁸⁷ Virginia State Corporation Commission of Health Insurance Mandates. 1998. House Report No. 10.

Available at: [http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/HD101998/\\$file/HD10_1998.pdf](http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/HD101998/$file/HD10_1998.pdf). Accessed May 7, 2010.

Decisions about shifting to self-funded status may be driven by health insurance premiums increases, the contribution of a mandated benefit to premiums, the proportion of the covered population likely to obtain the mandated service, and whether the mandated benefit is generally covered by self-funded plans. For chiropractic services, on average the total medical cost contributes 0.8 percent of the PMPM premium for a fully insured group member. According to five carriers domiciled in Connecticut and covering approximately 47 percent of self-funded lives, 88 percent of the carriers' self-funded groups cover chiropractic services at least to the extent of Connecticut's mandate.

Given that the PMPM cost associated with chiropractic care contributes an expected 0.8 percent of the premium in 2010 and the standard practice of self-funded groups appears to include coverage for the mandated benefit, it is not anticipated that employers shifted or will shift to self-funded plans as a result of this single mandate. It is also not anticipated that in the absence of this mandate a shift from self-funded plans to fully insured plans among employers would occur. However, employers cognizant of the cumulative financial effects of mandated benefits and large enough to assume the risk of employee health care costs are more likely to consider shifting to self-funded plans. Alternatively, employers may shift to plans with higher coinsurance amounts to keep premiums at a more affordable level ("benefit buy down"). Benefit buy down can result in employees not taking up coverage and thus being uninsured or not accessing care when it is needed because of high deductibles.

15. The impact of making the benefit applicable to the state employee health insurance or health benefits plan.

The state employee health insurance/benefit plans were subject to a chiropractic services requirement from the mandate implementation date of October 1, 1989 up until July 1, 2010 when Connecticut transitioned from fully insured group plans to self-funded. As a self-funded group, the State of Connecticut is exempt from state health insurance mandates under the federal Employee Retirement Income Security Act (ERISA). Assuming Connecticut continues to cover the mandated benefits, the social impact of the benefit for the approximately 134,344 covered lives in state employee plans and 30,000 state retirees not enrolled in Medicare⁵⁸⁸ is expected to be the same or similar to the social impact for persons covered in non-state employee health insurance plans as discussed throughout Section IV of this chapter. In terms of financial impact, if the state employee health insurance/benefit plans continue to provide coverage for the required benefit, the IC actuarial analysis estimates the medical cost to the state employee health insurance plan will total \$4,989,180 in 2010.⁵⁸⁹ However, this amount reflects the total medical cost of providing chiropractic services rather than the amount of the medical costs attributable to the mandate. It is plausible that the actual cost attributable to the mandate may be overestimated since the value is not adjusted to account for the cost of chiropractic services in the absence of a mandate.

16. The extent to which credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community determines the service to be safe and effective.

The lack of conclusive research-based evidence regarding the safety and effectiveness of chiropractic care is

⁵⁸⁸ Personal communication. Scott Anderson, State of Connecticut Comptroller's Office. September 14, 2010.

⁵⁸⁹ See Appendix II. Ingenix Consulting Actuarial Report. This estimate has been calculated by multiplying the 2010 PMPM medical cost in table 1.3A by 12 to get an annual cost per insured life, and then multiplying that product by 163,334 covered lives, as reported by the State Comptroller's office. This estimate is calculated using weighted averages for all claims paid by Connecticut-domiciled insurers and health maintenance organizations in the State. The actual cost of this mandate to the State plans may be higher or lower, based on the actual benefit design of the State plans and the demographics of the covered lives (e.g., level of cost-sharing, average age of members, etc.). Retention costs are not included in this estimate because the State is now self-funded and the traditional elements of retention do not apply. State costs for administration of this mandated benefit would be in addition to the above amount.

noted in multiple reports available through the *Cochrane Database of Systematic Reviews* and peer-reviewed, evidence-based clinical research synthesis articles available through *UpToDate*. Mandated benefit reviews conducted in Massachusetts⁵⁹⁰ and California⁵⁹¹ also document the methodological limitations of published research regarding chiropractic care.

Of the procedures and conditions reviewed, spinal manipulation for nonspecific low back pain was deemed appropriate as a relatively safe and mildly effective treatment to recommend as a therapeutic option to patients with an uncomplicated condition. Although recommended, spinal manipulation was not found to be superior to other treatments for nonspecific low back pain, including analgesics, physical therapy, exercises, back schools or those provided by a general practitioner.⁵⁹² An additional review found no evidence to support or refute that chiropractic interventions, including but not limited to spinal manipulation for low-back pain, provided a clinically meaningful advantage in reduction of pain or disability for low-back pain compared to other interventions.⁵⁹³

For neck pain, the systematic review available in *UpToDate* does not support cervical spine manipulation. This review is particularly interesting in light of neck pain being among the most popular reasons to visit a chiropractor. The *UpToDate* review does not recommend manipulation of the cervical spine given that the benefit is unproven and a rare but serious adverse effect is associated with neck manipulation.⁵⁹⁴ Interestingly, a Cochrane report authored by Gross, *et al.*, (2010) found little to no difference between manipulation and mobilization for neck pain relief, function, and patient satisfaction. The same review also found little or no difference between manipulation and other manual therapy techniques, certain medications, and acupuncture for neck pain relief. Combined, these findings suggest that substituting mobilization or other manual therapy techniques or certain medications for manipulation may be as effective.⁵⁹⁵

The systematic reviews in the Cochrane database also reported:

- Weak evidence that as a complementary treatment, chiropractic may help reduce nocturnal enuresis (bed-wetting).⁵⁹⁶
- Weak evidence for spinal manipulation and some non-invasive physical treatments for the reduction of pain for certain headaches.⁵⁹⁷
- No evidence that spinal manipulation relieves dysmenorrhoea (painful menstrual periods).⁵⁹⁸
- No benefit shown for chiropractic manipulation, exercise, laser acupuncture, magnets, NSAIDs, or

⁵⁹⁰ Massachusetts Mandated Benefit Review. 2005. SB 907 HB 2076. Chiropractic Services. Available at: <http://www.mass.gov/Eeohhs2/docs/dhcfp/r/pubs/mandates/chiropractic.pdf>. Accessed May 7, 2010.

⁵⁹¹ California Health Benefits Review Program. 2005. Analysis of Assembly Bill 1185, Chiropractic Services. Available at: http://www.chbrp.org/docs/index.php?action=read&bill_id=80&doc_type=3. Accessed May 7, 2010.

⁵⁹² Shekelle P, Atlas SJ, Eamranond P. Spinal manipulation in the treatment of musculoskeletal pain. Last updated June 17, 2010. Last literature review version 18.3: September 2010. *UpToDate Online* 18.3.

⁵⁹³ Walker BF, French SD, Grant W, *et al.* 2010. Combined chiropractic interventions for low-back pain. *Cochrane Database of Systematic Reviews* 2010. Issue 4. Art. No.: CD005427.

⁵⁹⁴ Shekelle P, Atlas SJ, Eamranond P. Spinal manipulation in the treatment of musculoskeletal pain. Last updated June 17, 2010. Last literature review version 18.3: September 2010. *UpToDate Online* 18.3.

⁵⁹⁵ Gross A, Miller J, D'Sylva J, *et al.* Manipulation or Mobilization for Neck Pain. *Cochrane Database of Systematic Reviews* 2010. Issue 1. Art. No.: CD004249.

⁵⁹⁶ Glazener CMA, Evans JHC, Cheuk DKL. Complementary and miscellaneous interventions for nocturnal enuresis in children. *Cochrane Database of Systematic Reviews* 2005, Issue 2. Art. No.: CD005230.

⁵⁹⁷ Bronfort G, Nilsson N, Haas M, *et al.* Non-invasive physical treatments for chronic/recurrent headache. *Cochrane Database of Systematic Reviews* 2004, Issue 3. Art. No.: CD001878.

⁵⁹⁸ Proctor M, Hing W, Johnson TC, Murphy PA, Brown J. Spinal manipulation for dysmenorrhoea. *Cochrane Database of Systematic Reviews* 2006, Issue 3. Art. No.: CD002119.

diuretics in the reduction of symptoms from carpal tunnel.⁵⁹⁹

- There appears to be a role for exercise in treatment of neck pain but the relative benefit of different exercise approaches is unclear.⁶⁰⁰
- Limited evidence exists for the positive effect of exercise compared to massage, massage as an add-on treatment, and manual therapy as an add-on treatment to exercise in the treatment of cumulative trauma disorders.⁶⁰¹
- Insufficient evidence exists to support or refute the usefulness of chiropractic spinal manipulations for treatment of asthma when compared to a sham intervention.⁶⁰²

Notably, a general trend across systematic reviews is the lack of evidence for significant reduction in pain or disability following interventions offered within the chiropractic profession and across other professions such as physical therapy and osteopathy. In several instances, the typical treatments (prescription medications, analgesics, manual therapy, exercise, physical therapy) offered for musculoskeletal conditions or the treatment of pain or injury yielded results that were not statistically different than chiropractic care and at times were not statistically different from a placebo.

Although rigorous systematic reviews of the medical literature generally yield limited conclusions about the effectiveness of chiropractic care, a number of medical physicians refer patients to chiropractors for care⁶⁰³ and government health programs⁶⁰⁴ reimburse for certain chiropractic interventions. In addition, a recent study sanctioned by the United Nations and the World Health Organization indicates neck manipulation to be a safe and effective form of health care.⁶⁰⁵

In general, chiropractic interventions are considered relatively safe.⁶⁰⁶ Systematic reviews of the research report some associations between chiropractic care and minor, but common complaints such as headache, fatigue and local discomfort. Less common issues include dizziness, nausea, and hot skin. In addition, a few rare but serious adverse events including disk herniation, the cauda equine syndrome and vertebrobasilar accidents following lumbar manipulation have been reported. Cervical (neck) manipulation has also been associated with strokes (vertebrobasilar artery ischemic events). However, causality between chiropractic methods and the adverse events has not been established. In the case of strokes, the rate for vertebrobasilar artery ischemic events following a physician visit is actually higher than that for chiropractic visits.⁶⁰⁷

⁵⁹⁹ O'Connor D, Marshall SC, Massy-Westropp N. Non-surgical treatment (other than steroid injection) for carpal tunnel syndrome. *Cochrane Database of Systematic Reviews* 2003, Issue 1. Art. No.: CD003219.

⁶⁰⁰ Kay TM, Gross A, Goldsmith CH, Hoving JL, Brønfort G. Exercises for mechanical neck disorders. *Cochrane Database of Systematic Reviews* 2005, Issue 3. Art. No.: CD004250.

⁶⁰¹ Verhagen AP, Karelis CH, Bierma-Zeinstra SMA, *et al.* 2007. Exercise proves effective in a systematic review of work-related complaints of the arm, neck, or shoulder. *Journal of Clinical Epidemiology* 60: 110-117.

⁶⁰² Hondras MA, Linde K, Jones AP. Manual therapy for asthma. *Cochrane Database of Systematic Reviews* 2005, Issue 2. Art. No.: CD001002.

⁶⁰³ Legorreta AP, Metz RD, Nelson CF, *et al.* 2004. Comparative Analysis of Individuals With and Without Chiropractic Coverage. *Archives of Internal Medicine* 164(18):1985-1992.

⁶⁰⁴ Department of Health and Human Services. 1998. Office of the Inspector General. Chiropractic Care, Medicaid Coverage. Available at: <http://oig.hhs.gov/oei/reports/oei-06-97-00480.pdf>. Accessed November 10, 2010.

⁶⁰⁵ American Chiropractic Association. Study Expert Validates Chiropractic Standard of Care. Available at: http://www.acatoday.org/press_css.cfm?CID=3769. Accessed December 1, 2010.

⁶⁰⁶ Shekelle P, Atlas SJ, Eamranond P. Spinal manipulation in the treatment of musculoskeletal pain. Last updated June 17, 2010. Last literature review version 18.3: September 2010. *UpToDate Online* 18.3.

⁶⁰⁷ *Ibid.*

V. Financial Impact

1. The extent to which the mandated health benefit may increase or decrease the cost of the service over the next five years.

The mandate is not expected to substantially alter the unit cost of chiropractic services over the next five years. The total spent on chiropractic is expected to continue to grow as utilization and inflation grows. However, if utilization remains consistent with the level seen between 2003 to 2006⁶⁰⁸ rather than the demand increases predicted by the Bureau of Labor Statistics for the period of 2008 to 2018,⁶⁰⁹ then utilization and the total cost of chiropractic care should remain stable. To the extent that cost may increase or decrease, the ability to attribute any changes to Connecticut's chiropractic mandate is limited by the lack of available claims and utilization data for fully insured groups and individuals prior to the mandate.

The expected stability of unit cost and growth in overall cost of chiropractic care suggested above is supported by an analysis of nationally representative data from the Medical Expenditure Panel Survey.⁶¹⁰ The analysis of inflation-adjusted annual expenditures for chiropractic care use among United States adults found spending increased 56 percent from 3.8 billion in 1997 to 5.91 billion in 2006 while the estimated inflation adjusted expenditures per patient and per chiropractic office visit remained relatively unchanged. In 1997 and 2006, utilization averaged 8.5 visits per year while the mean total annual expenditure per chiropractic patient and the mean expenditures per office visit decreased. In the same time period, expenditures per patient and per office visit to medical physicians increased by over 30 percent. The relative stability of costs in the chiropractic group may be due in part to the main treatment modality being "hands-on" and thus less susceptible to the increasing costs of health care delivery related to technological innovations.⁶¹¹

2. The extent to which the mandated health benefit may increase the appropriate or inappropriate use of chiropractic care over the next five years.

It is expected that the direct impact of the chiropractic mandate on the utilization of services among the fully insured population may be moderate. There is some evidence to suggest that a large proportion of the population may have had coverage for chiropractic care prior to the mandate. For example, in California, a state without a chiropractic mandate, a California Health Benefits Program report suggests that 27 percent of the fully insured population did not have chiropractic as a covered benefit and 5 percent had coverage for chiropractic, but the policy required a physician referral.⁶¹² The report also summarizes average annual utilization of chiropractic services based on coverage and cost sharing arrangements. The annual utilization was summarized as follows:

- Average across all plans: 363 visits per 1,000 members
- Chiropractic coverage with direct access/no referral: 452 visits per 1,000 members
- Chiropractic coverage with physician referral required: 300 visits per 1,000 members
- No chiropractic coverage: 146 visits per 1,000 members

⁶⁰⁸ Davis MA, Sirovich BE, Weeks WB. 2010. Utilization and expenditures on chiropractic care in the United States from 1997 to 2006. *Health Services Research* 45(3): 748-761.

⁶⁰⁹ Bureau of Labor and Statistics. Occupational Outlook Handbook 2010. Chiropractors. Available at <http://www.bls.gov/oco/ocos071.htm>. Accessed December 1, 2010.

⁶¹⁰ Davis MA, Sirovich BE, Weeks WB. 2010.

⁶¹¹ *Ibid.*

⁶¹² California Health Benefits Review Program. 2005. Analysis of Assembly Bill 1185, Chiropractic Services. Available at: http://www.chbrp.org/docs/index.php?action=read&cbill_id=80&doc_type=3. Accessed May 7, 2010.

As suggested by the California report, the net increase in utilization under a chiropractic “direct access” mandate would be 101 visits per 1,000 members for a total of 464 visits per 1,000 members. This estimate assumes that the populations enrolled in plans with no coverage or referral requirements would begin using services at the same rate as the group with direct access to chiropractic.⁶¹³ Due to a lack of adequate data on utilization rates by chiropractic coverage for Connecticut’s fully insured population, a similar analysis is not available for this report.

Knowledge gaps in the medical literature related to chiropractic care further restrict the ability to determine whether the mandate may contribute to the increase or decrease of appropriate or inappropriate use of chiropractic services as treatment. The medical literature on chiropractic treatments does not establish a threshold at which chiropractic services are an appropriate intervention for the range of possible conditions covered under available health plans. In addition, the literature lacks quality data on the appropriate frequency, intensity or “dosage,” and modalities for chiropractic treatment of all the conditions that may be covered by a health plan.

3. The extent to which the mandatory coverage for chiropractic services may serve as an alternative for more expensive or less expensive treatment, service or equipment, supplies or drugs, as applicable.

Based on the literature regarding treatment of musculoskeletal conditions and related pain, chiropractors may provide a more expensive treatment option than general physicians and an equally costly treatment option as physical therapists. Findings from the literature do not appear to indicate that chiropractors are any more or less effective in treating musculoskeletal conditions than other providers. Chiropractors deliver many of the same treatments that may be administered by physical therapists, osteopaths, and at times general practitioners. For the most part, the literature evaluates procedures rather than the profession of the provider who delivers them, and the evidence is generally weak for specific interventions targeting pain conditions.

A systematic review on interventions for subacute and chronic low back pain reports that yoga, spinal manipulation, massage therapy, or cognitive behavior therapy are moderately more effective than sham or placebo treatment for low back pain and thus are recommended modalities.⁶¹⁴ For more severe back pain, functional restoration or interdisciplinary rehabilitation is recommended, whereas for those with chronic pain and high expectations of benefit, acupuncture is recommended.^{615,616} To the extent that a chiropractor delivers these treatments, they may provide effective alternatives. Data was not identified differentiating costs of delivery for the same intervention among different provider types.

Other common treatments for musculoskeletal conditions include: prescription medications (opioids, anticonvulsants, barbiturates, etc.), NSAIDs, exercise,⁶¹⁷ massage,⁶¹⁸ and back school.⁶¹⁹ Although unable to prescribe medications, chiropractors at times incorporate massage and exercise into programs for patients.

⁶¹³ *Ibid.*

⁶¹⁴ Chou R, Atlas SJ, Eamranond P. Subacute and chronic low back pain: pharmacologic and noninterventional treatment. *UpToDate Online* 18.3. Last literature review version 18.3: September 2010. Topic last updated: August 23, 2010.

⁶¹⁵ *Ibid.*

⁶¹⁶ Furlan AD, van Tulder MW, Cherkin D, *et al.* Acupuncture and dry-needling for low back pain. *Cochrane Database of Systematic Reviews* 2005, Issue 1. Art. No.: CD001351.

⁶¹⁷ Chou R, Atlas SJ, Eamranond P. Subacute and chronic low back pain: pharmacologic and noninterventional treatment. *UpToDate Online* 18.3. Last literature review version 18.3: September 2010. Topic last updated: August 23, 2010.

⁶¹⁸ Furlan AD, Imamura M, Dryden T, Irvin E. Massage for low-back pain. *Cochrane Database of Systematic Reviews* 2008, Issue 4. Art. No.: CD001929.

⁶¹⁹ Hemans MW, van Tulder MW, Esmail R, *et al.* Back schools for non-specific low-back pain. *Cochrane Database of Systematic Reviews* 2004, Issue 4. Art. No.: CD000261.

The approach to treatment pursued with a chiropractor does differ from other health provider options. The chiropractor focuses primarily on the diagnosis and treatment of the subluxations of the spine, which often involves x-rays or image studies of the spine. The provision of care from chiropractors has also been met with higher patient satisfaction.⁶²⁰ Furthermore, when carrying out spine manipulation, chiropractors tend to use high velocity rather than the lower velocity method typically used by other providers. Many of the procedures carried out by chiropractors are conducted manually. The concentration on manual interventions rather than technology-based interventions or medications has been suggested as keeping chiropractic services costs low when compared to other medical offices.^{621, 622}

4. The methods that will be implemented to manage the utilization and costs of the mandatory coverage for chiropractic services.

The Connecticut mandate requires chiropractic services to be covered “to the same extent coverage is provided for services rendered by a physician.” For typical utilization and cost management strategies to be in effect for chiropractic services, a health plan must employ the same mechanisms (e.g., higher cost-sharing, preauthorization, reauthorization, medical necessity and consistency with medical standards) used for physician services.

Some additional limits on managing cost and utilization of chiropractic services may exist. A standard approach used by health plans for managing use of rehabilitative services such as physical therapy, occupational therapy, or speech therapy is to place a limit on the covered cost per visit and/or the number of covered visits. To the extent that plans do not use these limits for physicians, plans may not be able to manage use and cost of chiropractic care in the same manner as ancillary therapies. It also appears that carriers may not be able to deny claims for chiropractic care based on reviews of medical necessity or consistency with medical standards. The mandate requires plans to “provide coverage for services rendered by a chiropractor ...if such chiropractic services... are within those services a chiropractor is licensed to perform.”

5. The extent to which insurance coverage for chiropractic services may be reasonably expected to increase or decrease the insurance premiums and administrative expenses for policyholders.

Insurance premiums include medical cost and retention costs. Medical cost accounts for medical services. Retention costs include administrative cost and profit (for for-profit carriers) or contribution to surplus (for not-for-profit insurers/MCOs). As reported by IC, chiropractic services account for, on average, an estimated \$3.05 PMPM for group and \$1.60 PMPM for individual health plan premiums in 2010. For fully insured group policyholders, the average medical cost of insurance accounts for \$2.53 PMPM while retention accounts for \$0.51 PMPM. Under fully insured individual policies, the average total medical claims cost is \$1.23 PMPM and retention accounts for \$0.37 PMPM. This cost estimate does not include any savings for potential medical costs avoided. Since the mandate has been in place since October 1, 1989, the PMPM estimates do not capture the increase in cost attributable to the mandate but rather the cost of providing the service. Unless the claims for utilization of chiropractic services by the newly covered population were significantly higher than their utilization in the absence of mandated coverage, the potential increase in premium would be a small fraction of the PMPMs presented. If comparable to the changes predicted for California if a mandate were to be adopted, the expected increase in premium would be

⁶²⁰ Davis MA, Sirovich BE, Weeks WB. 2010. Utilization and expenditures on chiropractic care in the United States from 1997 to 2006. *Health Services Research* 45(3): 748-761.

⁶²¹ *Ibid.*

⁶²² Kapur K, Roan Gresenz C, Studdert DM. 2003. Managing care: utilization review in action at two capitated medical groups. *Health Affairs*. Supplemental Web Exclusives:W3-275-82.

approximately 27 percent⁶²³ of the PMPMs presented, marking an average PMPM increase of 0.2 percent or less in fully insured plans.

