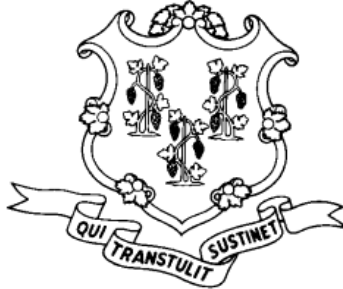


# Occupational Disease in Connecticut, 2017



This report covers data for 2015  
and was prepared under contract for the  
State of Connecticut Workers' Compensation Commission,  
John A. Mastropietro, Chairman,  
as part of the Occupational Disease Surveillance Program, operated in  
cooperation with the Connecticut Department of Labor and the  
Connecticut Department of Public Health

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## A. Executive Summary

This report focuses on occupational *disease* reports for 2015 and recent trends in reported cases. It does not address traumatic occupational *injuries*; data for Connecticut injuries can be found at the national Bureau of Labor Statistics at <https://www.bls.gov/iif/oshstate.htm>. Occupational diseases are typically harder to detect than injuries, since they often occur over longer periods of time, and can have multiple (including non-occupational) risks. Therefore, this report uses data from three primary sources as a way of establishing a more complete picture of occupational disease: Workers' Compensation First Report of Injury cases (WCC), physicians' reports under the Occupational Illnesses and Injury Surveillance System (OISS), and the Bureau of Labor Statistics/Conn-OSHA Annual Survey (BLS).

**Table A-1: Summary of Diseases Reported by Systems, 2013-2015**

Type of Disease	BLS/Conn-OSHA			WCC			OISS (Physicians)			Unique Cases*		
	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015
Respiratory & poisonings	300	200	200	429	520	364	120	171	178	521	660	511
Lead **							327	379	425			
Skin	500	400	400	259	230	178	174	140	166	393	343	310
Musculoskeletal***	***	***	***	3,232	3,028	2,831	666	774	734	3,741	3,610	3,403
Infectious				1,199	1,287	1,045	973	1500	1390	1,975	2,572	2,262
Hearing loss	300	300	200	131	138	84	11	12	17	140	147	99
Other***	1,600	1,400	1,500	778	765	788	148	172	178	899	925	940
<b>Total</b>	<b>2,600</b>	<b>2,400</b>	<b>2,300</b>	<b>6,028</b>	<b>5,968</b>	<b>5,290</b>	<b>2,419</b>	<b>3,148</b>	<b>3,088</b>	<b>7,669</b>	<b>8,257</b>	<b>7,525</b>

**Sources:** BLS: Bureau of Labor Statistics/Conn-OSHA; WCC: CT Workers' Compensation Commission, First Report of Injury database  
OISS: Occupational Illnesses and Injury Surveillance System

\*Unique cases are the combined total of Workers' Compensation cases and Physicians Reports, adjusted for cases reported to both systems

\*\*Laboratory reports of adult blood lead levels are from the Connecticut Adult Blood Lead Epidemiology and Surveillance program.

\*\*\* Musculoskeletal Disorders (MSD) definitions vary somewhat between systems. MSD is included in the "other" category for BLS/Conn-OSHA data

Table A-1 summarizes the data from the three different sources for the last 3 years. The BLS survey rounds to the nearest 100, so the subcategories do not always sum exactly to the total and yearly changes should be viewed with caution. The OISS draws from physician reports for known or suspected occupational illnesses that are required of all physicians but in practice are mostly from the network of occupational health clinics (and therefore are likely to relatively over-represent illnesses from those hospitals. Approximately 2,300 cases of occupational diseases were reported under the BLS/Conn-OSHA survey, 5,290 through the workers' compensation first report of injuries and 3,088 for OISS (including lead reports) for 2015. The number of reports in 2015 decreased 4% from 2014 in the BLS system, 11% for workers' compensation, and 2% for physicians' reports. Reports from workers' compensation and physicians combined (adjusting for cases reported to both systems) totaled 7,525 unique reports (excluding the 425 lead poisoning cases), a decrease of 9% from the previous year. Statistically adjusting for estimated unreported cases produces an estimate of approximately 33,000 cases of occupational illnesses in Connecticut for 2015.

**Musculoskeletal disorders (MSD)** such as Carpal Tunnel Syndrome and tendonitis dominated the workers' compensation reports, accounting for 54% of reports (28% of the physicians reports). MSD has not been broken out by BLS since 2002, but MSD cases are presumed to be the main portion of the "other illness" category, which is by far the largest BLS category. **Respiratory diseases and poisonings**, which include respiratory conditions and lung disease such as asthma, as well as poisonings such as from carbon monoxide and lead, accounted for 7% of cases for both workers' compensation and physician reports. **Infectious diseases**, which include bloodborne diseases such as HIV and hepatitis, Tb, scabies, Lyme Disease (and including exposures as well as diagnosed disease) accounted for 20% in workers' compensation but 52% of physician

reports (infectious disease is categorized under “other disease” in BLS; also, needlesticks and other bloodborne exposures with lost time are counted under injuries rather than illness in BLS). “Other diseases”, which includes infectious diseases and MSD in BLS, physical hazards such as heat and cold exposures, allergies, cancer, and others in Workers’ Compensation and physician reports, accounted for 7% (physicians) and 16% (WC). **Skin conditions** accounted for 3% (WC) and 6% (physicians). **Lead poisoning** is tracked separately and is based on laboratory reports to the Connecticut Department of Public Health; very few of those cases are reported to the other systems.