6. *The extent to which chiropractic services are more or less expensive than an existing treatment, service or equipment, supplies or drugs, as applicable, that is determined to be equally safe and effective by credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community.*

As previously described in Section IV-16 and Section V-3 of this chapter, systematic reviews of the medical literature generally find limited evidence for the treatment of non-specific musculoskeletal conditions. The literature related to the cost of treatment for chiropractic care and existing alternatives does not provide adequate comparison data; however, it may suggest that chiropractic care is more expensive per treatment episode than care received by general practitioners.⁶²⁴ Although in many cases the unit cost of a chiropractic visit is less than a general practitioner, comparing the cost per episode of a condition for which care is sought requires additional information. The extent to which chiropractic treatment services could be more or less expensive depends in part on whether chiropractor visits are sought in addition or as an alternative to physical therapy, osteopath, and/or primary care provider visits for the same issue. Another factor to consider is the frequency of visits associated with the care sought by each type of provider. For example, chiropractic and physical therapy visits tend to be more frequent than physician visits; therefore, even if the per unit cost of a chiropractic visit is less expensive than a physician visit, the per-episode cost of care may be more expensive for the chiropractic visit. One identified study suggests that chiropractic care costs more than supportive care provided by physicians; whereas, the cost of chiropractic care and physical therapy are similar.⁶²⁵

As noted in Section V-3, there are a number of potential procedures that could be carried out during a chiropractic visit. Among the treatments for which there is evidence that the treatment is more effective than a sham or placebo treatment, there may be cost differences across treatment or by the type of provider who delivers the treatment. For this report, adequate data for comparison was not available.

7. *The impact of insurance coverage for chiropractic services on the total cost of health care, including potential benefits or savings to insurers and employers resulting from prevention or early detection of disease or illness related to such coverage.*

Among the fully insured population, insurance coverage for chiropractic services is projected to account for \$57,170,178 of the total cost of health care in Connecticut during 2010. Of the total cost for chiropractic care, it is expected that 30.7 percent will be paid out-of-pocket by the insured and the remaining 60.3 percent will be paid as medical claims. However, as discussed under Section V-2, it is expected that a much smaller proportion of the total cost would be attributable to the presence of the Connecticut mandate. Chiropractic is often included in health plans regardless of a mandate and individuals without coverage often opt to pay out of pocket for the service.

Based on available literature, conclusions regarding any potential benefit or savings that may occur from prevention or early detection of conditions as a result of the chiropractic mandate are premature. Among the more rigorous studies noted by the *Cochrane Review*, chiropractic often is no more effective than

⁶²³ California Health Benefits Review Program. 2005. Analysis of Assembly Bill 1185, Chiropractic Services. Available at: http://www.chbrp.org/docs/index.php?action=read&bill_id=80&doc_type=3. Accessed May 7, 2010.

⁶²⁴ Davis MA, Sirovich BE, Weeks WB. Utilization and expenditures on chiropractic care in the United States from 1997 to 2006. *Health Services Research*. 2010 June. 45(3) 748-761. Epub 4 Dec 2009.

⁶²⁵ Skargren EI, Carlsson PG, Oberg BE. 19983 One-year follow-up comparison of the cost and effectiveness of chiropractic and physiotherapy as primary management for back pain. Subgroup analysis, recurrence, and additional health care utilization. *Spine* 23:1875.

comparative or usual treatments for a condition (pain medications, back school, physical therapy).⁶²⁶

The extent to which chiropractic services adds to the total cost of health care also depends on whether the service is being used as a complementary or alternative form of treatment. If the chiropractic services are added while maintaining use of traditional medicine and/or ancillary services such as physical therapy at the same level, then chiropractic spending would be additive. If chiropractic services are used as an alternative form of treatment and replaces traditional medicine and/or ancillary services, conflicting findings in the literature make it unclear whether cost savings to insurers and employers may be generated.⁶²⁷

Given the limits of existing chiropractic research, it is not possible to verify whether any potential benefits or savings may occur as a result of prevention or early detection of conditions through chiropractic care.

8. The impact of the mandated health care benefit on the cost of health care for small employers, as defined in § 38a-564 of the general statutes, and for employers other than small employers.

The cost of chiropractic services is projected to contribute 0.8 percent to the cost of group insurance coverage in 2010. A much smaller proportion of chiropractic cost may be attributable to the Connecticut mandate. In the California report, the projected increase in premiums was less than 0.2 percent for enacting a chiropractic mandate with a no physician referral requirement.⁶²⁸ Given the relatively small contribution of chiropractic care to premium costs, it is expected that the impact of covering chiropractic will be similar for both small employers and other employers. However, it is possible that some small employers may be more sensitive to premium increases than other employers.

9. The impact of the mandated health benefit on cost-shifting between private and public payers of health care coverage and on the overall cost of the health care delivery system in the state.

The overall cost of the health delivery system in the state is understood to include total insurance premiums (medical costs and retention) and cost sharing. Actuarial analysis of claims data received from carriers in Connecticut shows an expected cost in 2010 of \$65,373,895 for chiropractic services for Connecticut residents covered by fully insured group and individual health insurance plans.

The provision for fully insured plans to cover chiropractic services may result in some shifting of costs between the private and public payers of health care. It has been documented that individuals seek chiropractic care and often pay the full cost or pay policy specified out-of-pocket charges. To the extent that the fully insured would pay the full cost or larger out-of-pocket charges prior to the mandate, the cost of care once paid by the individual may have shifted to carriers or across policy members (employers or individual members) under the mandate. Because this required benefit became effective October 1, 1989, it is unlikely that the mandate, taken individually, has any impact on cost-shifting between private and public payers of health care coverage at present.

⁶²⁶ Walker BF, French SD, Grant W, Green S. Combined chiropractic interventions for low-back pain. *Cochrane Database of Systematic Reviews* 2010, Issue 4. Art. No.: CD005427.

⁶²⁷ Baldwin ML, Cote P, Frank JW, Johnson WG. 2001. Cost-effectiveness studies of medical and chiropractic care for occupational low back pain. a critical review of the literature. *Spine Journal* 1(2):138–147.

⁶²⁸ California Health Benefits Review Program. 2005. Analysis of Assembly Bill 1185, Chiropractic Services. Available at: http://www.chbrp.org/docs/index.php?action=read&bill_id=80&doc_type=3. Accessed May 7, 2010.

Volume III
Appendix I

House Bill No. 5018

Public Act No. 09-179

*An act concerning reviews of health insurance
benefits mandated in the State of Connecticut*



House Bill No. 5018

Public Act No. 09-179

**AN ACT CONCERNING REVIEWS OF HEALTH INSURANCE
BENEFITS MANDATED IN THIS STATE.**

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. (NEW) (*Effective July 1, 2009*) (a) As used in this section:

(1) "Commissioner" means the Insurance Commissioner.

(2) "Mandated health benefit" means an existing statutory obligation of, or proposed legislation that would require, an insurer, health care center, hospital service corporation, medical service corporation, fraternal benefit society or other entity that offers individual or group health insurance or medical or health care benefits plan in this state to: (A) Permit an insured or enrollee to obtain health care treatment or services from a particular type of health care provider; (B) offer or provide coverage for the screening, diagnosis or treatment of a particular disease or condition; or (C) offer or provide coverage for a particular type of health care treatment or service, or for medical equipment, medical supplies or drugs used in connection with a health care treatment or service. "Mandated health benefit" includes any proposed legislation to expand or repeal an existing statutory obligation relating to health insurance coverage or medical benefits.

(b) (1) There is established within the Insurance Department a

House Bill No. 5018

health benefit review program for the review and evaluation of any mandated health benefit that is requested by the joint standing committee of the General Assembly having cognizance of matters relating to insurance. Such program shall be funded by the Insurance Fund established under section 38a-52a of the general statutes. The commissioner shall be authorized to make assessments in a manner consistent with the provisions of chapter 698 of the general statutes for the costs of carrying out the requirements of this section. Such assessments shall be in addition to any other taxes, fees and moneys otherwise payable to the state. The commissioner shall deposit all payments made under this section with the State Treasurer. The moneys deposited shall be credited to the Insurance Fund and shall be accounted for as expenses recovered from insurance companies. Such moneys shall be expended by the commissioner to carry out the provisions of this section and section 2 of this act.

(2) The commissioner shall contract with The University of Connecticut Center for Public Health and Health Policy to conduct any mandated health benefit review requested pursuant to subsection (c) of this section. The director of said center may engage the services of an actuary, quality improvement clearinghouse, health policy research organization or any other independent expert, and may engage or consult with any dean, faculty or other personnel said director deems appropriate within The University of Connecticut schools and colleges, including, but not limited to, The University of Connecticut (A) School of Business, (B) School of Dental Medicine, (C) School of Law, (D) School of Medicine, and (E) School of Pharmacy.

(c) Not later than August first of each year, the joint standing committee of the General Assembly having cognizance of matters relating to insurance shall submit to the commissioner a list of any mandated health benefits for which said committee is requesting a review. Not later than January first of the succeeding year, the

House Bill No. 5018

commissioner shall submit a report, in accordance with section 11-4a of the general statutes, of the findings of such review and the information set forth in subsection (d) of this section.

(d) The review report shall include at least the following, to the extent information is available:

(1) The social impact of mandating the benefit, including:

(A) The extent to which the treatment, service or equipment, supplies or drugs, as applicable, is utilized by a significant portion of the population;

(B) The extent to which the treatment, service or equipment, supplies or drugs, as applicable, is currently available to the population, including, but not limited to, coverage under Medicare, or through public programs administered by charities, public schools, the Department of Public Health, municipal health departments or health districts or the Department of Social Services;

(C) The extent to which insurance coverage is already available for the treatment, service or equipment, supplies or drugs, as applicable;

(D) If the coverage is not generally available, the extent to which such lack of coverage results in persons being unable to obtain necessary health care treatment;

(E) If the coverage is not generally available, the extent to which such lack of coverage results in unreasonable financial hardships on those persons needing treatment;

(F) The level of public demand and the level of demand from providers for the treatment, service or equipment, supplies or drugs, as applicable;

(G) The level of public demand and the level of demand from

House Bill No. 5018

providers for insurance coverage for the treatment, service or equipment, supplies or drugs, as applicable;

(H) The likelihood of achieving the objectives of meeting a consumer need as evidenced by the experience of other states;

(I) The relevant findings of state agencies or other appropriate public organizations relating to the social impact of the mandated health benefit;

(J) The alternatives to meeting the identified need, including, but not limited to, other treatments, methods or procedures;

(K) Whether the benefit is a medical or a broader social need and whether it is consistent with the role of health insurance and the concept of managed care;

(L) The potential social implications of the coverage with respect to the direct or specific creation of a comparable mandated benefit for similar diseases, illnesses or conditions;

(M) The impact of the benefit on the availability of other benefits currently offered;

(N) The impact of the benefit as it relates to employers shifting to self-insured plans and the extent to which the benefit is currently being offered by employers with self-insured plans;

(O) The impact of making the benefit applicable to the state employee health insurance or health benefits plan; and

(P) The extent to which credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community determines the treatment, service or equipment, supplies or drugs, as applicable, to be safe and effective; and

House Bill No. 5018

(2) The financial impact of mandating the benefit, including:

(A) The extent to which the mandated health benefit may increase or decrease the cost of the treatment, service or equipment, supplies or drugs, as applicable, over the next five years;

(B) The extent to which the mandated health benefit may increase the appropriate or inappropriate use of the treatment, service or equipment, supplies or drugs, as applicable, over the next five years;

(C) The extent to which the mandated health benefit may serve as an alternative for more expensive or less expensive treatment, service or equipment, supplies or drugs, as applicable;

(D) The methods that will be implemented to manage the utilization and costs of the mandated health benefit;

(E) The extent to which insurance coverage for the treatment, service or equipment, supplies or drugs, as applicable, may be reasonably expected to increase or decrease the insurance premiums and administrative expenses for policyholders;

(F) The extent to which the treatment, service or equipment, supplies or drugs, as applicable, is more or less expensive than an existing treatment, service or equipment, supplies or drugs, as applicable, that is determined to be equally safe and effective by credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community;

(G) The impact of insurance coverage for the treatment, service or equipment, supplies or drugs, as applicable, on the total cost of health care, including potential benefits or savings to insurers and employers resulting from prevention or early detection of disease or illness related to such coverage;

House Bill No. 5018

(H) The impact of the mandated health care benefit on the cost of health care for small employers, as defined in section 38a-564 of the general statutes, and for employers other than small employers; and

(I) The impact of the mandated health benefit on cost-shifting between private and public payors of health care coverage and on the overall cost of the health care delivery system in the state.

Sec. 2. (*Effective July 1, 2009*) The commissioner shall carry out a review as set forth in section 1 of this act of statutorily mandated health benefits existing on or effective on July 1, 2009. The commissioner shall submit, in accordance with section 11-4a of the general statutes, the findings to the joint standing committee of the General Assembly having cognizance of matters relating to insurance not later than January 1, 2010.

Approved June 30, 2009

Volume III

Appendix II

Ingenix Consulting

Actuarial Report

On set three, 23-33 of the 45

Health Insurance Mandates

Covered By Public Act

Number 09-179

for

The State of Connecticut

INGENIX CONSULTING—
ACTUARIAL REPORT For The STATE OF CT
On Set Three Of The HEALTH INSURANCE MANDATES
Covered By PUBLIC ACT NUMBER 09-179

December 15, 2010

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TABLE OF CONTENTS:

I. Introduction

1. Brief Description of Each Mandate
2. Cost Estimate Approach
3. Executive Summary of 2010 Medical Cost Assessment of the 10 Mandates
 - A. Recap of Medical Cost of Each Mandate
4. The Data

II. Elaboration on the Ten Mandates

1. Initial Commentary on the Administrative Cost of the Mandates
 - A. Total Cost Recap—Medical + Administrative Cost
2. Explanation of the Medical Aspects of the Benefits
3. Further Explanation of the Medical Cost of the Mandates
4. Differential Effect of the Mandates on Individual vs. Group Insurance
5. Differential Effect of Small Group vs Large Group
6. Effect of Mandates on the Availability and Cost of Health Insurance
7. Effect of Mandates on Public Health
8. Effect of Mandates on the Delivery of Health Care Including the Utilization and Unit Cost of Health Care Services, Medical Supplies, and Devices
 - A. Provider/Supplier Reactions

III. Economic and Financial Aspects of the Mandates

IV. Conclusions

V. References to Financial / Economic Report

VI. Appendices

1. Weighted Average Cost of Each Mandate
2. Cost Sharing for Each Mandate
3. Appendix to Financial / Economic Report

I. INTRODUCTION:

This report serves to record the findings of Ingenix Consulting (IC) pursuant to the engagement to provide actuarial services to the State of CT in conjunction with Substitute House Bill No. 5021, Public Acts 09-179. This report is intended to communicate the results of this work.

IC is pleased to have been chosen to serve the state of CT in this valuable project. A team approach has been used, both with IC and the workgroup that included the CT Department of Insurance and the Center for Public Health and Health Policy. A team approach was also used internally at IC. Daniel Bailey, FSA, MAAA managed the actuarial work for the project and worked on most of the mandates. James Drennan, FSA, MAAA provided guidance, expertise in individual insurance, and acted as consultant and peer reviewer. Dr. Thomas Knabel, MD, and his clinical staff were responsible for clinical guidance and support. Mary Canillas, FSA, MAAA carried out the data research that involved IC's extensive commercial health claims databases.

The financial economic work was lead by health economist, Tanvir Khan, who worked with a team of associates located throughout the nation, including Jon Montague-Clouse, PharmD. The financial / economic report is embedded in section III of this Set Three report; it is not part of the actuarial report.

IC was retained by the state to assess 45 existing health insurance mandates. In this document, the findings and conclusions relating to the actuarial evaluation of each mandate in the third set of 10—Set Three—will be presented. The mandates will be reviewed with respect to cost, socio-economic impact, and effect on the finance and delivery system.

For this project, the six health insurers domiciled in CT were asked to submit their claim data showing how much these mandates cost. This was an important step in determining how much the mandates add to the cost of health insurance premiums in CT. For some of the mandates, IC also supplemented the health carrier data with data from their CT and national databases.

The results are presented in several steps in this report. First, results are presented in summary form, and subsequently, some of the additional data and calculations that support the findings are layered into the document.

I.1 IC reviewed the following ten mandates that pertain to either mental health and substance abuse (MH/SA) or mandatory coverage of certain provider types (Section numbers, individual then group, and date of passage are shown in parentheses):

MH/SA

1. **Availability of psychotropic drugs in health plans:** Prohibits mental health benefits from limiting the availability of the most therapeutically effective psychotropic drugs or requiring the utilization of those that are not the most therapeutically effective. Neither differential copays nor utilization review is prohibited by this mandate. (38a-476b; Oct. 2001)
2. **Mental or Nervous Conditions:** Requires insurers to cover diagnosis and treatment of defined mental and nervous conditions. Included in the definition of these conditions are mental health and substance abuse (MH/SA) diagnosis and

treatment. Per the mandate, "Mental or nervous conditions" means mental disorders as defined in the most current edition of the American Psychiatric Association's "Diagnostic and Statistical Manual of Mental Disorders." Mental health and substance abuse benefits must be offered at parity with other medical benefits. This mandate lists the types of providers authorized to provide services in addition to licensed physicians and psychologists. Services are covered on an inpatient or outpatient basis in a variety of medical settings. Not all of the providers of MH/SA services are licensed to prescribe medications, but this mandate makes no reference to medication. It refers only to the services of mental health providers. (Medications for mental and nervous conditions are covered under the psychotropic drug mandate, the first mandate in Set Three.) This MH/SA mandate is the latest iteration of a mental health mandate that first took effect in CT in 1971. It supersedes the prior mandate on biologically-based mental illness, section 38a-514a. (38a-488a and 38a-514; Jan. 2000).

3. **Accidental Ingestion of Controlled Drug:** Requires insurers to cover the expenses of emergency medical care arising from accidental ingestion or consumption of a controlled drug. Inpatient coverage shall be covered for at least 30 days in a calendar year. Up to at least \$500 of non-inpatient care shall also be covered. (38a-492 and 38a-518; July 1975).
4. **Health Services for People with Elevated Level of Alcohol in Blood:** Prevents insurers from denying coverage for services rendered to treat any injury sustained by any person with elevated blood alcohol level (.08% or more) or under the influence of intoxicating liquor or any drug or both. (38a-498c and 38a-525c; Oct. 2006).
5. **Coverage for Treatment of Medical Complications of Alcoholism: (Group only)** Requires coverage for the diagnosis and treatment of medical complications of alcohol including diseases such as cirrhosis of the liver, gastrointestinal bleeding, pneumonia, and delirium tremens, and thus requires coverage of detoxification. (38a-533; Jan. 2000).

PROVIDER MANDATES

6. **Coverage for Occupational Therapy (OT):** Requires medical insurers to cover OT provided by a licensed occupational therapist in accordance with a plan of care established in writing by a licensed physician. Physician must certify that the prescribed care and treatment are unavailable from other provider types and are provided in private practice or a licensed health care facility. Physician must review and certify the treatment plan at least every two months. This older mandate went into effect at a time when not all medical plans covered therapy services. (38a-496 and 38a-524; Oct. 1982)
7. **Mandatory Coverage for Physician Assistants and Certain Nurses:** This mandate defines three categories of nurses--certified nurse practitioner, certified psychiatric-mental health clinical nurse specialist, and certified nurse-midwife; and it defines physician assistant. Insurance policies shall provide coverage for the services of these licensed independent providers as long as they are within their area of competence and currently reimbursed when rendered by other licensed providers. They were referred to as "mid-level" providers before the term fell into disuse. The mandate does not permit RNs or physician assistants to provide services beyond their scope of practice. (38a-499 and 38a-526; Oct. 1984)

8. **Mandatory Coverage for Services Provided by the Veteran's Home:** Insurers must cover service provided by the Veteran's Home, which is located on West Street in Rocky Hill, CT. This mandate came into being at the time this institution changed its name.(38a-502 and 38a-529; Oct. 1988)
9. **Permit Direct Access to OB/GYNs:** Requires gatekeeper health insurance plans to permit female members to see their obstetrician/gynecologist without a referral. Non-gatekeeper plans are unaffected because they have never required their members to have a referral from their primary care physician in order to visit a specialist. This effectively enables OB/GYNs in gatekeeper plans to function as primary care physicians for their female patients. (38a-503b and 38a-530b; Oct. 1995)
10. **Mandatory Coverage for Chiropractic Services:** Requires insurers to provide coverage for services rendered by licensed chiropractors to the same extent as those rendered by physicians as long as the service is covered under the policy and is within the scope of services the chiropractor is licensed to perform. (38a-507 and 38a-534; Oct 1989).

Note: Except for the fifth mandate, which is group only, all ten mandates in Set Three apply the same to group and individual coverage. All ten mandates apply to comprehensive health insurance plans such as Health Maintenance Organizations (HMO) and Preferred Provider Organizations (PPO). The ten mandates do not apply to disability plans, workers compensation plans, or medical indemnity plans that pay a set amount for each day that someone is a hospital inpatient. The first, third, sixth, seventh, ninth, and tenth mandates apply to limited medical benefit plans under individual policies. Only the first and eighth mandates apply to limited medical benefit plans under group contracts.

I.2 IC Review of Cost of Mandates—Two Components:

With respect to the cost of the benefit mandates, two pieces were examined —medical cost and non-medical expenses, with much greater emphasis on the former since it involves the far larger portion of overall cost. The annual medical cost in 2007 and 2008 dollars, as reported by the carriers, was reviewed. Non-medical cost consists of administrative cost and profit; it is also referred to as retention.

In reporting the medical cost of the mandate, the cost shown is Paid Cost, which is the cost actually borne (paid) by the medical insurers and HMOs. The focus is on the Paid cost because it is the primary ingredient of health insurance premiums. In addition to Paid cost, there is another cost that is the amount borne by the member in the form of deductibles, coinsurance, and copays. This cost borne by the insured members is referred to as Cost Sharing. The sum of these two costs, Paid + Cost Sharing, is referred to as Allowed cost in this report. Most of the focus of this report is on Paid cost, since that is what drives the cost of insurance—the premium. When the member's financial burden is discussed later in this report, the focus will not be on Paid cost; in that case, the member cost-share, which is the difference between the Allowed and Paid Cost, is reported.

The primary data source was provided by the CT domiciled carriers, all of which are subject to the mandates for their fully insured business. These six carriers provided medical cost data for 2007 and 2008 on an allowed and on a paid basis. There were far more members in the group data than in individual plans; thus the group data was substantially more “credible” than the individual data. (Credible is used here in a statistical and actuarial sense.) The numbers referred to below in the cost summary of section I.3 are for **group** plans. Later in the report,

individual plans and the individual data are discussed at greater length. As a reference, IC's internal commercial health claims data for 2007 and 2008, both CT-specific as well as national data in some instances, were extracted and reviewed. Outside data sources were also reviewed for incidence and prevalence rates.

First, we will present a summary of the expected 2010 medical cost without detail or long-range projections. Later in this report, there is further elaboration on the medical cost of each mandate, and socio-economic consequences and ramifications on the finance and delivery system, including the effect on health insurance cost and availability. Finally, there are comments on the economic and financial aspects of the mandates.

I.3 EXECUTIVE SUMMARY OF 2010 MEDICAL COST ASSESSMENT AND MAJOR FINDINGS:

During the course of this project, each of the six insurance carriers domiciled in CT was asked to provide data showing their medical cost for each mandate. IC and the workgroup examined the carriers' reported cost of the mandates. A weighted average was developed across all six carriers using the relative number of member months as the weights. If a carrier had 25% of the total member months, for example, then its PMPM was weighted at 25% in the average. The cost shown by the carriers represents the full cost of all care mentioned in the mandate, even though a significant portion of the mandated services might have been covered prior to or in the absence of the mandate.

For some mandates, where available, IC's own data for CT was evaluated to ascertain a separate estimate of mandate costs and provide a reasonability check. It was easier to determine the cost of some of the mandates, whereas others were more difficult and may have involved additional analytic complexity. The carriers generally provided the full gross cost of the services covered by the mandate. This does not mean that carriers did not cover some or all of the mandated services prior to the mandate.

In the estimates below, an attempt has been made to use a point estimate of cost. This is not meant to imply a false sense of precision by providing a best estimate. When carriers selected the claims covered by the mandate, the variation reported likely represents some degree of judgment affecting that selection. While the actual 2008 cost is known, the projected 2010 cost may be somewhat greater or less than the values projected.

The term *de minimis* is used to describe the projected incremental cost of any mandate that we expect to be \$0.05 per member per month (PMPM) or less when the cost is spread to all the insured people covered by the plan. The terms per person per month and per insured person per month mean the same thing as per member per month (PMPM).

The mandates reviewed showed significant variation in the populations affected and produced different effects.

The following ten mandates, referred to as Set Three, are the third subset of the 45 mandates, all of which we will review by the end of 2010. **The PMPM costs presented in this section are for group insurance. Individual data and costs will be discussed later in this report in Sec II.4.**

1. Mandate one covers psychotropic drug availability. Based on the insurers' data, the weighted average for 2008 paid cost is \$6.75 PMPM. This is expected to be \$7.50 PMPM in 2010, which is about 2.5% of overall medical cost. The average cost-sharing was almost 24% of the allowed cost, which is more than for most mandates because it is a pharmacy benefit. All the carriers submitted all their claims for psychotropic drugs, which is a relatively high cost pharmaceutical category. None of the carriers made any attempt to isolate the incremental cost associated with the requirement to make available the most effective psychotropic drug. The cost of this mandate is increasing over time as new drugs are developed and direct-to-consumer advertising increases the demand for them; the rate of increase has been greater for psychotropics than for the rest of medical and pharmaceutical spending. In part, this reflects the development and availability of new drugs and the rapid evolution of classes such as SSRIs and SNRIs (selective serotonin reuptake inhibitors and serotonin norepinephrine reuptake inhibitors). Some of these drugs are taken on a long-term, maintenance basis; others may be short-term and situational. This was the second highest cost mandate in Set Three. Only the next mandate for mental or nervous conditions involved more cost.

2. Mandate two requires coverage of mental or nervous conditions. This includes mental health and substance abuse (MH/SA). Based on the insurers' data, the weighted average for 2008 paid cost is \$7.71 PMPM. This is expected to be \$8.50 PMPM in 2010, which is about 2.8% of overall medical cost. The average member cost-sharing for this mandate was 20% of the allowed cost. Carriers submitted all their claims for MH/SA but excluded medication claims. This is a high cost category of medical service and thus a high cost mandate due to high utilization of services by many of those who are insured. At the time the mandate was first enacted, not all medical plans covered mental health benefits. Medical science has advanced considerably since that time. So has the recognition of the importance of these services and the relationship between physical health, mental health, and productivity. The availability of these services has also increased over time. These services range from office visits for individual therapy to inpatient psychiatric stays for evaluation and treatment. Partial hospitalization is treatment that is midway between those two extremes. This is the highest cost mandate in Set Three.

3. Mandate three involves coverage for the accidental ingestion of controlled drugs. Based on the insurers' data, the weighted average for 2008 paid cost is \$0.03 PMPM. This is expected to be about the same in 2010. It is a very low cost mandate because there are extremely few people and services affected by it. The cost is de minimis. The problem of accidental ingestion of controlled drugs is increasing. It includes those who accidentally overdose on controlled drugs such as heroin. Across the entire population, most overdoses are from heroin, but some are for pharmaceuticals such as Vicodin. As more people become addicted to opiates used for pain medication, the problem can be expected to worsen; this is a public health issue.

4. Mandate four prohibits insurers from refusing to pay for services provided to a person injured while under the influence of alcohol or a drug. The carrier data showed a 2008 weighted average paid cost of \$0.03 PMPM. The 2010 cost is projected to be about the same. It is also a very low cost service because there are relatively few people and services affected by it. The cost is de minimis. Injuries obtained during a state of insobriety can range from minor to traumatic involving inpatient care in an intensive care unit. It is difficult to describe a typical episode of care. 10% of all accidental injuries occur while inebriated. Many of these involve falls. The diagnosis of insobriety is not always captured on a claim form for an accident in which alcohol played a role.

5. Mandate five requires insurers to pay for medical complications of alcoholism. Based on the insurers' data, the weighted average 2008 paid cost is \$0.34 PMPM. This is expected to be \$0.37 PMPM in 2010. The average cost sharing was less than 10%. This is a low cost service, but it is not de minimis. This mandate also covers detoxification, which helps some people break free of alcohol dependence, but not as successfully long-term as rehabilitation programs do. Some of the medical complications of alcoholism, such as delirium tremens are clearly caused by alcohol. There are other complications for which it is more difficult to assign cause to alcohol.

In rare instances, for example, when protracted abuse of alcohol leads to cirrhosis of the liver and a liver transplant, the cost of an episode of care can potentially be very high. Most of the claims were not large and involved ER visits, office visits, tests, and treatments.

6. Mandate six involves coverage for occupational therapy (OT), which is performed for a variety of different conditions. There are likely some overlapping OT services included here that were also included for the autism mandate for children. Based on the insurers' data, the weighted average 2008 paid cost is \$0.78 PMPM. The average cost-sharing was 35% of the allowed cost. The paid cost is expected to be \$0.86 PMPM in 2010. Decades ago, OT was not a commonly covered service in health insurance plans. At this point in time, however, excluding OT (and other forms of therapy such as physical and speech) from a health insurance plan is uncommon.

7. The seventh mandate requires insurers to cover physician assistants and certain nurses. The weighted average of the carriers for 2008 was \$2.03, which is about \$2.23 PMPM on a 2010 basis. The average cost sharing was 15% of the allowed cost. Both PAs and nurse practitioners are considered "mid-level" providers (in between a physician and a registered nurse), and they may perform many of the evaluation and management services that a physician does, thereby increasing the supply of qualified providers authorized to provide certain essential medical services. The term "mid-level provider" is falling into disuse and is regarded by some as pejorative. We will use the term licensed independent providers in its place.

The PA and NP are two different models of care. These providers may not be licensed to perform all the same interventional services that a doctor may, but they increase the available supply of providers available to see patients that need immediate or ongoing attention. It would be wrong to conclude that CT has simply added incremental cost to the system by mandating that insurers cover these licensed independent providers. PAs and nurse practitioners help to make the system more efficient and effective since basic care can be triaged to them, and they can become highly proficient with certain specific aspects of care. They help alleviate the shortage of primary care physicians and maintain access to necessary care. Despite the gross cost reported, the conclusion is that the net new cost of this mandate is effectively de minimis. This mandate has not added any new cost to the healthcare system despite the fact that there may be additional primary care services performed. This extended base of PCPs allows patients to be treated earlier, which helps reduce the occurrence of downstream complications. Without these providers, there could actually be more specialty and inpatient care, which would add expense to the system.

8. The eighth mandate requires coverage of services provided by the Veteran's Home in Rocky Hill, CT. Many of the carriers had some claims for this provider, but they were a

relatively small part of their overall claims. Based on the insurers' data, the weighted average 2008 paid cost is \$0.30 PMPM. This is expected to be \$0.33 PMPM in 2010. The average cost-sharing was 29%. It is unclear whether these claims could be denied in the absence of the mandate.

9. Mandate nine requires gatekeeper plans to allow direct access to OB/GYNs. For the three carriers that submitted data, the average is \$5.22 PMPM for 2008 for all their members. This implies that all plans issued by these carriers still require gatekeeper referrals in order for a person to visit a specialist. This would be about \$5.75 PMPM on a 2010 basis. Note that the calculation of the PMPM uses only those members insured by the three carriers that have gatekeeper plans—not all those who are insured. If it were spread to all insured, it would be less. But it would be inconsistent with insurance pricing principles to charge those insured by non-gatekeeper plans for this feature of a gatekeeper plan.

The average member cost-sharing was 10% of the allowed cost. Not all health insurance plans require their members to obtain a referral in order to obtain services from a provider other than their primary care physician (PCP). Only “gatekeeper” plans have this requirement. These are generally HMO plans, not PPO or high deductible plans. In gatekeeper plans, the PCP must approve subsequent care rendered by another provider. This mandate prohibits gatekeeper plans from requiring a referral for OB/GYN services. This means OB/GYNs can serve as PCPs for their patients. OB/GYNs are competent trained PCPs in their own right. By mandating direct access, the state has enabled OB/GYNs to serve as primary care providers to their patients, but the mandate has not introduced additional cost, even for those patients who maintain a separate PCP other than their OB/GYN. Members may have personal reasons for maintaining both, and the extent to which one or the other would provide redundant or unnecessary services is negligible. This mandate contributes to increased patient satisfaction. Three of the carriers had no claims for this mandate because they have no gatekeeper plans.

Those carriers that had gatekeeper plans provided the full gross cost of OB/GYN claims in all their plans. These are not necessarily costs that would not have otherwise occurred in the absence of the mandate. Many of these claims were duplicative of claims that had already been received for the maternity mandate, since, depending on the carrier, as much as one-half to three-fourths of the OB/GYN cost involved deliveries. Although the carriers sent data reflecting the full gross cost of OB/GYN services for gatekeeper plans, this does not reflect the true cost. It is concluded that this mandate has a *de minimis* cost to the system, if any. As the shortage of primary care physicians worsens, this mandate also helps expand the base supply of professional providers that can support primary patient care. It is likely that this mandate has not added any new cost to the system.

10. Mandatory Coverage for Chiropractic Services: The insurers' data shows a 2008 paid cost of \$2.30 PMPM. The 2010 cost is expected to be \$2.53 PMPM. The average cost-sharing was about 26%. Based on the carriers' data, this mandate costs about 0.8% of the total medical cost. This is consistent with the pricing data used by Ingenix Consulting. The carriers submitted all their chiropractic claims. A separate query of Ingenix Consulting data revealed a similar level of chiropractic claims. Chiropractic services may be an alternative to orthopedic care or physical therapy. In some instances, they may provide a lower cost solution to the patient suffering from back pain than an episode of care with an orthopedic provider. In other cases, the patient may see both provider types. The patient may also see a physical therapist after being given a script by an orthopedic physician. Some insurers have

A range of medical cost for the ten mandates would be \$17 to \$23 PMPM. In terms of three scenarios, low, medium, and high, \$17 PMPM is the low estimate and \$23 PMPM is the high estimate. The cost estimate for the medium scenario is **\$20.00 PMPM**.

In calculating the percentage of overall medical cost, a denominator of **\$300 PMPM** is used for all calculations. This is medical cost only and does not include administrative cost or profit.

If an assumed premium cost of \$360 PMPM (based on a medical cost ratio of about 83%) is used, then the \$20.00 represents about 5.6% of the total health insurance premium. It should be noted that the top half of the fraction does not include administrative cost and profit, but the bottom half does. For this reason it is not an appropriate measure to use. See section II.1.a.

I.4 THE DATA

MANDATE COST DATA:

Two major data sources were used for this project to obtain the cost by mandate. Each of the six carriers domiciled in CT was asked to supply a cost estimate of each mandate. This data was collected from the carriers and examined. Ingenix Consulting data was also used as reference point to compare with the carrier data for some mandates. Carriers were asked to provide diagnosis and procedure codes and national drug codes associated with each mandate, where available.

The carrier data for some mandates revealed variation of cost in the initial submission. Some of the variation was attributable to differences in codes gathered and the approach each carrier used to gather the data used to calculate the mandate cost.

The final cost estimates are based on both carrier data and Ingenix data. The data shown in table 3A is paid basis carrier data projected to a 2010 PMPM level. The purpose of the analysis was to produce a reasonable estimate of the actual cost. A weighted average of carrier data was obtained and compared with the mandate cost produced by the Ingenix data.

The workgroup also met with outside experts, such as providers who are experts in the clinical areas addressed by the mandates. These meetings also provided insight into the aspects of utilization and unit cost that drive the cost of the mandates as well as their socio-economic ramifications and effects on the system for the finance and delivery of health care.

CARRIER DATA ON TOTAL MEDICAL COST AND INSURED MEMBER MONTHS:

The carriers were asked to supply member months and total claims dollars for 2007 and 2008. A weighted average paid medical cost was developed for **group plans** as follows:

	<u>2007</u>	<u>2008</u>
MEDICAL	\$263.03	\$284.76
<u>PHARMACY</u>	<u>\$46.83</u>	<u>\$49.10</u>
TOTAL	\$309.86	\$333.86

The same was also provided for **individual plans**:

	<u>2007</u>	<u>2008</u>
MEDICAL	\$162.92	\$177.82
<u>PHARMACY</u>	<u>\$19.52</u>	<u>\$20.14</u>
TOTAL	\$182.44	\$197.96

In both the group and individual data, a significant number of members have medical coverage but not pharmacy coverage (Rx).

The group paid cost is more than 50% greater than the individual. Note that there were more than twelve times as many group members as individual in the 2007 and 2008 carrier data submitted. There were about 1.2 million group members but only about 92,000 individual members in the 2007 medical data. Of these members, only 829,000 and 79,000 also had RX coverage. The following chart shows the 2007 and 2008 average member counts for both medical and RX split by 2007 vs. 2008 and group vs. individual.

AVERAGE MEMBERS	<u>2007</u>	<u>2008</u>
<u>MEDICAL</u>		
GROUP	1,197,282	1,155,892
INDIVIDUAL	91,625	95,208
<u>PHARMACY</u>		
GROUP	829,041	804,438
INDIVIDUAL	79,430	82,568

Because of the large difference in the number of insured lives, the Group data is much more credible than the Individual data. The term credible is used here in the actuarial and statistical sense that is an aspect of data validity. Due to the greater number of lives associated with Group plans, we would expect the average for Group to fluctuate less than the average for Individual if this study were repeated year after year. For this reason, we have more confidence in the statistics calculated from the Group data. When examining the cost of a single mandate, credibility is a more significant issue for the Individual data than for the Group data.

II. ELABORATION ON THE TEN MANDATES:

II.1 COMMENTARY ON ADMINISTRATIVE COST:

The premium dollar can be thought of as composed of three pieces. The first is medical cost; the second is administrative cost and the third is profit (or contribution to surplus for carriers that are not for-profit). Sometimes the term retention is used to mean the combined cost of administration and profit. Retention is also referred to as non-medical expense. Embedded in administrative cost is state premium tax, which is 1.75% of premium for fully insured plans.

The cost of mandates is part of the overall cost of health care. As such, they come with an administrative cost. This reflects, in part, the cost of covering more benefits and processing additional claims, but that is not all. When mandates are introduced, they necessitate changes in various operational and technological processes, such as premium billing and claims payments systems. Health insurers need to configure benefit systems to handle the required benefit changes. They may also need to notify members or policy-holders of the changes and perhaps revise marketing and sales material. Even for a mandate whose medical cost is *de minimis*, there may still be an associated one-time administrative (admin) cost involved in implementation. Various functions within the insurance company need to be made aware of the change in minimum coverage, and there is an associated cost. This set-up cost is not unique to commercial insurance and a similar process occurs when plan changes are introduced into self-funded plans, and Medicaid or Medicare.

Separate from the one-time administrative cost is the ongoing administrative cost that occurs in subsequent years. This is the case for all the mandates in this report. Because there are claims payments associated with these mandates, there is administrative cost in addition to medical cost. Because there is additional risk associated with the medical cost of the mandates, there is a risk and profit charge. Most health insurance companies, HMOs, and third party administrators have become adept with the operational aspects of benefit changes, although some systems and companies may accommodate change more easily. The systems modifications associated with a benefit change may vary in complexity as may the ongoing operational cost associated with mandates.

Since all the mandates are ongoing, the administrative costs were estimated using a percentage of the medical cost. For the sake of simplicity, assume administrative cost including profit is 20% of every dollar of premium, and medical cost is 80%. In this case, retention would be 25% of medical ($25\% = 20\% / 80\%$).

Retention as a percent of premium varies from carrier to carrier and is different for group than for individual coverage. Companies may target a specific medical cost ratio ($MCR = \text{Claims} / \text{Premium}$). Since retention is $1 - MCR$, the target MCR can be used to estimate the administrative cost plus profit of the book of business.

In addition to administrative cost, insurers build a profit charge into their premiums in order to cover their cost of capital and assure their financial security. In the case of for-profit insurers, their profits also benefit their shareholders. The term retention is used to describe administrative cost plus profit, which is all non-medical cost.

The vast majority of the incremental expense for the ten mandates is medical cost.

For all ten mandates combined, the cost of administration plus profit is about \$4.10. This is approximately 17% of overall premium and about 20% of the total medical cost. As a range, this total retention is about \$3.25 to \$4.75 PMPM. As a percent of premium, one might expect this percentage to decrease over time as medical cost increases at a rate faster than the ordinary inflation that drives the cost of administration.

At the time the mandates were first introduced, there were likely one-time set up costs for the insurers. It is also possible that the mandates may have reduced some relatively minor administrative cost at the time they were introduced by preventing claim denials and appeals. No such reductions to administrative cost have been included in the range above because it is believed to be inappropriate to do so at this point in time.

On average, the portion of the health insurance premium dollar that is assumed to apply to administrative cost, excluding profit, is approximately as follows:

Admin as Percentage of Total Premium

Individual	16% to 24%
Small Group	10% to 18%
Large Group	6% to 14%

This is reasonably consistent with the percentages provided by the CT DOI based on 2010 CT HMO filings.

This will generally vary by plus or minus a few percent depending on the insurer. As medical costs increase, particularly as more services are rendered and claims are paid, administrative cost also tends to increase. Over time, however, as medical claim cost increases at a faster rate (medical CPI) than administrative cost (CPI), administrative cost as a percentage of the premium dollar should decrease. The effect of this differential increase is mitigated somewhat by the effect of employers buying insurance plans that shift more of the cost to their employees at renewal, but it is not entirely eliminated.

II.1.A SUMMARY OF EXPECTED TOTAL COSTS OF MANDATES IN 2010, INCLUDING ADMINISTRATIVE COST AND PROFIT

For 2010 medical cost, a projected range of \$17 to \$23 PMPM was used, and a point estimate of \$20.15 PMPM, which was rounded to \$20 for a medium-cost scenario. For retention, administrative cost plus profit, a range of \$3.25 to \$4.75 PMPM is assumed, with a point estimate of \$4.10. The expected total cost, including all retention, for these 10 mandates in 2010 on a paid basis is \$24.25 PMPM. ($\$24.25 = \$20.15 + \4.10). For future calculations later in this report, 6.7% of premium is used as the incremental cost of insurance due to the ten mandates of Set Three ($6.7\% = \$24.25 / \360).

It is expected that most of this cost would be part of insurance plans today, regardless of whether the mandates exist or not. This is not to deny that the mandates generated new financial liability for the CT carriers, nor is it suggested that the mandates did not expand essential services provided to those insured. The \$24.25 represents the full cost of the mandates as written, using the medical cost data provided by the carriers. This is not the net new cost only, however. Moreover, **it excludes the full gross cost of two mandate, #7 and**

#9. Mandate # 7 pertains to Physician Assistants and Nurse Practitioners. Mandate #9 pertains to Direct Access to OB/GYNs without a gatekeeper referral.

II.2 BRIEF EXPLANATION OF THE MEDICAL ASPECTS OF THE MANDATES:

This section is intended to provide enough medical information about the mandates that the reader of this report can put them into context. Since all of the mandates are currently required under CT insurance law, it was possible to see some of the effects of the mandates on medical practice and patient health.

MENTAL HEALTH AND SUBSTANCE ABUSE MANDATES:

1. **PSYCHOTROPIC DRUGS AVAILABILITY:** Psychotropic drugs are a broad class used to treat mental disorders and diseases. These chemical substances alter brain function and result in changes in perception, mood, consciousness, and behavior. They act primarily upon the central nervous system. They include anti-psychotics, anti-depressants, stimulants, mood stabilizers and anti-manic agents, anti-anxiety medications, medications for attention deficit disorder, sedatives, and insomnia medications. Certain anti-convulsants and beta-blockers may also be used for the psychotropic purposes of mood stabilization and impulse control. The definition of psychotropic drug is not perfectly clear, and some authorities and carriers may have somewhat differing lists.

This mandate requires prescription drug plans to make available the most effective pharmaceutical treatment with the least probability of adverse side effects regardless of cost. Conversely, the drug plan cannot require the utilization of a drug that is not the most effective. It does not prevent plans from using differential copays (higher for some types of drugs, such as brand or non-preferred, and lower for others, such as generic). It also does not prevent plans from applying utilization review (UR), which could involve prior authorization of high cost drugs or step therapy. The latter is a type of UR whereby a patient cannot be prescribed drug B until the patient has first tried drug A. Implicit in the mandate then is that psychotropic drugs are covered. The mandate does not define “most effective,” and in some cases, this may involve a trial and error process of selection by the physician in consultation with the patient who is prescribed a sequence of different medications until one is found that works well without intolerable side effects. Once the most effective drug is identified, this mandate assures the patient that they will not have to give it up. This is particularly important to people with severe mental disorders who rely on their medication for behavioral stability.

Over the past twenty years, there has been a surge of development of new psychotropics by drug manufacturers. Coupled with direct to consumer advertising, the use of these medications has increased substantially. The newest drugs are often better and safer, but not always the best. Some of the older medications have proven highly reliable for certain conditions. Some newer medications may present minor advantages such as once a day dosing rather than 2 or 3 times. Other newer generations of drugs may represent a significant advance in the effectiveness of the drug and its safety and or reduction in side effects. For some people with conditions such as severe bipolar disorder or schizophrenia, the most effective psychotropic drug

can make the difference between incapacity and a productive life that may include some gainful employment.