There was an overall illness rate of 17.7 cases per 10,000 workers based on the BLS survey, a 5% decrease in the rate from the previous year. The CT rate was 5% higher than the average national rate. The highest specific sector rate based on the BLS survey was Local Government at 37.3 per 10,000 workers, with the highest rates for respiratory disorders (5.0) and other illnesses (23.1). State government had the second highest specific sector rate at 31.9, with the highest rate for skin disorders (20.6). Manufacturing had the third highest rate at 31.1, with the second highest rate for “other illnesses” (16.2) and the highest rate for hearing loss (10.8).

Overall (based on Workers’ Compensation reports), approximately 49% were for **women**, but this varied by type of case, with women accounting for 62% of infectious cases. Based on workers’ compensation reports, occupational illnesses occurred more in **older workers**, with over half involving workers between 40 and 59 years old. Based on physician reports where **race and ethnicity** were known, 16% of cases were black and 8% Hispanic.

The most common specific diagnoses for **musculoskeletal disorders** reported by physicians were epicondylitis (tennis elbow) with 19% of the cases, tenosynovitis (16%), strain/sprain (14%), and carpal tunnel syndrome (12%). The most common specific causes (aside from the commonly used terms “repetition” or “cumulative”) for MSD in workers’ compensation reports were pushing or pulling (17%), lifting (17%), tool use (including references specifically to pneumatic tools or vibration exposure) (8%), and computing and clerical tasks (8%).

Nonspecific respiratory illnesses were the most common type of physician-reported **lung condition**, with 40% of reports, followed by asthma or reactive airways dysfunction syndrome (RADS) with 14%. Exposures associated with respiratory conditions included fumes (including gas or carbon monoxide), mold or indoor air quality, chemicals (including solvents, cleaning chemicals, epoxy, and oil), and smoke.

**Infectious disease** and exposures were reported primarily through workers’ compensation. There were 834 reports of potential exposure to bloodborne pathogens (including reports of exposure to HIV/AIDS and Hepatitis C), accounting for 80% of all infectious disease reports. There were 75 reports of tick bites, rashes from tick bites and/or a diagnosis of Lyme disease attributed to occupational exposures. There were 37 cases of tuberculosis infection, usually determined by PPD conversion (which is a skin test based on immune response) or based on exposure to patients or clients with TB. This was a decrease of 68% from 2014, when there was one particularly large outbreak at a facility. In addition, there were 22 cases of scabies or lice exposures/illnesses, 17 cases of meningitis exposure, 7 cases of chicken pox, measles or whooping cough, 4 reports of exposure or cases of MRSA (Methicillin-resistant Staphylococcus aureus, or staph infection that responds poorly to antibiotics) or other staph or strep infections and 3 cases of exposure to rabies.

Based on workers’ compensation reports, rates of illness varied widely by municipality; often these appear to be related to large employers in high rate industries. The overall state mean (average) was 31.8 cases per 10,000 employees. There were 34 towns and cities with at least 50 cases of occupational disease. Of those, Cromwell had the highest rate at 70 cases per 10,000 employees, well over double the median rate for these towns (29). Cromwell was followed by Farmington (55 cases per 10,000), Vernon (53), Middletown (50), Cheshire (45), South Windsor (45), Groton (45), Stratford (44), New London (40), and Berlin (40). Figure A-1, a map of the rates by town is below, with rates listed in Table D-6 and Appendix 3 (which includes reports down to 10 cases per town). The map is based on 25 or more cases (prepared by Kevin Evringham of UConn).