2. **MENTAL AND NERVOUS CONDITIONS:** This mandate requires insurers to cover all mental health and substance abuse (MHSA) conditions as defined by the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM). The cost-sharing (copays, coinsurance, deductibles, and limits) for these benefits cannot be greater for MHSA than it is for other medical, surgical, or physical health benefits. This aspect is referred to as "mental health parity." This mandate applies to a variety of provider types including physicians (psychiatrists) and non-physician MHSA providers such as social workers, clinical social workers, psychologists, alcohol and drug abuse counselors, marriage and family therapists, and licensed professional counselors. The services consist primarily of individual therapy although there can be some group therapy as well or group therapy in lieu of individual. More intensive services are provided on an inpatient basis in the psychiatric unit of a hospital or other psychiatric facility. Care may also be provided on an outpatient basis that is of longer duration than a fifty minute therapy session; this is referred to as partial hospitalization. Some people who need MH/SA services may resist treatment because of the perceived stigma associated with these conditions.

The first version of this mandate goes back to 1971. At that time, not all medical plans included mental health and substance abuse treatment. CT's mandate is broad-based and covers all treatments in the DSM; other states may have a mandate that covers only a subset such as severe or biologically-based mental illness. Insurers were historically cautious about covering mental health benefits because the decision to pursue treatment seemed relatively subjective and does not seem as physically compelling as, say, a heart attack or a life-or-death injury that necessitates an immediate visit to a hospital emergency room. More recent advancements in knowledge about the bio-chemistry of the brain and central nervous system have broadened public understanding of mental illness and the importance of treatment.

3. **ACCIDENTAL INGESTION OF CONTROLLED DRUGS:** This mandate encompasses a range of possible causes of accidental ingestion. Controlled drugs are a specific category of pharmaceuticals whose use is governed by the Controlled Substances Act. A controlled (scheduled) drug is one whose use and distribution is tightly controlled because of its abuse potential or risk. Controlled drugs are rated and ranked based on their abuse risk. They are placed in Schedules by the Federal Drug Enforcement Administration (DEA). The drugs with the highest abuse potential are placed in Schedule I; those with the lowest abuse potential are in Schedule V. These schedules are commonly shown as C-I, C-II, C-III, C-IV, and C-V.
 - Schedule I – these drugs have high risk of abuse and no safe or accepted use in the United States today.
 - Schedule II — these drugs have a high abuse risk, but also have safe and accepted medical uses in the United States. These drugs can cause severe psychological or physical dependence. Schedule II drugs include certain narcotics, stimulants, and depressants.
 - Schedule III, IV, or V — these drugs have an abuse risk less than Schedule II and also have safe and accepted medical uses in the United States.

Schedule III, IV, or V drugs include those containing smaller amounts of certain narcotic and non-narcotic drugs, anti-anxiety drugs, tranquilizers, sedatives, stimulants, and non-narcotic analgesics.

This older mandate has been in effect for thirty-five years; its origin came about in a period during which some health insurance plans did not cover mental health and substance abuse benefits and might deny a claim for accidental ingestion. If a young child ingests a quantity of adult medication thinking it is candy, for example, the treatment could involve an emergency visit followed by an inpatient stay—this could easily cost several thousand dollars. The mandate requires only \$500 of non-inpatient treatment, which may have adequately covered the cost in 1975, but would not cover the full cost of a typical emergency room treatment in 2010 for such a cause. Based on inflation alone (CPI), \$500 in 1975 is equivalent to over \$2,000 today. The advances in medical technology in the past thirty five years have also led to diagnostic and treatment approaches that did not exist in 1975—all at additional cost. The mandate also requires coverage of at least 30 inpatient days. By specifying a number of days rather than a dollar limit, the effect of inflation over time has not rendered this internal limit too low.

People affected by this mandate have medical claims with ICD-9 diagnosis codes of any of 965.0, 965.00, 965.01, 965.02, and or 965.09, and these codes may be in primary or secondary position. There is some overlap between this mandate and the mandate on pain management. Some people become addicted to pain medication while being treated for it. This often occurs with opiates, synthetic versions of opium, such as Vicodine or Oxycontin obtained through legitimate means. When their medication is tapered off and discontinued, some pain patients have turned to illegal drugs such as heroin. According to the *Hartford Courant*, August 30, 2010, a Yale study in 2009 concluded that over 2,200 CT residents have died from unintentional opiate overdose in the past 11 years. 61% of the people died from heroin overdose; the rest involved pharmaceuticals. It is the leading cause of accidental death for the state's adult population and is a public health issue.

4. **HEALTH SERVICES FOR PEOPLE WITH AN ELEVATED LEVEL OF ALCOHOL IN BLOOD:** This mandate covers medical services rendered to treat any injury sustained by any person with elevated blood alcohol level (.08% or more) or under the influence of intoxicating liquor or any drug or both. Some insurers may have denied claims for such injuries based on various grounds, such as exclusion according to policy language. This mandate prevents insurers from denying coverage for these services under any circumstance. These injuries do not occur frequently, but when they do, they can range from very low cost (a few stitches and a bandage) to highly expensive (an emergency room visit followed by an inpatient stay in a trauma center or intensive care unit). They usually involve a trip to the ER. Medical claims for those affected by this mandate will show an ICD-9 diagnosis code of 303 in either primary or secondary position in combination with any injury code in the 800-959 range.

This mandate is related to the next mandate covering medical complications of alcohol. According to one national scientific study, alcohol-related injuries accounted for about one-tenth of all accidental injuries. In 2001, there were roughly 314,000 such

accidents treated in the emergency room in the US that were recorded—about one per every thousand people. (This is roughly the incidence rate observed in the carrier data.) Most of these involved the head and neck, followed by the limbs. They often involve falling or transport. Alcohol is a vasodilator which may impede resuscitation of those with head injuries—this complicates the necessary medical care. The national report concluded that alcohol can have a significant epidemiological effect, but one that is hard to predict for the individual patient. More than one-third of fatal auto accidents involve alcohol, as do about 80% of completed suicides.

5. **MEDICAL COMPLICATIONS OF ALCOHOL:** It is widely understood that habitual and heavy use of alcohol over time leads to the deterioration of a person's physical condition and the breakdown of internal systems. Cirrhosis of the liver is an obvious example. In the case of some other ailments, it may be less clear whether and to what extent the true cause is long-term and excessive use of alcohol. Pneumonia is one such medical complication cited in the mandate itself; it may be more difficult to confirm that alcohol is the primary cause of pneumonia. There are a number of specific diseases caused by alcohol abuse. These include gastritis, gastric bleeding, other types of liver damage, and alcohol induced amnesia disorders. They also include delirium tremens which is caused by alcohol withdrawal. In the case of alcohol dependence, withdrawal from alcohol must be conducted under the supervision of a physician. Effectively, this mandate therefore also covers detoxification. While this mandate is directed at medical complications, by covering detoxification, it also covers a treatment to break alcohol dependence, which is the root cause of the medical complications. Recent science has reported that a person's genetics may be correlated with their predisposition toward alcoholism.

The medical complications can be severe in some individuals, such as those with Wernicke Encephalopathy, Korsikov Dementia, and Alcoholic Cerebellar Degeneration. Inpatient hospital stays are the most expensive type of claims. Because of the possibility of seizures and delirium tremens, alcohol withdrawal can be fatal. A detoxification program may take about three days to one week. It may be protracted by delirium tremens to two weeks in rare instances. The bio-chemical process of detoxification that an individual goes through on withdrawal, however, takes about six weeks, with most serious side effects subsiding by the end of week three. Rehabilitation is a more extensive and lengthy program than detoxification, and it has a higher success rate for long-term abstinence.

About 2% of the general adult population is reported to have a problem with alcohol dependence. Heavy drinking is associated with alcohol dependence and often leads to the same. It is defined as consuming more than 14 drinks per week, or more than 4 per day sometimes.

PROVIDER MANDATES:

6. **COVERAGE FOR OCCUPATIONAL THERAPY (OT):** This is an older mandate that has been around for 28 years. It began at a time when not all medical insurance policies covered the services of occupational, speech, or physical therapists. It requires medical insurers to cover OT provided by a licensed occupational therapist in accordance with a plan of care established in writing by a licensed physician. The physician must certify that the prescribed care and treatment are unavailable from

other provider types and are provided in private practice or a licensed health care facility. The physician must also review and certify the treatment plan at least every two months. The World Federation of Occupational Therapists defines Occupational Therapy as follows: "Occupational therapy is as a profession concerned with promoting health and well being through occupation. The primary goal of occupational therapy is to enable people to participate in the activities of everyday life. Occupational therapists achieve this outcome by enabling people to do things that will enhance their ability to participate or by modifying the environment to better support participation." Occupational therapists analyze the various barriers to occupation—physical, environmental, social, and mental. Occupational therapy draws from the fields of medicine and other disciplines in developing its knowledge base. OTs work with people who have a mental, physical, developmental, or emotional impairment. Occupational therapists use treatments to develop, recover, or maintain the activities of daily living and work skills of their patients. The therapist helps patients to improve their basic motor functions and reasoning abilities and compensate for permanent loss of function so they can live independent, productive, and satisfying lives.

Patients with permanent impairments, such as spinal cord injuries, cerebral palsy, or muscular dystrophy, often need special instruction to master certain daily tasks. For these individuals, therapists demonstrate the use of adaptive equipment, including wheelchairs, orthotics, eating aids, and dressing aids. They also design or build special equipment needed at home or at work, including computer-aided adaptive equipment. They teach clients how to use the equipment to improve communication and control various situations in their environment. Some occupational therapists treat individuals whose ability to function in a work environment has been impaired. These practitioners might arrange employment, evaluate the work space, plan work activities, and assess the client's progress. Therapists also may collaborate with the client and the employer to modify the work environment so that the client can succeed at work. Some OTs may specialize in a particular age group, such as children, or the elderly.

7. **MANDATORY COVERAGE FOR PHYSICIAN ASSISTANTS AND CERTAIN NURSES:** This older mandate has been in force for 26 years. It defines three categories of nurses—certified nurse practitioner, certified psychiatric-mental health clinical nurse specialist, and certified nurse-midwife; a nurse practitioner may be called an advanced practice registered nurse (APRN). The mandate also defines physician assistant (PA). Insurance policies shall provide coverage for the services of these providers as long as they are within their area of competence and currently reimbursed when rendered by other licensed providers. The mandate does not permit nurse practitioners or physician assistants to provide services beyond their scope of practice. These types of providers are often referred to as licensed independent providers—they perform services beyond what a nurse can but not all the same services that a doctor does.

Physician assistants (PA) are licensed to prescribe drugs independently, but they perform medical services in conjunction with a physician. Some nurse practitioners also have prescriptive authority, but they serve patients independent of a physician. PAs and APRNs are thus two different care models. Both PAs and nurse practitioners may perform many of the evaluation and management services that a physician does, thereby increasing the supply of qualified providers authorized to provide certain essential medical services. These providers may not be licensed to perform the kind of

interventional services that a doctor may, but they increase the available pool of providers available to see patients that need immediate or ongoing attention.

As the supply of Primary Care Physicians (PCPs) has declined in relation to the growing population, the services of PAs and APRNs have become increasingly important to population health management. Without them, the shortage of PCPs would be worse than it is.

8. **MANDATORY COVERAGE FOR SERVICES PROVIDED BY VETERAN'S HOME:** This mandate became law after the Veteran's Home changed its name in order to assure that claims payments would continue to be made by insurers to that facility in Rocky Hill, CT.
5. **DIRECT ACCESS TO OB-GYNs:** Some women choose to have their obstetrician/gynecologist serve as their primary care physician. Others choose to have a different physician for their PCP. Either way, under this mandate in CT, no woman needs to obtain a referral from her gatekeeper physician in order to see her OB/GYN. In order to understand this mandate, it is necessary to understand the referral approach that became part of managed care. It was developed in the 1980's as a way to manage care by requiring PCPs to pre-authorize their patients' visits to specialists. Some specialty care may be unnecessary, and the gatekeeper concept was intended to help patients find the appropriate provider for a particular condition. In addition to specialist physicians, specialty care includes the services of non-physician professionals such as PT/OT/ST, psychologists, chiropractors, and the like. Without such direction by a PCP, a patient might see more than one type of specialist in hopes of remedying their medical problem. This mandate does not prohibit the gatekeeper approach in general, but it does assert that women do not need a referral in order to see their OB/GYN. As part of the managed care backlash movement, insurers began to offer plans that might cost a bit more in premium but do not require referrals. These were called open access plans or non-gatekeeper plans. Those that do offer them may offer both gatekeeper and non-gatekeeper plans. Some insurers have eliminated all gatekeeper plans and do not offer them today.
10. **MANDATORY COVERAGE OF CHIROPRACTORS' SERVICES:** The chiropractic profession is a health field that emphasizes diagnosis, treatment and prevention of mechanical disorders of the musculoskeletal system and especially the spine. The profession believes these disorders can affect general health because the nervous system branches out from the spinal chord to all parts of the body. Chiropractic medicine is generally considered a branch of alternative medicine. It has been somewhat controversial and at odds with mainstream medicine as practiced by medical doctors, especially orthopedic physicians. It often involves manipulation of the spine and additional modalities of treatment such as stimulation and massage of the muscles. Chiropractors cannot treat all the same medical problems that medical doctors (MDs) and Doctors of Osteopathy (DOs) are able to treat. Chiropractors are capable of resolving back and neck pain problems for many, and there is evidence that their approach is effective. They cannot treat most diseases, however, or even all musculoskeletal problems. Orthopedic physicians treat some of the same musculoskeletal conditions as chiropractors; so do physical therapists. There are about 53,000 chiropractors in the US. A minimum of two years of college education are required before acceptance into a chiropractic college. The program of education

in a chiropractic college involves four years of study including a clinical internship of about 1,000 hours in the fourth year. The degree granted is a Doctor of Chiropractics (DC). Before practicing, chiropractors must pass a state licensing exam.

II.3 FURTHER EXPLANATION OF THE MEDICAL COST OF THE MANDATES:

Note: The term PMPM (per member per month) and per insured person per month have been used to mean the same thing in the following projections. The latter term is meant to convey that the cost of the mandated benefit, which is intended for a small and vulnerable subgroup, has been spread to the entire insured population.

In this report, the PMPM has been used as the main measure to represent mandate cost. In this report, the effect the mandate has on health insurance premiums is measured. The best way to assess this is to evaluate the cost of the mandate on a PMPM basis. Each mandate has also been reviewed on a percent of total premium basis.

The primary data used for this project was supplied by the 6 carriers domiciled in CT. A data survey spreadsheet was developed for each mandate to collect carrier-specific medical cost data separately for 2007 and 2008 dates of services, as well as separately for individual and group policies. Carriers were provided with the spreadsheets and asked to complete them. The results were collected, interpreted, and analyzed. The carrier data was sent to a point person on the workgroup who de-identified the carriers and then passed the carriers' data along to the workgroup.

To supplement the carrier data, IC produced CT and national data when necessary. For example, the carriers were asked to provide the allowed and paid PMPMs for each mandate by year by group vs. individual. This allowed us to infer the average member cost-sharing (Cost-sharing = Allowed – Paid), but it did not allow the workgroup to see the distribution of cost-sharing by member for each and every member. For the latter, IC data and outside literature were used. This gave us a better understanding of the financial burden of cost-sharing for some of the mandates, in addition to knowing the average PMPM cost-sharing. Also, a model was used that examined the effect of benefit richness on member cost-share as well as the effect of member income on member cost-share.

For some of the mandates, it was difficult for the carriers to produce an estimate of the mandate cost with a high degree of accuracy. One of the issues we encountered in tracking claims by diagnoses and procedure codes is that not every diagnosis is 100% certain. Other ambiguities made it difficult to determine the cost of some mandates.

In this report, the terms gross cost and net new cost are used occasionally. Gross cost is the total cost involved in the mandate. Net new cost is the incremental cost of the mandate in comparison with the absence of the mandate. Distinguishing between the two is an extremely difficult task because it is unclear what insurers would cover in the absence of the mandate. It is difficult to distinguish the gross cost of the mandates from the net new cost. Outside of the two provider mandates that were excluded, only two of the mandates are of *de minimis* cost—these are the MH/SA mandates for accidental ingestion of a controlled substance and the prohibition against denial of services to those injured while under the influence. Other mandates may affect a much larger percentage of individuals in the insured pool.

In the section that follows, each mandate is looked at and the comments made in the executive summary are expanded upon.

1. Psychotropic Drugs Availability: All six carriers provided the full gross cost of all psychotropic drugs. None of them attempted to distinguish the incremental cost associated with the requirement to make the most effective psychotropic drug available.

There were well over 1,000 NDC codes that appeared in the carrier data for these drugs. Each dosage of a unique drug has a unique NDC. Upon closer inspection of the carrier data, several observations were made. First, the data from a carrier with significant market share was reviewed. The data was ranked by allowed cost. The top two drugs on the list were an SSRI called Lexapro in two strengths—10 mg followed by 20 mg. They accounted for about 14% of the overall allowed cost of psychotropic drugs. The next two were also SSRIs or SNRIs, Cymbalta and Effexor, in 60 mg and 75 mg dosages respectively. The top ten codes represented about 1/3 of the carrier's cost on an allowed and a paid basis. Almost all were drugs for anxiety and depression, except number five was Provigil at 150 mg, which is used to maintain wakefulness and alertness. Upon inspecting the data from another large carrier, a similar composition for their top ten drugs was observed, although Provigil was replaced by the antipsychotic Seroquel in 200 mg. For the second carrier, the top ten drugs represented over half of their allowed cost for psychotropic drugs. The second carrier had less than one-fourth as many different drugs and dosage levels listed as the first carrier.

SSRIs are selective serotonin reuptake inhibitors and SNRIs are serotonin/norepinephrine reuptake inhibitors. These relatively newer drugs are used to treat anxiety and depression and a number of related conditions.

For the first carrier, the average cost-sharing for all psychotropics was about 24%, with a slightly higher percentage for Lexapro and some other brand drugs. For the second carrier, the average cost-sharing was 22%, but only about 17% for the top ten. For all carriers, the cost sharing was about 23%. For the first carrier, the average script was about \$62 in paid cost, although some were five, ten, or even fifteen times greater in cost than that. For the second, it was \$108. The unit cost data was generally less reliable than the PMPM cost data. It is unclear whether or not the script data was net to pharmacy rebates, which would reduce the paid cost. Based on the second carrier's data, it appears that as many as 20% of the people insured filled at least one script for a psychotropic drug during the calendar year, and their average use of psychotropics was 3.6 scripts per year.

There was some variation in the list of drugs included from carrier to carrier. The data for one of the carriers was missing some psychotropic drug categories so it was adjusted; this increased the overall average by about 10%. The full gross cost for this mandate is about \$7.50 PMPM on a paid basis for 2010. Again, it does not try to break-out the cost attributable to the mandated requirement to make the most effective drug available. The \$7.50 represents the full paid cost of all psychotropic drugs. It does not include member cost-sharing, which is about another \$2.25 PMPM. The use of higher copays for more expensive brand drugs is an approach carriers use to link the copay level with the cost of the script. The cost-sharing for this pharmacy mandate is somewhat higher than for medical mandates. This reflects the fact that cost-sharing in general is higher for pharmacy than medical benefits.

The carrier data cost was compared with that available from external sources, and they are all reasonably consistent. Over the past twenty five years, the trend in the overall cost of

psychotropic drugs has been greater than that of other medical and pharmacy spending. There are two reasons for the increase—first, the utilization rate for psychotropics has increased, and second, the unit cost of new brand drugs is higher than older generic drugs.

It would be extremely difficult if not impossible to determine a net new cost for this mandate associated with the “most effective” clause of the mandate. For that reason, the full gross cost of psychotropic drugs is presented. Approaches to quantifying the net new cost were considered, but none were reasonable enough to warrant presentation.

2. Mental & Nervous—Mental Health and Substance Abuse: This proved to be the most costly of the 10 mandates in Set Three. One of the carriers had relatively high cost for this mandate because they used all medical claims associated with diagnosis codes for mental illnesses. This skewed the average, so that carrier’s data was adjusted to be more in line with the others. The paid cost for this mandate is about \$8.50 PMPM for 2010. The member cost sharing is about \$2.10 PMPM, which is somewhat lower than the prior mandate (both on a dollars and percent basis) even though the allowed cost of this second mandate is greater. Roughly one fourth of the paid cost was for inpatient care. The vast majority was for psychotherapy by a psychiatrist or non-physician professional or for psychopharmaceutical management; these services were billed using procedure codes. Some of the services were billed as HCPCS (HealthCare Common Procedure Coding System), such as partial hospitalization.

The paid cost of \$8.50 PMPM would likely be higher if insurers did not use a) some forms of medical management, and b) provider contracting to help control the unit cost of this category of service. By contracting with providers, carriers reduce their payment per service. By using medical management, carriers strive to make more efficient use of care to assure that it is delivered in the right setting, by the right provider type, by qualified and effective providers, at an appropriate level of quality; the objective is to provide access without encouraging unnecessary utilization. The work associated with establishing provider networks for mental health and substance abuse care comes with administrative cost; so does the medical management.

The unit cost of the office visits is much lower than that of the inpatient stays. In 2008, on average, fifty minute individual therapy sessions cost approximately \$100 for a psychiatrist (CPT 90801) and roughly \$60 for a non-physician provider (CPT 90806); this is on a paid basis. The allowed cost was about \$120 and \$75, which includes member copays or other forms of cost-sharing. Many of the inpatient stays ranged from \$2,000 to \$5,000 in paid cost. For all services covered by this mandate, the cost sharing was about 20% of the allowed cost.

The carriers’ average cost was compared with other external sources, including the mental health and substance abuse benefits data that Ingenix Consulting uses in its overall health care pricing models. This was consistent with the carrier data. Some of the external sources are greater, but most are roughly in the same range.

For this mandate, the net new cost is effectively the full gross cost of all the mental health and substance abuse services, diagnosis, and treatment required by the mandate. Under the recently passed federal mental health parity regulations, even self-funded plans must provide MHSA services at a cost-sharing level that is no higher than for other services. These self-funded plans, however, may choose to exclude MHSA from their plan of benefits.

3. Accidental Ingestion of Controlled Drug: Requires insurers to cover the expenses of emergency medical care arising from accidental ingestion or consumption of a controlled drug. Inpatient coverage shall be covered for at least 30 days in a calendar year. Inpatient care proved to be the most costly component for this mandate. Up to at least \$500 of non-inpatient care shall also be covered. It is unclear whether carriers pay in excess of \$500 for non-inpatient claims involving accidental ingestion, but it appears they do pay over \$500 because evidence of claims cut off at the \$500 level in the data was not seen. The cost of this mandate is *de minimis*. Some carriers had no data because they did not pay any claims arising from this cause. According to IMS Health, a company that tracks drug sales in the US, Vicodin was the most frequently prescribed drug in the US in 2009 with sales of 128 million scripts. Addictions that arise from use of pain medication are expected to exacerbate this problem. This is a public health issue, and the pain management mandate in set four helps to alleviate some of this problem.

4. Health Services for People with Elevated Level of Alcohol in Blood: Prevents insurers from denying coverage for services rendered to treat any injury sustained by any person with elevated blood alcohol level (.08% or more) or under the influence of intoxicating liquor or any drug or both. Although the overall paid cost is *de minimis*, it was concluded that there were probably more than 100 people in the carrier data with these claims. The data representing the number of people with claims was not as reliable as the PMPM data. Some of the claims involved an inpatient stay and were higher in cost; most claims did not.

5. Coverage for Treatment of Medical Complications of Alcoholism (Group only): This mandate covers a broad range of diseases resulting from alcohol abuse. On a paid basis, the highest cost service involved an inpatient stay and was less than \$10,000. Most of the costs were much lower for an episode of care. The carrier data involved more PMPM cost variation than expected. Some carriers reported their cost as *de minimis*. One carrier had high cost with particularly high cost for pneumonitis. All except one were less than \$1 PMPM for both 2007 and 2008. The weighted average paid cost for 2008 was \$0.34 PMPM. Although no catastrophically expensive claims were observed in the carrier data, the cost for this mandate could be easily skewed by a high cost claim for a liver transplant.

Ingenix Consulting data was gathered for this mandate, and a fully insured CT paid cost of \$0.10 PMPM for 2008 was identified. The approach was to first identify all claims for individuals with a diagnosis code of 291 or 303, which refer to alcohol related mental disorders and alcohol dependence syndrome respectively. A list of additional codes was then used to narrow the claims down to alcohol related medical conditions only. 60% of these claims were for inpatient care. Although the alcohol-related complications claims were only \$0.10, when the PMPM cost of all care for those people with diagnosis codes of 291 and 303 was calculated, it was \$2.04 PMPM. Only 0.032% of the fully insured CT people in the data had either or both of these diagnosis codes. Those people with these two diagnoses have roughly twice the annual medical cost of others. Those with complications spend approximately as much for conditions involving their medical complications of alcohol as they do for other medical care. In the Ingenix data for 2007 and 2008 combined, only about 2 out of every 10,000 people insured had claims for these medical complications in the IC data. It is possible that there is under-reporting of this diagnosis itself, because outpatient medical claims are typically paid on the basis of services performed rather than diagnosis assigned.

PROVIDER MANDATES

6. Coverage for Occupational Therapy (OT): The carrier data was variable. For the purposes of calculating a weighted average, the data was consistent enough to produce a reasonable result; however, one carrier's data had to be removed entirely before calculating the weighted average. That carrier had included all types of therapy performed by all types of therapists in their data and thereby significantly overstated their cost of OT only. For 2008, for the five remaining carriers, the average results were \$1.20 PMPM on an allowed basis and \$0.78 PMPM paid. Cost-sharing was thus 35% of the allowed. Most of the services performed by OTs are relatively low cost on a per service basis or per hour.

Ingenix Consulting data for CT fully insured members only was also extracted. A type of provider code was used in order to isolate and extract OT claims. This approach revealed a \$0.29 PMPM on an allowed basis for 2008 and \$0.21 on a paid basis. This is roughly one-fourth of the carrier average. A reconciliation of the two was not conducted, but it is possible that this approach (using the type of provider code with IC data) understates the actual cost of OT care. Some OTs practicing with a physician may bill OT services under the physician. It is also possible that some of the carriers used an approach to gathering claims that overstated the true OT cost. One carrier provided a PMPM cost only without a breakdown by code.

For information gathering purposes, some health insurers break down their overall spending by type of service, but they generally include physical, occupational, and speech therapy all in the same category. Ingenix Consulting's pricing model has a category for physical medicine that includes PT and OT services. For 2010, the national average is \$1.69 PMPM in network and \$3.32 out of network; these are on an allowed basis. The higher out of network cost reflects both higher utilization and unit cost.

OT is directly involved with improving the function and productivity of individuals. Those productivity gains can be interpreted as savings. No analysis was conducted to assess the economic value of these productivity gains, but since they involve a person's future capacity to work, they can be substantial.

7. Mandatory Coverage for Physician Assistants and Certain Nurses: For 2008, this mandate showed a weighted average allowed cost of \$2.40 PMPM and \$2.03 on a paid basis. Cost-sharing was about 15%. Most of the services performed by PAs and APRNs are also relatively low cost, such as office visits and various procedures performed during office visits. It is the conclusion that the net cost of this mandate is effectively *de minimis*. This cost is not incremental to the system, but rather, it is cost that would otherwise show up in primary and specialty care, and perhaps cost more there. Physician Assistants and Nurse Practitioners improve the overall efficiency of the health care system, enhance availability of primary care, and thereby improve access. They may even enable access for some with a minor injury or illness who would not otherwise obtain care. But these providers also enable access to primary care for those whose more serious conditions benefit from early intervention and thereby avoid downstream complications and expense. For this reason, the full gross cost of this mandate was excluded from the total.

8. Mandatory Coverage for Services Provided by the Veteran's Home: Most of the insurers had some claims for this mandate, although one carrier did not have any claims at this facility. For 2008, the average allowed amount was \$0.42 PMPM and \$0.30 on a paid basis.

9. Permit Direct Access to OB/GYNs: This type of provider covers services ranging from routine and preventive office visits to deliveries. Of those carriers who submitted claims, over half the claims cost was for preventive office visits. Some was delivery and post-partum care. There was even a small cost for mammograms in some of this carrier data. Thus, there is overlap (cost duplication) between this mandate and two mandates from Set Two—the maternity stay mandate and the newborns mandate. If a referral were required for these services performed by the OB/GYN under direct access, the cost of care would be no less because none of this obstetric and gynecological care is truly avoidable. For this reason, the net new cost of this mandate is *de minimis*. Many of the claims presented for this mandate were included already for the maternity mandate. For this reason and because the net new cost is effectively *de minimis*, the decision was made not to include the full gross cost of this mandate in the total.

10. Mandatory Coverage for Chiropractic Services: Chiropractic services are covered by Medicare only to a more limited extent than in commercial health plans for employees and their dependents. The carriers were instructed to gather chiropractor claims using a type of provider code.

Most of the chiropractic services were low cost. The median cost service was about \$34. More than half the total cost was for chiropractic manipulative treatment, CPT codes 98490 to 98493. There were also claims with procedure codes that fall under supervised modalities of physical medicine and rehabilitation—97010 to 97014.

One of the carriers provided capitated data which was lower in cost than the average; it included only CMT claims. Three other carriers provided data that included codes for chiropractic manipulative therapy codes 98940 to 98943, but no other codes. This may have understated their cost. For those carriers that submitted both claim ranges, their CMT claims were roughly 50% to 90% of their total chiropractor claims. The 2008 weighted average allowed cost was \$3.13 PMPM and \$2.30 PMPM on a paid basis for a cost share of 27%. As a share of total medical cost, chiropractic services are about three-fourths of one percent.

Other sources, including Ingenix Consulting’s pricing data, were used. For 2010, a national average chiropractic cost of \$2.40 in network on an allowed basis, and \$4.58 PMPM out of network is shown in the IC pricing data. There is definitely a net new cost for this mandate that is less than the full gross cost shown in the carrier data, but it is not *de minimis*. For lack of a better approach, the net new cost is presented as one-fourth of the gross cost.

PERCENTAGE CALCULATIONS

Denominator Used in Medical Cost Percentage Calculations:

From the CT DOI, these arithmetic (not weighted) averages were obtained for filed 2010 insured HMO premiums (includes administrative cost and profit) for medical and RX combined:

Individual	\$245.22
SG	\$316.06
LG	\$349.92

Note: This does not include any PPO or other non-HMO health insurance policies. To compute the premium, the following average retention factors (administrative cost plus profit) are assumed:

Individual	25%
SG	18%
LG	14%.

Using these administrative cost percentages multiplied by the premiums provided by the CT DOI, yields the following average PMPM medical costs rounded to the nearest dollar:

Individual	\$184
SG	\$259
LG	\$301.

The HMO premiums are expected to be less than the non-HMO plans, but non-HMO rates are not filed in CT, so it was assumed that on average they are 10% more costly than HMO.

In view of these numbers, a decision was made to use **\$300** for the 2010 group medical cost in the denominator of our percentage calculations, which is within the range of the various filed and calculated 2010 medical cost amounts above. Note that this \$300 is the medical cost and does not include administrative cost and profit. The fully loaded premium we used is **\$360**. This assumes a medical loss ratio of 83.3%. ($\$300 / \$360 = 83.3\%$).

II.4 DIFFERENTIAL EFFECT OF THE MANDATES ON INDIVIDUAL vs. GROUP INSURANCE:

The individual market is characterized by a larger percentage of leaner benefit plans that involve greater member cost-sharing, often in the form of a high deductible. Based on the carrier data, the average cost sharing for individual plans was determined to be 25%; (it is 13% for group plans). Individual insurance is not inexpensive, however, and the policy-holder must bear the entire premium cost alone. Individual policies are subject to more adverse selection than group policies. If an individual can pass initial underwriting, they can purchase individual health insurance when they think they will need it, and drop it when the economic value diminishes, or retain it when they know they will need it. The average cost of an individual health policy in CT is less than a group policy, and it typically provides less benefit, on average, than a group policy. For example, the cost-sharing on an individual plan may be higher—this means higher deductibles, copays, and more coinsurance. This is an important consideration when assessing the financial burden for those covered by individual plans, especially less healthy people. These people pay for their entire premium, as well as all the cost-sharing associated with their plan. Those with plans that have an out of pocket maximum have some assurance that their personal financial burden will not exceed that maximum and lead to personal bankruptcy.

The medical cost of group plans in the CT data was significantly higher than individual plans both on an allowed and especially on a paid basis. There was also a significant difference between the Allowed Cost and Paid Cost for Group vs Individual. For group plans, paid cost was about 87% of allowed based on the CT data across all six carriers. For individual plans, paid cost was 75% of allowed. (This restates the cost sharing statistics of 13% and 25% presented above.) Thus, as a percentage of allowed cost, the member cost-sharing in individual plans is about twice as much as it is in group plans.

As explained in the prior section, \$300 PMPM was used as the assumed average medical cost for the CT insured population in 2010, since the exact amount is unavailable. Each carrier provided medical costs for 2007 and 2008. A weighted average paid medical cost for **group plans** was developed as follows:

	<u>2007</u>	<u>2008</u>
MEDICAL	\$263.03	\$284.76
<u>PHARMACY</u>	<u>\$46.83</u>	<u>\$49.10</u>
TOTAL	\$309.86	\$333.86

The same was also provided for **individual plans**:

	<u>2007</u>	<u>2008</u>
MEDICAL	\$162.92	\$177.82
<u>PHARMACY</u>	<u>\$19.52</u>	<u>\$20.14</u>
TOTAL	\$182.44	\$197.96

In both the group and individual data, a significant number of members have medical coverage but not pharmacy coverage.

Bearing in mind the relativities of the filed insurance premiums, it is assumed this medical cost breaks down roughly as follows:

	PREMIUM	MEDICAL COST
Individual Policies	\$280	\$210
Small Group	\$340	\$275
Large Group	\$375	\$320

There were more than twelve times as many group members as individual in the 2007 carrier data submitted. There were about 1.2 million group members but only about 92,000 individual members in the 2007 medical. Of these members, only 829,000 and 79,000 also had RX coverage.

The total 2010 projected paid cost for all 10 mandates was \$20.15 PMPM for group coverage, which is 6.7% of total medical cost. (The \$20.15 is medical cost only and excludes administrative cost and profit.) If mandate #5, medical complications of alcohol, is excluded since it pertains to group only and not individual, the paid cost for group is \$19.88 PMPM. This is a more appropriate number to use for group for the sake of fair comparison of individual and group. **For individual health insurance, for the nine applicable mandates, the 2010 projected paid cost was \$11.49 PMPM, which represents 5.5% of the total medical cost** ($5.5\% = \$11.49 / \210). It is also 58% of the group cost ($58\% = \$11.49 / \19.88). As a percent of total medical cost, individual (5.5%) is less than group (6.7%) for this third set of mandates. For both group and individual, most of the cost was in the first two mandates—psychotropic drugs and mental health/substance abuse. For the nine mandates, these two items represent the same percentage of the total paid mandate cost, 83%, for individual plans and group alike. The average cost-sharing for these nine mandates was 66% of allowed for individual plans, which is somewhat less than the 75% average cost-sharing for all medical benefits for individual. This reflects the higher percentage of cost-sharing on pharmacy than medical that shows up in the psychotropic drugs mandate. The individual plans also have a higher level of cost-sharing for chiropractic services than the group plans.

Some of the 45 CT mandates may be less desirable to the purchaser of individual coverage than group coverage by virtue of the fact that individual policyholders pay the full cost of premium and may approach the purchase knowing they have a specific medical need. For example, if a person buys individual insurance because he was uninsured and has recently learned from his physician that he is a candidate for a heart attack, that individual, knowing he has no need for infertility coverage, might prefer a basic policy that does not cover infertility.

One last point to note regarding individual coverage is that conversion policies fall into this category. These policies help provide access to insurance for those who lose group coverage. Conversion policies tend to be purchased by those that need continued coverage, and they can experience significant adverse selection as the small pool acquires an increasing percentage of higher risk individuals with known health conditions. This would be particularly true for a mandate such as maternity in Set Two, but less so for each of the Set Three mandates. Mental health/substance abuse and psychotropic drugs are the two mandates in Set Three that are most applicable, but they are less prone to adverse selection than maternity or cancer, for example. Conversion policies are sold to those singles, couples, and families who wish to maintain individual coverage after they lose group status. Unlike the vast majority of group policy holders, conversion policy holders pay the full cost of their coverage. If someone knows they are going to have a child or if they anticipate other large medical costs, they are more likely to purchase conversion coverage than someone who is healthy and expects no upcoming medical expenses.

II.5 DIFFERENTIAL EFFECT ON SMALL GROUP vs. LARGE GROUP:

The mandates are expected to have roughly the same effect on the allowed cost of small group plans as large. Small groups tend to purchase lower cost, leaner plans than large groups. This means that those who are insured through small group employers tend to have plans that involve more member cost-sharing than large group employer plans. Employees of small business also tend to pay a larger share of the premium. In this respect, the cost burden will be somewhat greater for small group than large.

Like individual coverage, there is typically more adverse selection of benefits among small groups than large groups. The ten mandates in Set Three do not invite as much adverse selection as did the maternity and newborn mandates in Set Two, since the latter two involve a known upcoming medical event of large cost.

The small group market is more sensitive to the cost of health insurance. A 20% increase in premium cost, all else equal, is expected to cause more small groups than large ones to drop health insurance coverage. In general, mandates push up the cost of health insurance for small and large groups alike, but a somewhat higher percentage of small groups may drop coverage as a result. This is driven in part by the fact that there is generally more variation in the annual premium increases of small groups relative to large. The small groups with the largest increases tend to lapse coverage first.

For the smallest employer groups, the owner who purchases group health insurance on behalf of the group may know more about the health conditions of the employees and their dependents. This may cause the employer to purchase a richer plan or to renew coverage when they might have otherwise terminated it.

One consequence of additional mandates is that some groups, especially very large groups, may switch to a self-funded approach, which enables them to avoid complying with the mandates if they wish. This will be discussed further in the next section.

II.6 EFFECT OF MANDATES ON THE AVAILABILITY AND COST OF HEALTH INSURANCE:

Traditionally, the function of insurance, health insurance included, has been to provide financial security to those who are faced with economic uncertainty due to premature death, disease, accident, disability, loss of property, and the like. Insureds believe there is greater utility in paying a certain monthly premium than potentially sustaining the uncertain loss that could occur. Because of group coverage and the fact that most insureds are insulated from most of the cost of health insurance, which is borne by the employer, health insurance is different than life insurance. It is increasingly perceived as fundamental to the health, commonwealth, and productivity of the nation. It is reported in the literature that those without access to health insurance, however, have difficulty maintaining the same level of health as the insured. Although the uninsured rate is lower in CT than the national average, it is estimated that there are approximately 340,000 people in CT, under the age of 65, who are currently without health insurance. This number has been increasing over the past ten years as the cost of coverage (premium) has increased at a rate about double that of inflation. A significant number of the uninsured are undocumented immigrants. A recently released national report estimates that there were about 110,000 undocumented immigrants in CT in 2007, which represented a leveling off of an increasing rate during the prior decade.

Although the data show that the cost of the mandates is significant. It would be false to conclude that the mandates in isolation are the primary driver behind the growth in the cost of health insurance.

In this section of our report, the increase in total insurance premium cost caused by the ten mandates is discussed in the context of the expected consumer decision whether or not to renew health insurance coverage. Some actuarial evaluations of new and revised mandates now consider not only the effect of the mandate on health insurance premiums, but also the number or percentage of policy holders that will choose not to renew coverage due to the premium cost increase. This may be an issue at the time a mandate is first introduced or revised, but less so once the mandate cost has been embedded in the cost of coverage for several years.

In the last section, the difference in lapse rate between small and large groups that results from the same-sized annual premium increase was mentioned. The likelihood of disenrollment due to cost increase is not easily calculated; it depends on the economic environment and other factors. Disenrollment tends to occur more often as a result of an abnormally large increase to a specific policy-holder. As the cost of health insurance premiums rises, fewer residents of CT can afford coverage.

If normal medical trend is about 8%, and if an annual premium increase can be reduced to around 4% with some moderate increase in copays, coinsurance, and or deductible (benefit "buy-downs"), such a small cost increase is less likely to cause disenrollment. Groups may choose to "buy-down" their benefit plan somewhat further rather than lapse coverage

altogether. If lapsation occurs as a result of a mandate, it would tend to occur in the year it is introduced because that is the time the price increase would be noticed.

This is a consideration that should be noted. As employer groups reduce the level of coverage by shifting more cost to the insureds year after year, two things happen. One is that members pay a larger portion of the total plan cost, and the other is that members may forego some medically important services to avoid the higher copays, deductibles, or coinsurance. Mandates generally increase the cost of insurance and, in conjunction with medical trend, individuals and groups will respond at time of renewal by purchasing a lower level of coverage with increased member cost-sharing. The end-game of all these buy-downs is a plan in which considerably more expense is shifted to the insured. Unless the plan makes high-value services available for reduced or no copays, under-insureds will tend to forego some necessary services, such as immunizations, diabetic medications and supplies, and other preventive services because the member cost-sharing acts as a barrier to access. Many carriers have shifted to plans that cover certain preventive services (or other high value services) at low or no cost to the member. This is intended to discourage underutilization of important care. The reforms to health care under the Patient Protection and Affordable Care Act of 2010 will also require insurers to offer plans that cover more preventive services without any cost sharing required from the member. Although this report does not cover the effect of the PPACA on the CT health insurance system, we note this here and also point out that this will have the most positive effect on those high deductible plans that do not currently provide preventive services with zero cost-sharing.

On an ongoing basis, the group or individual insurance consumer tends not to notice the cost of mandates buried in the plan. Although actuaries have estimated lapse rates as a function of premium increases, there is not a great deal of hard data to work with. As a result, many of the expected lapse rate estimates tend to be “soft.” In this study, for the ten mandates, the cumulative incremental value of the mandates is significant, but the mandates have been part of CT insurance plans for so long that there is little lapsation specifically on account of them. The level of cost of health insurance plans is high enough today, however, that some groups can not afford coverage.

The other group response to consider is that some groups, especially larger ones, will choose to move to a self-funded approach as a result of additional mandates that add to the cost of health insurance and that they perceive as low value. By switching to self-funding, groups can avoid mandates. Roughly half of the commercial health coverage in CT is now self-funded. The carriers were surveyed to determine whether they already provide these mandated benefits in their self-funded plans. The majority of CT mandates are included. That being the case, there is little evidence to support the claims that groups are leaving the fully insured sector on account of mandates. Self-funded groups pay less in profit charges, and the largest self-funded groups are able to exert considerable leverage on the level of administrative fee that the insurer charges them to administer their self-funded business. It is likely that these economies of scale play a much more important role in the size of the self-funded sector than the existence of mandates. Additionally, self-funded groups do not pay state premium tax—this tax applies only to fully insured plans, and it is 1.75% of premium.

These 10 mandates add approximately 6.7% to the cost of group health insurance plans on an adjusted gross basis. Some groups or individuals might choose to purchase or retain coverage if the financial burden of the insurance premium were less. Nonetheless, it would not be practical for an insurer to remove the benefits covered by most of the mandates as they

are written. In other words, these are not entirely avoidable costs for a health insurer due to the breadth of the mandate language, which covers much of the benefit that insurers covered prior to the passage of the mandate. Since all carriers in CT are subject to the mandates, the playing field is level and affects all insurers equally.

Above and beyond the availability of insurance, the substantial increases in health care cost over the past decade have left employers with less and less money to spend on other employee benefits and on wages and salaries.

The last point to cover in this section pertains to the cost of health insurance. When health insurance is priced, it is broken into cost categories depending on the “tier” that is purchased. A single person buys a single policy. A couple that wishes coverage will purchase a couple policy, also known as the employee plus dependent tier. A single parent with one or more children will purchase an employee plus children policy. And a couple with a child or children will purchase a family policy. Based on a PMPM medical cost of \$300 and a PMPM premium of \$360, the following costs by tier are approximated:

	<u>MONTHLY</u>	<u>ANNUAL (rounded)</u>
Single	\$430	\$5,000
Couple	\$930	\$11,000
Parent + Child(ren)	\$860	\$10,000
Family	\$1,250	\$15,000

The objection to mandates that is raised by some organizations is that the cost of mandated services, when added to the overall cost of care, adds a substantial increment to the cost of health insurance. This argument is raised more forcefully when mandates are for services that are perceived to be non-essential. To reiterate the example described earlier for infertility in Set Two, an additional 1% of cost per year adds about \$150 annually to the cost of a family plan. For the first two mandates in Set Three, their additional 5.3% adds about \$800 per year to family coverage under a group policy.

This is a complex problem because if insureds are allowed wide-ranging choice to pick and choose the benefits they wish to include in their coverage, they will tend to select those they expect to best meet their medical needs. Too much self selection of benefits can defeat the underlying insurance principle of pooling. At the other extreme, an insurance plan that covers all possible services for all insureds can become prohibitively expensive. Such a “rich” plan would need to impose substantial member cost-sharing in order to make it a reasonably priced insurance product. This describes the two-edged problem of covered benefits vs. member cost-sharing. As health technology evolves and increasingly expensive services are added to health insurance plans, there needs to be a trade-off established between covered benefits and cost-sharing, otherwise plans become prohibitively expensive. This is a bigger issue for individual plans. It is less an issue for group plans because employers substantially subsidize their premium cost and receive a tax benefit for doing so.

II.7 EFFECT OF MANDATES ON PUBLIC HEALTH:

The public health gains resulting from the mandates will be discussed in this section. Depending on the nature of the mandate, their positive medical effect occurs over a continuum ranging from those that affect everyone to those that affect only a vulnerable minority.

Mandates that serve to improve the health of individuals also increase their productivity. Due to the small number of individuals affected by the narrow focus of some mandates, their overall affect on the public health of the entire insured population will not be as sweeping as a mandate that affects all. For the few that are affected, however, these mandates provide strongly beneficial health interventions that will enable them to live higher quality, more productive lives.

Most studies of the cost of disease, illness, and injury include not only the direct cost of medical care but also the cost of lost productivity and other costs to society. The first five mandates pertaining to mental health and substance abuse all have sociological ramifications. These mandates can be credited with helping to improve productivity and improve the lives of those with mental health or substance abuse problems.

The provider-based mandates also have significant positive ramifications for public health. The mandate for Physician Assistants and Nurse Practitioners helps to expand the supply of available primary care providers and thereby improve access. When PAs focus on mid-level care, doctors working with a PA can allocate more work time to complex cases and improve the quality and efficiency of care delivered by the office. The direct access to OB/GYN has similar positive consequences.

The chiropractic mandate likely causes some incremental cost to the system, but it also offers the public health advantage of a lower cost alternative to orthopedic interventions such as lower back surgery.

The occupational therapy mandates assures that those who need these services can obtain them through their medical plan rather than solely out of pocket.

II.8 EFFECT OF MANDATES ON THE DELIVERY OF HEALTH CARE INCLUDING THE UTILIZATION AND UNIT COST OF HEALTH CARE SERVICES, MEDICAL SUPPLIES, AND DEVICES:

One of the consequences of any benefit mandate is reactionary change elsewhere in the system for the finance and delivery of health care. Sometimes the consequence is anticipated and intended; other times not. If the evolution of Medicare over the past forty plus years is observed, similar actions and reactions can be seen as the package of benefits, provider reimbursement methods, and eligibility standards changed over time.

Any mandate that adds to the list of things health insurers must cover generally adds to the cost of medical care and insurance. Although there is often initial hope that certain advances produce savings, most mandates as well as advances in medical technology are additive in cost. The market reacts to the mandate in many ways. The mandate may induce utilization, and providers may increase the rate at which the service is performed. It may increase the unit cost of medical goods and services as increased demand increases price.

Half of these ten mandates, the mental health/substance abuse mandates, are “service” mandates, which by definition require the provision of a specified medical service in health insurance plans. The rest are provider mandates that require the services of certain providers be covered. Yet a third category of mandates defines the individuals who are eligible for group or individual coverage—there are no such eligibility mandates involved in this study. A

mandate as broad as CT's mental health parity mandate, which assumes a broader definition of mental health than some states, is likely to have created increased employment opportunities for mental health and substance abuse providers as the demand for their services increased. Insurers are free to respond to price increases that accompany increased demand; they can do so by contracting with a select group of network providers to deliver services at a lower cost per encounter or episode of care. Insurers can also use medical management in an effort to assure appropriate utilization and deter unnecessary utilization.

Of the provider mandates, the one that has the most direct impact is chiropractic care. By requiring these services, it is likely that demand has increased somewhat as a result. It is not, however, a zero sum game that causes a decrease in the supply of orthopedic physicians or physical therapists. As new types of providers enter the system, a demand for their services generally follows.

Two of the provider mandates were handled uniquely. These are 1) the PA and NP mandate, and 2) direct access to OB/GYN. The full gross cost of these two mandates was not included in the total. The rationale for doing so involves the fact that these provider mandates do not contribute to incremental care in the system. In fact, they lead to better and more efficient care.

Some mandates, such as breast cancer screening in Set Two, can lead to subsequent medical cost such as biopsies and lumpectomies, which are tests or treatments following the screening. That is, the mandate may set a sequence of medical treatment into motion after the initial screening. Screenings and other preventive care help providers to stop or delay the progression of disease. This "upstream" preventive and routine care generally costs less than emergency and catastrophic care.

II.8.A Based on a review of each mandate, these provider and supplier reactions are described:

One of the aspects of the mandates that was asked to be addressed is the effect on public-private cost-shifting. Generally, the public sector, due to its authority and purchasing power, is able to establish lower provider reimbursement rates for its programs, especially Medicare and Medicaid, than private sector insurers pay for the same services. Historically, Blue Cross Blue Shield plans had larger market share and were able to negotiate somewhat lower rates than their competitors in the private sector, but both paid more than public payers. The conventional wisdom maintains that private payers must pay more because public payers reimburse providers at cost or less than cost. The shortfall, it is argued, must be made up by charging commensurately more to those with private coverage.

In general, because the vast majority of private insurance is group coverage provided through employers that pay for the majority of the premium, most people are buffered from the true cost of health care. Employers are tax-subsidized to provide insurance to employees and their dependents. Some policy experts argue that this situation contributes to the high and increasing cost of health care. Part of this high cost stems from the unnecessarily high utilization of services that is, in part, caused by the fact that insured people are buying those services with the help of "other people's money." Without the employer subsidy for the cost of health insurance premiums, the member cost-sharing would have to be much greater; it is also likely that many services would have to be cut out of the insurance coverage to keep premiums affordable. The same experts argue that this induced demand in group coverage

III. FINANCIAL AND ECONOMIC ASPECTS OF THE MANDATES

In this section of the report, we will consider the financial burden of the services covered by the mandate. We will do so both in the presence and absence of the mandate. We took a broader interpretation of the financial burden analysis to include socioeconomic factors in addition to the cost burden considerations. The medical aspects of the mandates as well as elaboration of the mandates were covered in the earlier sections of this report and therefore not reported here.

In 2008, about two-thirds of Connecticut residents were covered¹ by private insurance (60.1% had employer based policies and 4.6% had individual policies); about a quarter were covered under public programs (Medicare 13.6% and Medicaid 11.5%); and 9.7% did not have any insurance. Among the privately insured, a third² were enrolled in HMO plans and the rest had PPO or other non-HMO coverage. Of those with HMO coverage, about 66% are fully insured. Of those with non-HMO coverage, about 45.6% are fully insured. Unless stated otherwise, the mandates discussed here, in general, apply to these fully insured group and individual policy holders only, that is, about 32% to 35% of the CT population. Although 60.1% of CT residents have private, employer-based group coverage, about half of that is self-funded (not fully insured) and is not subject to the state health insurance mandates. The charts below provide the overall coverage information as well as the demographics of the uninsured. Even though the state mandates are not applicable to this population, it provides us a baseline against which we can measure the impact of the mandates on the cost and financial burden.

FIGURE 1(a)

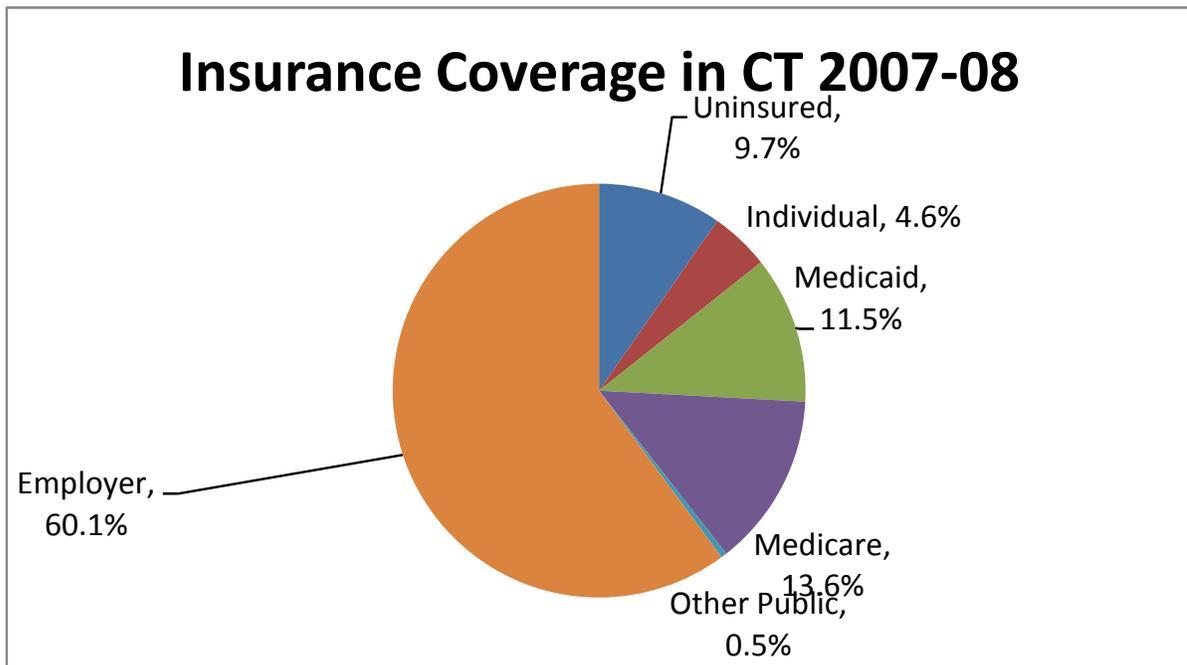


FIGURE 1(b)

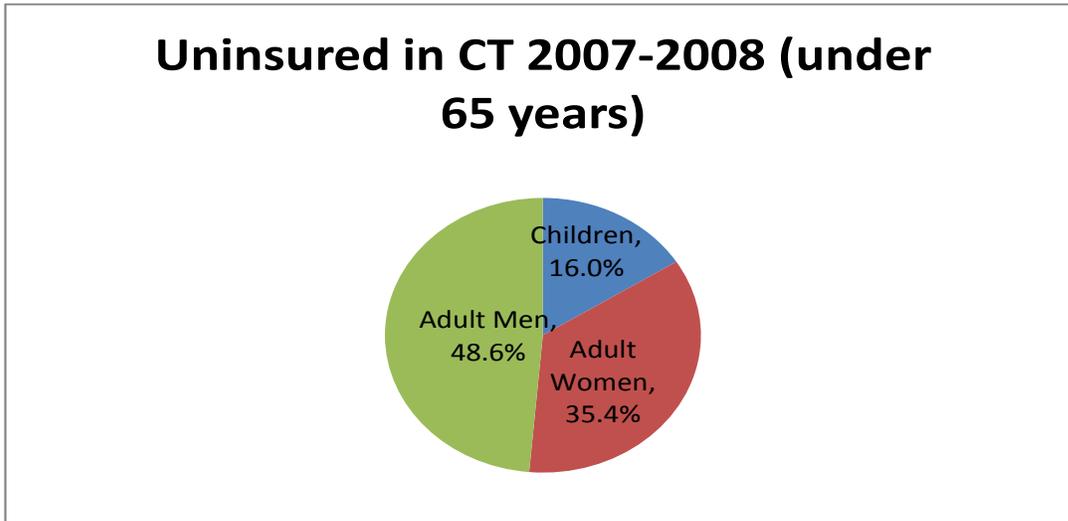
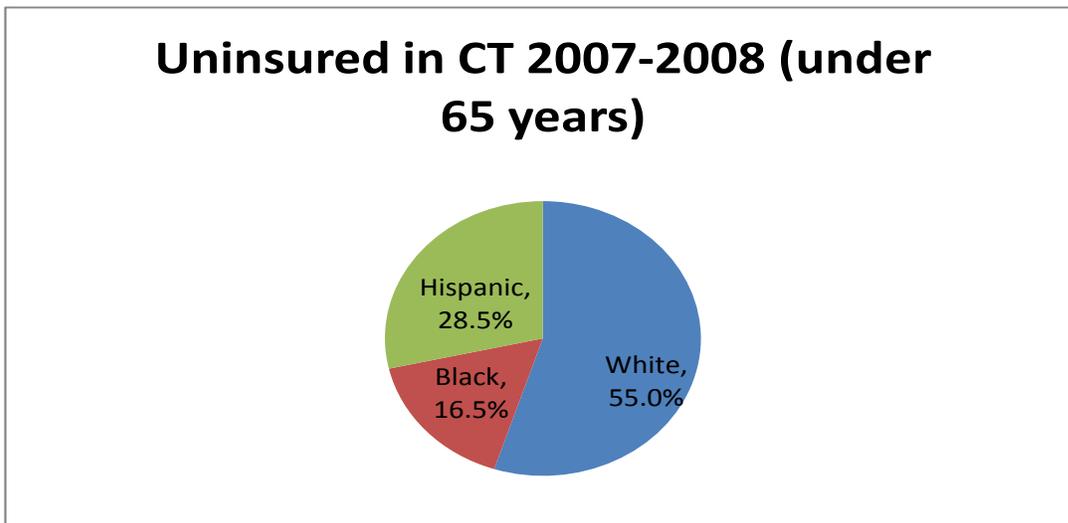


FIGURE 1(c)



Source: Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the Census Bureau's March 2008 and 2009 Current Population Survey (CPS: Annual Social and Economic Supplements). Accessed August 20th, 2010 <http://www.statehealthfacts.org/profileind.jsp?ind=125&cat=3&rqn=8>

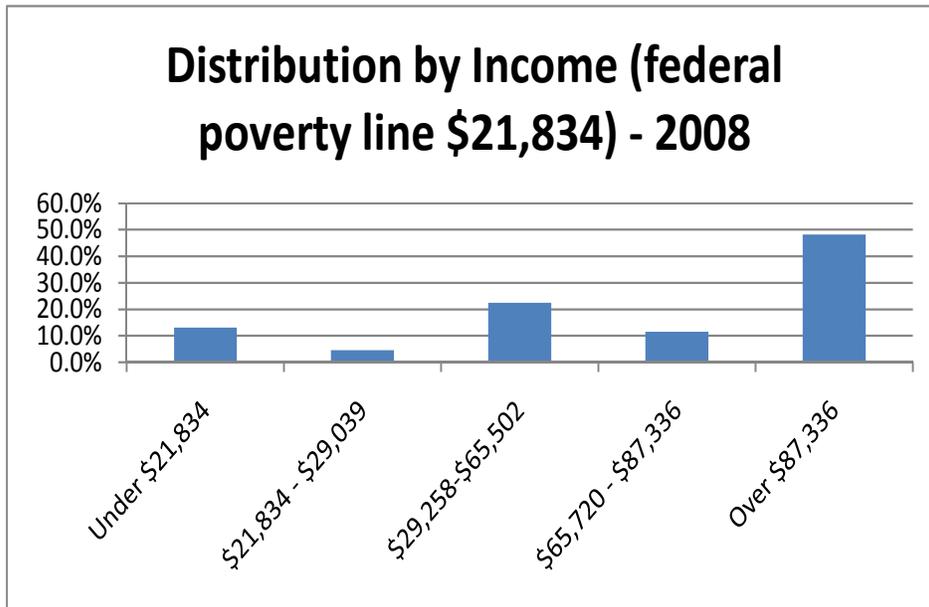
The healthcare landscape has changed significantly since most of the mandates considered in this report were enacted. For instance, the high deductible plans were not very common at the time most of the mandates under consideration were implemented. America's Health Insurance Plans (AHIP) estimates that over ten million lives are covered in 2010 under Health Savings Account/High-deductible Health Plans (HSA/HDHP).³ In Connecticut, 7.1% of the lives covered by commercial health insurance have a HSA plan. These plans have an inflation indexed minimum deductible for individual and family coverage (for 2010, the minimum family deductible is \$2,400). Without some modification of benefit design, the high deductible in such plans can be a deterrent to services that are high value and much needed. For example, if one had to wait until a \$2,400 deductible is satisfied in order to get a medically necessary service, the tendency might be to wait rather than pay. The tendency to wait is greater for

people at a lower income level. It is possible that due to the increasing deductibles in particular, as time has gone by, some of the mandates are less readily accessed than they were when introduced. Similarly, the impact of the mandates which work mainly through the pharmacy benefits of an insurance policy or have a significant pharmacy services component has been somewhat reduced by the penetration of fourth or even fifth copayment tiers. These higher tiers may require members to pay \$100 or more for a prescription. The mandate for covering psychotropic medications falls under the pharmacy benefits.

Insurers recognized this propensity to delay care and countered with new and improved plan designs that are designed to encourage access to benefits that bring higher value for their cost. Certain high value services may be generally made available in high deductible plans, with or without a copayment, prior to satisfying the deductible. The idea is that the benefit design should help the member obtain high-value needed services with minimal economic barriers to access. Health insurers may refer to these as wellness or preventive benefits.

From the carrier data, we were able to establish average cost-sharing for each mandate using the PMPM difference between allowed and paid claims for each mandate. Even for a seemingly low-cost mandate, the cost-sharing can be significant to the family. In examining the financial and economic aspect of the mandates, and in particular, the burden of cost on patients and their families, Ingenix Consulting adopted an approach that makes use of a model. We examined the cost burden with respect to two primary variables—1) member or family income level, and 2) level of cost sharing in the member's benefit plan. Those with the lowest income who are enrolled in plans with high cost-sharing have the largest cost burden of care. With respect to family income, a member in the lowest income bracket will pay a larger percentage of their income toward cost sharing. The income distribution in Connecticut in 2008 is shown in Figure 2. For our analysis we modeled the percent of income families with income of \$50,000, \$80,000, and \$160,000 would spend on services associated with each mandate. These illustrative family incomes were chosen to show the cost burden for a family with income slightly below, and a little above the median income in CT (\$68,595) and for a high income family. Our cost burden analysis was done for the incremental cost of each mandate only and did not include the member contribution to the premium. Families benefiting from the mandates would have paid the premium even in the absence of the mandates. We did not find a usable source for the information regarding the copayments, coinsurance and other forms of member share which would represent the State averages. Therefore we used our knowledge of health insurance plans to define a "generous" plan with member share of 10% and a representative plan with member share of 20%. Our model also looked at the high-deductible plans, and we used AHIP data as the source for the annual deductible limit. We assumed that the members in a high deductible plan will pay a copayment/coinsurance of 20% after meeting the annual deductible limit. Detailed results of our calculations are presented in the Appendix.

FIGURE 2



Source: Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the Census Bureau's March 2008 and 2009 Current Population Survey (CPS: Annual Social and Economic Supplements). Accessed August 20, 2010. <http://www.statehealthfacts.org/profileind.jsp?ind=9&cat=1&rgn=8>

AVAILABILITY OF PSYCHOTROPIC MEDICATIONS

There are a large number of psychotropic medications available in the market. They range from drugs to treat depression to schizophrenia and bipolar disorder. Similarly, the cost of these drugs varies from about \$20 to several hundred dollars for a month of treatment. Frequently, drugs originally approved to treat one mental health condition (MHC) may be used for treating another MHC; this can occur either after the FDA's approval or off label. Similarly, a significant number of people with a MHC may be diagnosed with more than one condition. The science of behavioral health itself is rapidly evolving as advances are made in the knowledge of the working of the central nervous system. All these factors combine to add an element of subjectivity to the science of diagnosing and treating MHC. It is not uncommon for a mental health care provider (MHCP) to try a number of medications before settling on a treatment regimen for a person with a MHC.

The mandate regarding the availability of psychotropic medications ensures that health insurers can not limit the choice of medications available to a mental health care provider. The law mandates two types of prohibitions – insurers can not limit the use of most effective medications and can not force the use of medications not considered most effective. This mandate is different from most of the other health care mandates in Connecticut in that it does not ensure the provision of a service (most carriers already cover mental health treatment and medications). Rather, it addresses the limitation of care through the restriction access to pharmaceuticals. The definition of the “most effective” is, however, absent from the mandate language. This omission, given the complex and evolving nature of mental health treatment, results in a mandate that continues to have an impact on cost for these pharmaceuticals.

In 2004-2005, there were about 600,000 adults in Connecticut who evidenced symptoms of mental illness.⁴ Out of these, 135,000 had serious mental illness and another 66,000 had severe and persistent illnesses. The number of children and youth with a MHC during the same period was estimated to be between 87,500 and 125,000. Left untreated, MHC can lead to significant decline in the quality of life, loss of productivity, anti-social behavior, and even suicide. Many mental disorders are chronic conditions or episodic. Treatment of even episodic conditions frequently can last 6-12 months. Recommendations for depressive episodes are for treatment to continue for at least six months. Schizophrenia and bipolar disorder treatment generally require lifelong therapy. Attention Deficit with Hyperactivity Disorder (ADHD) is a chronic condition, often requiring treatment through puberty and sometimes beyond. Other conditions such as anxiety disorders are more episodic, with treatment being symptomatic. Given the variety of MHCs, the treatment options, and cost variations, Ingenix Consulting instead of attempting to define an average base line cost to be used in the cost burden model, chose a different approach. Instead, two hypothetical extreme scenarios were modeled to provide the lower and upper bounds of cost burden that a typical family with a member having a MHC would face. For the lower cost burden scenario, it was assumed that a member takes a mid-priced antidepressant costing \$60/month for six months. For the high cost burden model, it was assumed that a member took 12 months therapy for an antipsychotic medication priced at \$150/month. For a family with an annual income of \$50,000 and a generous plan with 10% cost sharing, the cost burden ranges from 0.12% to 0.36% of income for the low and the high burden scenarios respectively. The burden increases to 0.3% and 0.9% of income with a cost sharing of 25%. For the uninsured, the low cost scenario will have 1.2% of income devoted for the treatment, and the high cost scenario would cost 3.6% of family income. For a member with a typical high-deductible plan, the cost will be somewhere between 0.3% and 1.2% of income in the low cost scenario and between 0.9% and 3.6% for the high cost scenario.

The clinical efficacy of psychotropic medications, in general, is well established in the literature. However, there is evidence that some antidepressants may not be as effective in treating mild to moderate conditions⁵. There is a dearth of information in the literature regarding the cost effectiveness of psychotropic medications. Studies were found showing the adverse impact of increased member cost sharing on the utilization of mental health medications, especially the antidepressants⁶. There is evidence of ethnic and racial disparities in the use of mental health care services in general as well as in the use of medications to treat a MHC. Caucasians tend to have higher expenditure and utilization of antidepressants than Latino or African-Americans. African-Americans tend to use older medications and generics⁷. These findings hold in studies based on national cost and utilization data⁸ as well as based on self reported data⁹. Some of the causes for the disparities cited in the studies include education, insurance access, cultural, perceptions of social stigma, etc.^{10,11}

The cost for 30 days of medication therapy is significantly higher today than it was during the 1990s. However, it is hard to determine how much of this cost increase is due to the mandated “most effective” treatment. Factors not related to the mandate which are likely to have contributed to the higher per unit cost include direct to consumer advertising by drug manufacturers promoting higher cost new drugs, the need for customized treatment regimens, and the widespread prescribing of psychotropic medications by non-MHCPs. (Ingenix data shows more than half of prescriptions for anxiety, depression and hypnotics are written by primary care providers). Therefore it is not possible to quantify any increase in the overall cost to the health care system due to this mandate. However, to the extent that mandatory “most

effective” treatment may reduce some ER visits, less strain on the public finances in the form of lesser mental health related social expense and incarcerations, as well as lesser job/productivity loss related expenditures, it can be argued that this mandate may reduce some public cost.

MENTAL HEALTH AND NERVOUS CONDITIONS

This mandate provides for the comprehensive coverage of mental health treatment (for the conditions defined by the American Psychiatric Association). The law not only ensures the coverage of mental health and substance abuse conditions but also requires the coverage to be at parity with the coverage for other medical conditions. It also covers similar services by non-physician providers, such as social workers, psychologists, substance abuse and family counselors, etc.

According to the National Institute of Mental Health¹² about one in four Americans 18 years or older has a diagnosable mental disorder in a given year. The ratio for children is one in ten. About 6% of the adult population has severe mental illness, and a little under half of this population meets the criteria for two or more disorders. The number of adults with severe mental illness in Connecticut is around 135,000, and those with symptoms of mental illness is about 600,000¹³. A significant portion of the homeless and prison population has addictive disorders with or without additional mental health conditions (MHC). The estimate of children and youth in Connecticut with a MHC ranges from 87,500 to 125,000. Over half of the children admitted to pre-trial detention centers show signs of a MHC, and a fifth require prompt psychiatric intervention. Connecticut’s African-American and Latino youth have a higher proportion of MHC conditions including addiction and suicide attempts, and the juvenile and prison population shows the same demographic disparities.

The cost of treatment of mental illness can vary based on the condition(s) to be treated, need and number of psychotherapy sessions, need for partial or complete hospitalization, etc. (the medication cost is not considered here as it was discussed in the mandate regarding psychotropic medications). Therefore, it is difficult to define a typical scenario to model the cost burden of illness. Two generic scenarios are considered. Under scenario one, the person with MHC has six sessions of psychotherapy during the course of treatment. The second scenario adds to the first scenario a hospitalization. Using the data provided by the carriers, it is assumed that each therapy session costs \$125 and the hospitalization cost is \$3,000. A family with an annual income of \$50,000 and a group policy with 20% cost sharing will spend 0.3% or 1.5% of its income under the low and the high cost scenarios respectively. A similar family with a more generous plan with 10% cost sharing will spend 0.15% or 0.75% of the income depending on the treatment scenario. If this family had no insurance, then the cost burden could be as high as 7.5% of their income. For a plan with a high deductible, the cost burden could range from 1.5% to 5.1% of the income depending on the treatment scenario as well as how much of the deductible requirements have been met to treat non-MHC health conditions.

As described above, this mandate provides for the coverage of MHC treatment as well as for the parity of this coverage to non-MHC treatments. Neither the cost burden model above nor the carriers-provided average cost of \$7.71 PMPM tries to separate out the impact of the coverage or the parity aspects of this law. However, there is a significant body of literature around the cost and economic impact of the state and the federal parity laws.¹⁴ Research

shows little to positive impact of the parity mandates. The studies which have shown little or no increase in the mental health care utilization or no reduction in the unmet needs have cited complexity of the law, supply side bottlenecks¹⁵ and other non-mandate related factors¹⁶ as the reasons for lack of positive impact. By legislating comprehensive laws on mental health treatment, parity, and the use of psychotropic medications, as well as increasing the type of service providers, Connecticut has avoided some of these problems. However, we could not find any major research showing the direct impact of the parity law in Connecticut.

The social and economic cost of not treating MHC is enormous. Mental illness is the leading cause of disability in the U.S. Also, the human cost of mental illness is huge. It is estimated that mental illness is the attributing cause in 90% of suicides. In Connecticut¹⁷, there were 3,072 prisoners with mental illness in 2004. People with mental health and substance abuse (MHSA) conditions are more likely to be incarcerated for minor offenses and serve longer sentences. The annual cost of incarceration in the state is about \$44,000. Similarly, due to lack of proper treatment and support, people with a MHC are more likely to end up in a nursing home. In 2004 there were 2,700 adults with severe mental illness in nursing homes costing the state \$60,000 or more per person per annum. Additionally, there are significant personal and societal costs in the form of lost productivity, broken families and homelessness. For children with untreated mental health conditions like ADHD, the potential for long term costs is even greater. To the extent this mandate has provided access to mental health treatment and reduced the unmet need, it can be argued that the mandate has reduced some of the cost burden on the public sector. At the same time, it has reduced the cost burden on individuals as well as on society.

While the coverage and parity of MHC treatment increases the demand for these services by reducing the financial barrier to treatment, the provider part of the mandate increases the supply of the mental health care services. The mandate extends the covered providers to qualified psychologists, clinical social workers, marital and family therapists, and alcohol and drug counselors. The table below shows the number of mental health services providers in the state based on the Connecticut Department of Labor¹⁸ statistics

Provider Type	CT Employed
Psychiatrist	584
Psychologist	3,126
Marriage and Family Therapist	225
Substance Abuse and Behavioral Disorders Counselor	1,210
Mental Health Counselor	2,014

By covering non-psychiatrists, the state mandate has significantly increased the supply of mental health care providers. It is hard to estimate the additional cost to the insurers due to this provision of the mandate. If we assume that the additional providers are providing previously unmet needs, then this provision has increased the cost burden of the carriers. Since these providers are reimbursed at a lower rate than the physicians, the cost burden of the people being treated is lower. Similarly, the public sector as well as society in general has a net reduction of cost given the societal costs of untreated mental illness.

ACCIDENTAL INGESTION OR CONSUMPTION OF CONTROLLED DRUGS

This mandate sets the minimum coverage requirements for the services related to the accidental ingestion/consumption of controlled drugs. Insurers are required to cover at least 30 days of inpatient and \$500 of other services in a calendar year. According to the Centers for Disease Control and Prevention (CDC), unintentional or accidental drug poisoning includes drug overdoses resulting from drug misuse, drug abuse, and taking too much of a drug for medical reasons.¹⁹ There were 27,658 accidental overdose deaths in the United States in 2007, second only to motor vehicle crash deaths as far as the leading causes of unintentional injury deaths are concerned. CDC estimated two million drug-related emergency department (ED) visits in 2008. The ED visits were equally split between the nonmedical use of prescription/over-the-counter and illicit drugs. Cocaine and heroin were the two most widely used illicit drugs in these encounters, while among the prescription drugs, opioid painkillers (oxycodone/Oxycontin, hydrocodone/Vicodone, and methadone) and benzodiazepines (a type of sedative) were the cause behind 578,000 ED visits. According to the CDC estimates, the cost to society of just prescription opioid abuse was \$8.6 billion in 2001.

In the State of Connecticut, there were 11 deaths per age-adjusted 100,000 persons due to drug overdose (2007 figures). During the same year, Connecticut spent about \$284 million on substance abuse services with the majority of the expenditure (\$233 million) going towards treatment programs.²⁰ Among adults entering the State treatment programs in 2008, 16.1% of the heroin and other opiate users, 64% of the cocaine users, and 89.6% of the marijuana users were treated in outpatient settings. 32% of the heroin and other opiate users were admitted to a hospital or residential detoxification program. The cost of an emergency visit followed by three to five days of detoxification at a hospital can be very expensive. It is difficult to determine a typical cost scenario. Therefore, the cost burden was modeled based on a hypothetical case. \$944 was assumed as the cost for the ER visit²¹ and \$8,000 for a four day inpatient stay. An insured family with an annual income of \$50,000 and a plan with a 20% cost share will spend about 3.5% of its income for an episode of treatment. The cost burden will be a little less than 2% if the same family had a 10% cost sharing plan, and up to 7% if the insurance plan was a high deductible one. The uninsured family with \$50,000 income can spend 17% or more for the treatment.

Drug related deaths and health care utilization on account of controlled drug use are a significant medical, social, and economic problem. They are also a health policy issue. The dynamics of this issue, however, have been evolving with time. For instance, the number of illicit drug related ER visits has remained the same between 2004 and 2008. However, the ER visits related to non-medical use of prescription and over-the-counter drugs have doubled. This trend is reflected in the increase of the number of prescriptions of opioid analgesics (pain relievers). Therefore, there is a correlation between the medical practice advancement in aggressive pain management, availability of pain medications and the use of these medications. The drug abuse/overdose incidence (as measured by ER visits and deaths) was highly skewed towards the male population when illicit drug abuse was more prevalent than medication abuse. However, in 2008, the ER visits due to opioid abuse were almost equal for both genders, and the visits caused by benzodiazepines had a higher percentage of female abusers. The largest increase in the prescription drugs abuse during 2004-2008 occurred among the 21-29 age group.

This mandate covers medically necessary but avoidable services. Better management of controlled drugs can reduce the abuse of these medications. For instance, frequent scanning

of prescription drugs claims data can help identify physician and pharmacy shopping instances. Similarly, better disposal of unused medications and effective education can reduce the accidental use of pain and other medications by children and adolescents.

ALCOHOL AND DRUG RELATED INJURIES

This mandate provides coverage for the treatment of the injuries that occur while under the influence of alcohol or other substances. The mandate became effective in 2006 at the height of the campaign against the 1947 Uniform Accident and Sickness Policy Provision Law (UPPL) which had been adopted by most of the states. According to the UPPL law, insurers could deny payment for treatment if the patient tested positive for alcohol or drugs.

Injury is the fourth largest cause of death in the United States. Alcohol related fatalities account for about a third of injury caused deaths. A significant number of non-fatal injuries are also attributed to alcohol. For instance, 22%-30% of all injuries at home are alcohol related. Elevated alcohol level increases the likelihood of a fall by sixty times²² and is involved in 21%-48% of fatal and 17%-53% of nonfatal falls. A similar empirical link exists between alcohol and injuries related to fires, burns, and drowning. Perhaps the most serious and frequent alcohol related injuries happen on the road. According to the CDC²³ nearly one third of all traffic-related deaths in 2008 in U.S.A. involved alcohol-related driving crashes. Marijuana, cocaine and other drugs, often in combination with alcohol, were involved in about 18% of vehicle driver deaths. During the same year, there were over 1.4 million DUI arrests (alcohol and narcotics), which is less than 1% of the self reported episodes of alcohol impaired driving every year. There were 264 traffic related fatalities²⁴ in Connecticut in 2008. Out of these, 40% involved alcohol, and 32% involved crashes where the highest BAC was 0.08 or more.

Even though the average cost of this mandate is low (\$0.03 in 2008 based on the carriers' data), the cost of a single alcohol related injury could be significant. One study²⁵ found the average direct health care cost for each survivor of an alcohol related crash to be \$19,500 in 2005. The total cost, including the productivity loss, legal and insurance costs, and property damage etc was around \$81,000. Another study²⁶ focusing on minimally injured (defined as trauma patients with length of stay of not more than one day and Injury Severity Score of less than 9) found the average hospital charges to be \$10,405. When compared to the trauma patients with similar baseline characteristics, the persons with alcohol related crashes required more invasive procedures and more diagnostic tests, were more frequently required to be hospitalized, and were less likely to be discharged from the ER. The alcohol related crash cohort had \$1,833 higher medical charges on average. The medical cost for treatment of very severe injuries can easily run into hundreds of thousands. Adopting the average cost statistic from the minimally injured study, we used \$10,405 for our cost burden calculations. Depending on the cost sharing arrangement, an insured family with \$50,000 can spend between 2% and 8% (2% for a rich plan and 8% for a high deductible plan) of its income on ER and other medical costs related to an injury. For an uninsured family with the same income, the cost burden can be as high as 20.8% of their income.

As reflected by the carrier data, the incidence of alcohol related injuries is not high and therefore the cost of treatment, when spread over a large number of insured, is quite low. However, the cost to the society for the prevention and treatment of these injuries as well as non-medical cost is significant. The cost-of-illness studies on alcohol related injuries suggest²⁷ that the healthcare cost to societal cost ratio is 13% to 87% respectively. According to the

Substance Abuse and Mental Health Services Administration (SAMHSA), people with alcohol and substance abuse issues are 3.5 times more likely to be involved in a workplace accident, increasing workers' compensation and disability claims cost. Additional costs are incurred due to loss of productivity and turn over, etc.

Similar to the mandate regarding accidental ingestion of alcohol, this mandate covers services which are medically necessary yet avoidable to some extent. Research has shown that investing in substance abuse treatment has a return to investment ratio of 12:1.

ALCOHOL RELATED MEDICAL COMPLICATIONS

This mandate provides coverage for medical complications arising from alcoholism. The intention is to require treatment for acute and chronic conditions as well as detoxification (the mandate language specifies delirium tremens, which is associated with alcohol withdrawal). If left untreated, alcoholism can lead to serious illness. Some of the medical conditions most often linked directly to excessive alcohol use over a long period of time include liver disorders (alcoholic hepatitis, cirrhosis), digestive problems (gastritis), neurological complications (numbness of the hands and feet, disordered thinking, dementia, short-term memory loss) and episodes of pneumonia. Alcoholism can increase the risk of, or complicate existing conditions like diabetes, heart problems, several types of cancer, and birth defects. The cost of alcohol related medical complications is high. According to the CDC²⁸ 360 people (32% female) died every year in Connecticut during the 2001-05 period due medical complications associated with medium to high daily alcohol consumption. This does not include deaths related to acute conditions and injuries, etc. Liver conditions were the biggest cause of death (200 per year) followed by alcohol dependence syndrome (35 per year). Some of the chronic medical conditions and their alcohol-related factor (% caused by alcohol)²⁹ are listed in the table below:

Impacted Organ/System	Chronic Condition	Direct Alcohol-Related %
Liver	Alcohol Liver Disease	100%
	Liver Cirrhosis (unspecified)	40%
	Liver Cancer	3% (1% in women)
Digestive System	Alcohol Gastritis	100%
	Esophageal Varices	40%
	Gastroesophageal Hemorrhage	47%
Pancreas	Acute Pancreatitis	24%
	Chronic Pancreatitis	84%
Heart and Cardiovascular	Alcohol Cardiomyopathy	100%
	Portal Hypertension	40%
Nervous System	Alcohol Polyneuropathy	100%
	Alcoholic Psychosis	100%
	Alcohol related degeneration of nervous system	100%
Other	Alcohol Dependence Syndrome	100%
	Alcoholic Myopathy	100%
	Fetal Alcohol Syndrome	100%

	Fetus & Newborn Affected by Maternal Alcohol Use	100%
	Spontaneous Abortion	4%

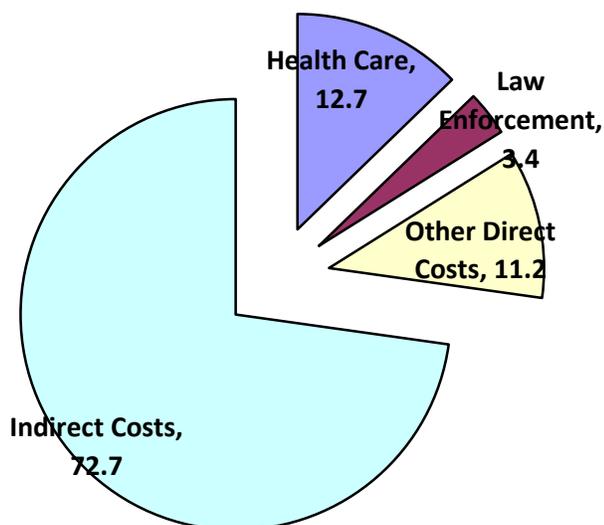
Source: ARDI System

The cost burden for individuals and their families varies with the type and severity of the alcohol related medical condition. Usually these medical conditions develop over a long period of time and are chronic, hence the cost is spread over an extended period. A liver transplant is the most expensive alcohol related treatment. It can cost around \$300,000 (much higher in some cases) for the transplant itself, followed by very expensive lifetime anti-rejection and other medications. The person undergoing the liver transplant may pay a significant part of the transplant cost depending on the member's cost share, (deductible, copays, and coinsurance) and payment ceiling provisions of the specific policy. (Many policies have a maximum out of pocket amount that limits the patient's cost-sharing to a pre-catastrophic level.) Given the lack of a typical cost of the medical complications, we used our model to determine the cost burden for alcohol detoxification including the treatment for delirium tremens. The detoxification usually requires a facility stay for five to seven days and can cost between \$3,000 and \$7,000. For our modeling, we assumed the cost for an episode to be \$5,000. For an insured family with \$50,000 annual income, the cost of detoxification can range from 1% to 2% of their income (assuming a generous plan with 10% and a typical plan with 20% cost sharing respectively). If this family had a high deductible policy, the cost could be up to 5.6% of their income. For an uninsured family the cost could be up to 10% of income.

The prevalence of problem drinking in men exceeds that in women and correspondingly, the incidence and severity of medical complications due to alcoholism is higher in men. We did not find any other direct socio-demographic disparities. Some of the usual social, economic and ethnic differences do, however, play an indirect role in this context. For instance, people in the lower strata of income and education, etc. are more likely to seek treatment at a later stage of the medical condition. Studies have shown some correlation between the age at which alcohol consumption begins and the probability and severity of alcohol related medical conditions.

This mandate covers a medically necessary albeit a potentially avoidable need. Research shows that if left untreated, alcoholism causes a significant cost burden for the individual, the health care system, and society at large. One study³⁰ estimated a one year cost of alcoholism in the United States to be \$235 billion. About 13% of this cost was for health care, and the rest was related to other direct and indirect expenditures like law enforcement, loss of productivity, etc. The distribution of this cost is shown in the figure below:

Components of National Alcohol Expenditure



Source: Adopted from Rehm 2010

OCCUPATIONAL THERAPY

The mandate regarding occupational therapy services requires insurers to pay for these services only if the policy also covers physical therapy services. Even then, the following conditions are to be met:

- A plan of care is to be established, and approved by a physician and the plan is certified by the physician at least every two months
- The approving physician certifies that only a licensed occupational therapist (OT) can provide these services

It is not clear if the insurers take advantage of the above limitations or allow for more generous coverage. Some of the OT services may be covered through other channels. For instance, the state mandate on Autism may cover OT services for children. Other OT services for children may be provided by the education system.

Occupational therapy is increasingly recognized as a significant component of integrated health care. It covers physical and mental health as well as community based services like lifestyle changes. The services can be provided in acute physical or mental health settings (for instance hospitals), sub-acute settings (like aged care facilities), outpatient clinics, community settings, educational institutions, and home settings. Some of these services are for specific age groups. For instance, pediatric services include autism and developmental disorders, sensory or motor developmental delays or deficits, and emotional and behavioral disturbances. The services for elderly may include dementia and Alzheimer care, environmental modifications in senior housing, other geriatric services, etc. (these services will

likely be covered by Medicare and not subject to this mandate). Short term therapy services include recovery and rehabilitative therapy after trauma or injury, as well as services related to work place.

A number of studies have looked into the effectiveness of occupational therapy. These studies have focused on a specific health condition (autism, rheumatoid arthritis etc) or a care setting (work place etc). These studies show little to significant positive outcomes of the therapy. The research related to the cost-effectiveness of occupational therapy, however, is mostly limited to the elderly population. The carrier data collected for this project showed the average cost of this mandate to be \$0.78 PMPM and the member cost share to be 35%. The wide variety of the types of services as well as the variations in the duration of the services precludes any cost modeling to compute the cost burden for an individual or a family. Some of these services are expensive. For instance, a 15 minute session for neuro-muscular re-education³¹ can cost \$126.

The mandate related to the occupational therapy covers needs ranging from medical to life style. Given the fact that a physician has to certify that these services can only be provided by an occupational therapist, it can be argued that these needs would not have been met in the absence of the mandate. Furthermore, the mandate likely has resulted in some shift of resources from the public to the private sector. For instance, the public system is likely to save money if private insurance-covered occupation therapy allows a person with an injury or a mental health condition to live independently. Similarly, if a person can not get back to work due a condition treatable by OT, the public system losses money in the form of Medicaid and other services as well as in the form of lost tax revenue. To the extent that the mandate allows affected people to live healthier, more independent and/or productive life, there may be significant savings for the health care system over the lifetime of these people. The quality of life improvements are likely to have a positive impact on the individuals using these services, their care givers and society on the whole.

The cost of this mandate for health insurers is likely to increase over time as the Bureau of Labor Statistics³² has projected the demand for occupational therapists and their services to increase by 26% between 2008 and 2018 (there are 1,593 OT in Connecticut)³³. A large part of this additional demand will be driven by children and the elderly (and therefore have little impact on the population covered by the mandate). However, advances in health care as well as increasing awareness among families, employers, and society regarding the effectiveness of occupational therapy and other rehabilitative services is going to drive up the demand for these services for the working age population. For instance, the number of people living with disabilities but lesser dependence as well as the number of people working with disabilities is increasing with time.

PHYSICIAN ASSISTANTS AND CERTAIN NURSES

Like other parts of the country, there is a shortage of primary care physicians (PCP) in Connecticut. There are 6,396 PCPs in the State³⁴ which translates to 1.9 PCPs per 1,000 population (58% better than the national average of 1.2 PCPs per 1,000 population). According to a recent study³⁵ by the Connecticut State Medical Society, a quarter of PCPs in the state are not accepting new patients. On average a new patient has to wait for 18 days for a routine office visit. The shortage is particularly acute in the urban and poorer parts of the State. The three major urban centers in the State (in the Fairfield, Hartford and New Haven

counties) have 26 federal designations³⁶ as underserved areas for primary care. The rest of the five counties have 14 such designations. The mandate related to independent care providers (certain advanced practice registered nurses and physician assistants) requires the carriers in the state to cover the services rendered by these care providers as long as these services are within the scope of the education and experience of these providers and as long as the payer does not have to cover duplicate fees for the same care provided by these clinicians and the physicians. There are 4,098 nurse practitioners, 266 licensed nurse midwife and 2,782 physician assistants (PA) in the State. Since most of the services provided by the advanced practice registered nurse (APRN), PA and other providers covered by this law are primary care related, the mandate effectively has more than doubled the number of primary care practitioners available in the State.

The practitioners covered under this mandate provide a variety of services in a number of settings. Some of these providers have the authority to prescribe medication, some can examine and treat patients independently, while others have to work under the supervision of a physician. Many of these providers work in primary care clinics or hospitals, emergency care units, nursing homes and in clinics providing OB/GYN services. The role of the non-physician providers as a solution to the shortage of physicians, and as an integral part of the increasingly popular patient-centered medical home model of care, has received a lot of attention recently. A study just published by the Institute of Medicine³⁷ has emphasized the role of nurses in general and that of the APRNs in particular in alleviating the shortage of primary care providers in the U.S. However, the role of these service providers is not without controversy. The American Medical Association (AMA), for instance, has long been cautioning against the expansion of the APRN and PA role as independent care providers. According to the AMA the non-physician care providers are not the answer to the primary care shortages in the country³⁸. We found a number of studies analyzing the effectiveness of APRNs and PAs as primary and emergency care providers³⁹⁻⁴⁰. These studies focused on several outcome metrics like the cost of care, clinical outcomes, and patient satisfaction. In general, these studies found the non-physician care providers to be as effective as physician providers but there were exceptions to these findings. Studies focusing on patients' perception of access to care showed lesser patient satisfaction with APRN/PA treatment compared to the treatment by physicians.

To the extent that there is a large and well-documented shortage of physicians, this mandate addresses an unmet medical need in the state. Also, the reimbursement rates of the providers covered under this law are usually lower than those for the physicians. Therefore, it can be argued that the individuals, carriers, and the health care system save money. The real impact of this mandate, however, is the net saving to society in the form of avoided health care cost, productivity, and non-monetary burden due to timely supply of preventive care and treatment made possible by additional supply of trained health care providers. According to the Connecticut Department of Public Health⁴¹ there were 47,000 hospitalizations (11% of total) costing \$1.2 billion which could have been prevented in 2008. Similarly, 44% of the ER visits in the state between 2007 and 2009 were non-emergent, emergent but primary care treatable, or emergent but preventable/avoidable. All these figures indicate insufficient access to primary care. While the shortage of primary care providers is only one of the factors explaining the lack of access to care, it is an important one (lack of insurance coverage, social and cultural issues etc are other factors). In the absence of the APRN/PA mandate, the above statistics could have been much worse.

VETERAN'S HOME

Connecticut's Department of Veterans Affairs runs a 483 bed facility in Rocky Hill. This facility provides continuum of health and rehabilitative care to veterans. The current Home has been providing services to the veterans since 1940. The mandate was passed at the time of the change of name for the Home and was intended to ensure coverage of the services provided there. The data provided by the carriers does not lend itself to a financial or cost burden analysis.

DIRECT ACCESS TO OB/GYN FOR PRIMARY CARE

This mandate allows the female population covered under fully insured private plans to have unhindered access to an OB/GYN provider. An OB/GYN can be designated by the patient as the sole PCP or in addition to a non-OB/GYN physician. Regardless of the PCP designation, the female patients are given direct (without needing referral by a "gatekeeper") access to the OG/GYN for obstetric-gynecology related care and treatment. In the case of a patient getting OB/GYN care from one provider and other primary care from another provider, the carrier is allowed to require the OB/GYN provider to discuss any services and treatment plans with the PCP. The latter provision is probably to prevent any duplication services through physician shopping.

We could not estimate the number of women impacted by this mandate. Unlike 1995, the year this mandate was legislated, most of the insurers now allow direct access to care without a gatekeeper. The gatekeeper plans are mostly traditional HMOs. According to a Kaiser Family Foundation survey⁴², only 26% of employer-sponsored members are enrolled in the Northeast in HMO plans. The carrier data received for this project showed only three carriers had these types of plans.

One potential impact of this mandate is the increased access to primary care. As discussed in the APRN and PA mandate above, Connecticut has a shortage of PCPs. This shortage is especially acute in the urban areas with larger population concentration of poor and minorities. This mandate expands the pool of available PCPs by facilitating access to the 720 OB/GYNs practicing⁴³ in the state. As discussed in the actuarial part of the report, there is very little cost burden of this mandate. This is true for the individuals and as well as the insurers because rather than mandating any new services, this law only expands the pool of providers to meet existing need. If we assume that in the absence of this mandate primary care and prevention would not have been accessible to some of the female patients, then it can be argued that the health care system and society have a net saving of resources in the form of avoidable and preventable hospitalization, ER visits, productivity loss, etc. Some of these net gains to society have been quantified in the discussion on the APRN/PA mandate.

We found a number of studies looking into the characteristics of females using OB/GYN for primary care, the clinical effectiveness as well as limitations of using OB/GYN settings for primary care. In general, women aged 18-34 tend to use OB/GYN more often than older women. Furthermore, younger women with lesser education and income are more likely to use OB/GYN for primary care.⁴⁴⁻⁴⁵ This could be due to the fact that younger women are less likely to have any care needs beyond OB/GYN care related to pregnancy and sexual health. Also, this demographic segment is more likely to have access barriers such as lack of insurance and residence in areas with a more pronounced shortage of providers. Research

shows higher satisfaction for younger women who use OB/GYN as the primary care provider than those who use a general practitioner or a combination of a PCP and OB/GYN. Women are found less likely to seek depression related help⁴⁶ from their OB/GYN due to the perception that their OB/GYN is not the right provider for this type of service or that the OB/GYN was not the right setting for depression care.

CHIROPRACTIC SERVICES

This mandate requires insurers to cover chiropractic services by a licensed provider to the same extent as the services by a physician as long as the services are within the scope of the chiropractor. The U.S. Department of Labor⁴⁷ defines doctors of chiropractic medicine as providers who “diagnose and treat patients with health problems of the musculoskeletal system and treat the effects of those problems on the nervous system and on general health”. There were 49,100 chiropractors working in the U.S. in 2008. The number of chiropractors in Connecticut is 522.⁴⁸ Treatment provided by a chiropractor is considered a form of alternative medicine. Most of the patients using these services come for the treatment of non-fracture and non-malignant back and neck pain. Other providers in this space include orthopedic surgeons/physicians, primary care physicians, pain care physicians, physical therapists, and message therapists.

By covering the services of chiropractors, the mandate has expanded the pool of care providers for a highly prevalent medical condition. According to the CDC⁴⁹ back and spine pain is the second leading cause of disability in the country accounting for over 16% of disabilities. The life time prevalence of lower back and neck pain (BNP) is estimated to be around 85%. The associated annual cost is over \$100 billion. Chiropractors provide a relatively less expensive treatment option for BNP. A Mercer study⁵⁰ in 2009 estimated the 1-year cost of treating low back pain (excluding medications expenditure) by using chiropractor care to be \$2,431 which was \$761 lower than the physiotherapy-led care (but slightly higher than an medical physician care). Similar figures for treating neck pain were estimated to be \$302 lower than the medical physician care and \$675 lower than exercise based care. Using the Mercer estimate of \$2,431, our model of the cost burden for an individual with back pain in a family with annual income of \$50,000 showed that this cost would use between 0.5% and 1% of their income (based on 10% or 20% cost sharing respectively). A family with similar income but a high deductible plan or without insurance could spend up to 5% of its income obtaining chiropractic treatment for back pain. This cost burden is for the chiropractic treatment only and does not include the cost of medications or the loss of income due to absence from work, etc.

Despite the low cost of care, the clinical and the cost effectiveness of chiropractic care is not universally accepted in the health care literature. We found a number of studies showing evidence for and against the effectiveness of this type of treatment. For instance, the above noted Mercer study found chiropractic care to be highly cost effective (the study was done for the Foundation for Chiropractic Progress). Research supportive of this form of treatment usually focuses on the cost effectiveness⁴⁶ while showing the clinical efficacy to be at least as much as with other alternatives. The studies drawing conclusions not in favor of chiropractic treatment highlight safety and clinical efficacy issues. One study⁴⁷ reviewing the literature since 2001 concluded that spinal manipulation (the common technique used by chiropractors), especially that of upper spine frequently caused mild to moderate adverse effects and could cause vertebral artery dissection leading to stroke or even death. A number of studies we

IV. CONCLUSION OF ACTUARIAL REPORT:

IC examined the ten mandates in Set Three of the CT health benefit mandates and calculated their expected 2010 paid costs. This was \$20.15 PMPM--about 6.7% of the per member medical cost for a group contract. There is also administrative cost and a profit charge associated with medical cost for these ten mandates. It is \$4.10 PMPM. The total cost that these Set Three mandates add to the cost of health insurance is \$24.25 (\$20.15 + \$4.10). These ten mandates add 6.7% to the cost of health insurance. Most of the cost is for the first two mandates pertaining to 1) psychotropic drugs, and 2) mental health and substance abuse. The \$20.15 PMPM excludes any cost for the Physician Assistant/Nurse Practitioner mandate and the Direct Access to OB/GYN mandate. The language of some of the mandates is broad, however, and covers many medical expenses that carriers were already covering prior to the passage of the mandates. Thus the net new cost of the mandates is less than the gross cost. In the case of the psychotropic drug mandate, the mandate requirement is to cover the most effective drug, but what is seen in the data is the gross cost of all psychotropic drugs.

The data for individual plans was considerably less credible than for group plans because there are more than 12 times as many group members as individual members in the submitted carrier data. These mandates represented about 5.5% of the cost of individual plans. This is somewhat smaller than for group plans. The cost of the first two mental health mandates was 83% of all mandates--the same portion for individual plans as for group.

Some of the mandates have a more positive effect on public health than others. Some affect a small but vulnerable special population, such as those injured while under the influence, or people who accidentally ingest controlled drugs, or those with medical complications of alcohol. These affected subgroups are so small that the mandate cost is small or de minimis when spread to the entire pool of insureds. People who seek the services of chiropractors and occupational therapists in any given year also do not represent the majority of the insured population.

The first two mandates for psychotropic drugs and mental health were by far the most costly of the 10 mandates. Five of the other mandates all cost less than \$1 PMPM each, not including the two provider mandates that were excluded from the total mandate cost. Since the mandates are required to be covered by CT insurers, they add to the medical and administrative cost of insurance plans for all fully insured residents of CT. The costs of the two most expensive mandates reflect the broad and general nature of the mandate language. As written, these mandates require carriers to cover a broad range of medically necessary claims. Thus the net new cost of the psychotropic drug mandate is less than the gross cost reported. In this report, the 10 mandates in Set Three are reviewed. IC will provide another similar report for the mandates covered by Set Four.

LIMITATIONS IN USE:

This study was conducted by IC exclusively for the State of CT, specifically and solely as it applies to the evaluation of Set Three of the forty-five mandates covered by Public Act Number 09-179. It is not intended for any other application or purpose. This Limitations section applies to the actuarial report. The financial / economic report included in this Set Three report is not part of the actuarial report.

I, Daniel Bailey, am Director of Actuarial Services with Ingenix Consulting. I am a fellow of the Society of Actuaries and a member of the American Academy of Actuaries, in good standing, and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. Please contact me if you have questions. My e-mail address is Daniel.Bailey@IngenixConsulting.com, and my office phone is 860-221-0245.

Daniel Bailey, FSA, MAAA

A handwritten signature in cursive script that reads "Daniel Bailey".

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APPENDIX ONE

**WEIGHTED AVERAGE COST OF EACH MANDATE
ACROSS ALL CARRIERS**

MANDATE

DESCRIPTION

1	Psychotropic Drugs
2	Mental Illness
3	Accidental Ingestion
4	Elevated Blood Alcohol Levels
5	Medical Complications of Alcoholism
6	Occupational Therapy
7	PAs and Certain Nurses
8	Veteran's Home
9	Direct access to ob/gyn
10	Chiropractors

GROUP				
ALLOWED			PAID	
2007	2008		2007	2008
\$ 7.35	\$ 8.83		\$ 5.62	\$ 6.75
\$ 8.94	\$ 9.63		\$ 7.23	\$ 7.71
\$ 0.02	\$ 0.03		\$ 0.02	\$ 0.03
\$ 0.05	\$ 0.04		\$ 0.05	\$ 0.03
\$ 0.30	\$ 0.37		\$ 0.28	\$ 0.34
\$ 1.00	\$ 1.12		\$ 0.68	\$ 0.78
\$ -	\$ -		\$ -	\$ -
\$ 0.29	\$ 0.42		\$ 0.19	\$ 0.30
\$ -	\$ -		\$ -	\$ -
\$ 3.16	\$ 3.13		\$ 2.19	\$ 2.30
\$ 21.12	\$ 23.56		\$ 16.27	\$ 18.24

TOTAL

1	Psychotropic Drugs
2	Mental Illness
3	Accidental Ingestion
4	Elevated Blood Alcohol Levels
5	Medical Complications of Alcoholism
6	Occupational Therapy
7	PAs and Certain Nurses
8	Veteran's Home
9	Direct access to ob/gyn
10	Chiropractors

INDIVIDUAL				
ALLOWED			PAID	
2007	2008		2007	2008
\$ 5.11	\$ 6.04		\$ 3.00	\$ 3.62
\$ 6.06	\$ 6.92		\$ 4.48	\$ 5.09
\$ 0.00	\$ 0.03		\$ 0.00	\$ 0.02
\$ 0.26	\$ 0.10		\$ 0.22	\$ 0.09
\$ -	\$ -		\$ -	\$ -
\$ 0.49	\$ 0.50		\$ 0.34	\$ 0.38
\$ -	\$ -		\$ -	\$ -
\$ 0.31	\$ 0.24		\$ 0.17	\$ 0.13
\$ -	\$ -		\$ -	\$ -
\$ 2.21	\$ 2.23		\$ 1.14	\$ 1.12
\$ 14.45	\$ 16.07		\$ 9.34	\$ 10.45

TOTAL

APPENDIX TWO

**AVERAGE COST SHARING
ACROSS ALL CARRIERS**

MANDATE	DESCRIPTION	GROUP		INDIVIDUAL	
		2007	2008	2007	2008
1	Psychotropic Drugs	\$ 1.73	\$ 2.08	\$ 2.11	\$ 2.42
2	Mental Illness	\$ 1.70	\$ 1.92	\$ 1.59	\$ 1.83
3	Accidental Ingestion	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
4	Elevated Blood Alcohol Levels	\$ 0.01	\$ 0.00	\$ 0.04	\$ 0.01
5	Medical Complications of Alcoholism	\$ 0.02	\$ 0.03	\$ -	\$ -
6	Occupational Therapy	\$ 0.63	\$ 0.67	\$ 0.15	\$ 0.12
7	PAs and Certain Nurses				
8	Veteran's Home	\$ 0.10	\$ 0.12	\$ 0.14	\$ 0.12
9	Direct access to ob/gyn				
10	Chiropractors	\$ 0.97	\$ 0.83	\$ 1.08	\$ 1.11
TOTAL		\$ 5.16	\$ 5.65	\$ 5.11	\$ 5.62

COST SHARING AS % OF ALLOWED CHARGES

MANDATE	DESCRIPTION	GROUP		INDIVIDUAL	
		2007	2008	2007	2008
1	Psychotropic Drugs	23.6%	23.5%	41.3%	40.1%
2	Mental Illness	19.1%	19.9%	26.1%	26.4%
3	Accidental Ingestion	3.1%	11.2%	33.3%	17.9%
4	Elevated Blood Alcohol Levels	14.0%	9.9%	17.0%	12.3%
5	Medical Complications of Alcoholism	8.1%	7.1%		
6	Occupational Therapy	32.1%	30.6%	30.8%	24.5%
7	PAs and Certain Nurses				
8	Veteran's Home	33.6%	27.7%	45.7%	47.5%
9	Direct access to ob/gyn				
10	Chiropractors	30.5%	26.5%	48.6%	49.9%

Appendix to Financial Economic Report
Percent of Family Income Spent on Mandate Related Services
Results of the Income - Benefit Modeling

Global Assumptions

- 1 A variety of sources were used for the cost assumptions including the Carriers' data, assumptions used in the actuarial report or in the previous phase of the project, and service cost in the literature.
- 2 Calculations shown here for the high deductible plans are for group insurance. The cost burden will be higher for the individual insurance plans because the deductible levels are higher for individual insurance plans. For a broader discussion of how group plans compare to the individual plans, pl see the actuarial report.

PSYCHOTROPIC MEDICATIONS

Low Cost Scenario

Assumptions:

- 1 We have assumed annual medication cost of \$600
- 2 High-ded plan family has not met any ded prior to this service

INCOME	BENEFIT →	Generous Plan	Member	HD Plan	Uninsured
		(10% Mbr Share)	Share 25%		
↓ 50,000		0.12%	0.30%	1.20%	1.20%
80,000		0.08%	0.19%	0.75%	0.75%
160,000		0.04%	0.09%	0.38%	0.38%

High Cost Scenario

Assumptions:

- 1 We have assumed annual medication cost of \$1,800
- 2 High-ded plan family has not met any ded prior to this service

INCOME	BENEFIT →	Generous Plan	Member	HD Plan	Uninsured
		(10% Mbr Share)	Share 25%		
↓ 50,000		0.36%	0.90%	3.60%	3.60%
80,000		0.23%	0.56%	2.25%	2.25%
160,000		0.11%	0.28%	1.13%	1.13%

MENTAL AND NERVOUS CONDITIONS

Therapy Only Scenario

Assumptions:

- 1 We have assumed cost of 6-sessions therapy is \$750
- 2 High-ded plan family has not met any ded prior to this service

		BENEFIT →			
INCOME		Generous Plan (10% Mbr Share)	Member Share 20%	HD Plan	Uninsured
↓	50,000	0.15%	0.30%	1.50%	1.50%
	80,000	0.09%	0.19%	0.94%	0.94%
	160,000	0.05%	0.09%	0.47%	0.47%

Therapy & Inpatient Stay Scenario

Assumptions:

- 1 We have assumed cost of 6-sessions therapy and inpatient stay is \$3,750
- 2 High-ded plan family has not met any ded prior to this service

		BENEFIT →			
INCOME		Generous Plan (10% Mbr Share)	Member Share 20%	HD Plan	Uninsured
↓	50,000	0.75%	1.50%	7.50%	5.10%
	80,000	0.47%	0.94%	4.69%	3.19%
	160,000	0.23%	0.47%	2.34%	1.59%

ACCIDENTAL INGESTION

Assumptions:

- 1 We have assumed cost of ER is \$944 and Inpatient stay is \$8,000
- 2 High-ded plan family has not met any ded prior to this service

		BENEFIT →			
INCOME		Generous Plan (10% Mbr Share)	Member Share 20%	HD Plan	Uninsured
↓	50,000	1.79%	3.58%	7.18%	17.89%
	80,000	1.12%	2.24%	4.49%	11.18%
	160,000	0.56%	1.12%	2.24%	11.18%

ALCOHOL RELATED INJURIES

Assumptions:

- 1 We have assumed that the cost of an episode is \$10,405
- 2 High-ded plan family has not met any ded prior to this service

		BENEFIT →			
INCOME		Generous Plan (10% Mbr Share)	Member Share 20%	HD Plan	Uninsured
↓	50,000	2.08%	4.16%	7.76%	20.81%
	80,000	1.30%	2.60%	4.85%	13.01%
	160,000	0.65%	1.30%	2.43%	13.01%

MEDICAL COMPLICATIONS OF ALCOHOLISM

Assumptions:

- 1 We have assumed that the cost of a DETOXIFICATION episode is \$5,000
- 2 High-ded plan family has not met any ded prior to this service

		BENEFIT →			
INCOME		Generous Plan (10% Mbr Share)	Member Share 20%	HD Plan	Uninsured
↓	50,000	1.00%	2.00%	5.60%	10.00%
	80,000	0.63%	1.25%	3.50%	6.25%
	160,000	0.31%	0.63%	1.75%	6.25%

CHIROPRACTIC SERVICES

Assumptions:

- 1 We have assumed that the cost of \$2,431 for a year long treatment of back pain
- 2 High-ded plan family has not met any ded prior to this service

		BENEFIT →			
INCOME		Generous Plan (10% Mbr Share)	Member Share 20%	HD Plan	Uninsured
↓	50,000	0.49%	0.97%	4.57%	4.86%
	80,000	0.30%	0.61%	2.86%	3.04%
	160,000	0.15%	0.30%	1.43%	3.04%

The other 4 mandates did lend themselves to cost burden analysis

Appendix III

Index of Health Insurance Mandates



INDEX OF MANDATES

Volume I	
Chapter	Description
1	Diabetes Self Management Training
2	Prostate Cancer Screening
3	Ostomy-Related Supplies
4	Hearing Aids for Children Twelve and Under
5	Craniofacial Disorders
6	Inpatient, Outpatient or One-day Dental Services
7	Diabetes Testing and Treatment
8	Birth to Three Program
9	Lyme Disease Treatments
10	Colorectal Cancer Screening
11	Tumors and Leukemia

Volume II	
Chapter	Description
1	Mammography and Breast Ultrasound
2	Maternity Minimum Stay
3	Mastectomy or Lymph Node Dissection Minimum Stay
4	Prescription Contraceptives
5	Infertility Diagnosis and Treatment
6	Autism Spectrum Disorder Therapies
7	Coverage for Newborn Infants
8	Blood Lead Screening and Risk Assessment
9	Preventive Pediatric Care and Blood Lead Screening
10	Low Protein Modified Food Products, Amino Acid Modified Preparations and Specialized Formulas
11	Neuropsychological Testing for Children Diagnosed with Cancer

INDEX OF MANDATES

Volume III	
Chapter	Description
1	Psychotropic Drug Availability
2	Mental or Nervous Conditions
3	Accidental Ingestion or Consumption of Controlled Drugs
4	Denial of Coverage Prohibited for Health Services to People with Elevated Blood Alcohol Content
5	Treatment of Medical Complications of Alcoholism
6	Occupational Therapy
7	Services of Physician Assistants and Certain Nurses
8	Services Provided by the Veterans' Home
9	Direct Access to OB/GYNs
10	Chiropractic Services

Volume IV	
Chapter	Description
1	Experimental Treatments
2	Off-label Use of Cancer Drugs
3	Cancer Clinical Trials
4	Hypodermic Needles and Syringes
5	Prescription Drugs Removed from Formulary
6	Home Health Care
7	Ambulance Services
8	Prescription Drug Coverage/Mail Order Pharmacies
9	Copayments Regarding In-Network Imaging Services
10	Comprehensive Rehabilitation Services (mandatory offer)
11	Mobile Field Hospital
12	Pain Specialist
13	Maternity Benefits and Pregnancy Care Following Policy Termination



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