**Figure A-1: Map of Occupational Illness Rates by Town, 2014 (following page)**

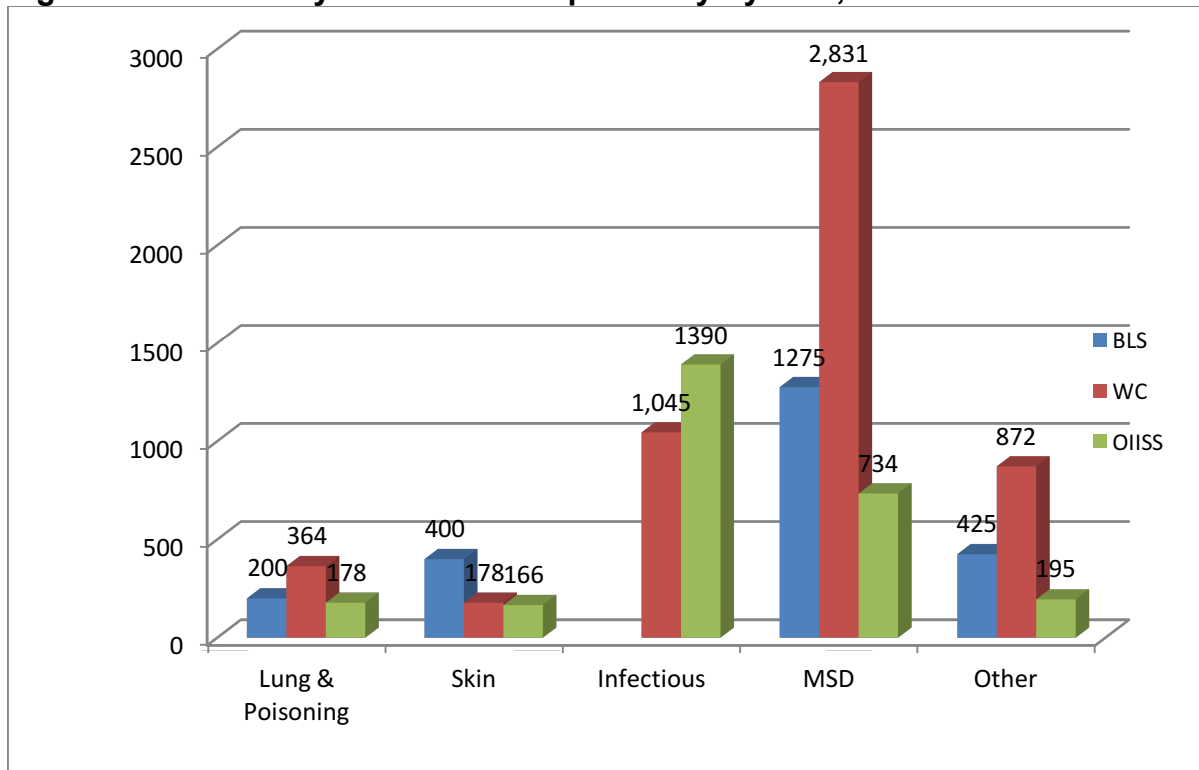




## B. Summary of Diseases

Figure B-1 shows the totals by disease category for 2015 for three reporting systems: the Bureau of Labor Statistics/Conn-OSHA (BLS) survey; Workers' Compensation (WC) First Reports of Injury; and the Occupational Illnesses and Injury Surveillance System (OIISS) physician reports. Categories have been combined to make comparisons as close as possible; however, differences in the three systems' definitions make comparisons incomplete. For example, Workers' Compensation only requires reporting for lost-time or restricted duty cases, while the other two reporting systems require all occupational illnesses to be reported. Although all physicians are legally required to report occupational disease, only a minority report. Lead reports from the laboratory reporting system are combined into "lung and poisoning" under the OIISS. The BLS/Conn-OSHA system discontinued collecting "repetitive trauma" as a category in 2002, so MSD has been estimated based on the proportion of "other illness" in the 2001 dataset, which was 85%. See Appendix 1 for a complete description of methods.

**Figure B-1: Summary of Diseases Reported by System, 2015**



**Notes:** BLS=Bureau of Labor Statistics/ConnOSHA survey; WC=Workers' Compensation First Report of Injury Database; OIISS=Physicians reports from the Occupational Illnesses and Injury Surveillance System combined with laboratory reports of lead poisoning. MSD for the BLS database was estimated using prior proportions from "other" (85%).

The Workers' Compensation database showed the highest number of cases, with 5,290 cases reported, followed by the physicians' reporting/laboratory database with 3,088 cases, and by the BLS survey with 2,300. There is a low amount of overlap between these systems, so total cases are higher than these figures might indicate.

Longer term trends in number of reports are complex (Figure B2), with BLS trends generally declining; Workers' Compensation data generally slightly declining since 2008 (the Workers' Compensation database appears incomplete in 2003 and 2005-2007); and Physician reports fluctuating but decreasing the last 2 years after 5 years of increases.

## Case Matching and Total of Unique and Estimated Cases of Occupational Illness

There is a fairly low number of cases that are reported to both workers' compensation and by physicians. In order to get a better estimate of the total number of cases of occupational illness in Connecticut, cases were matched by name, employer, and type of illness for the WC and OIIS reports (Table B-1). This allows a sum of unique cases that were reported to at least one of the two systems and an estimate of cases that were not reported to either. Individual level BLS/ConnOSHA data from their survey was not available for matching, and lab-based lead reports did not have enough detail to match, so lead reports are not included in Table B-1.

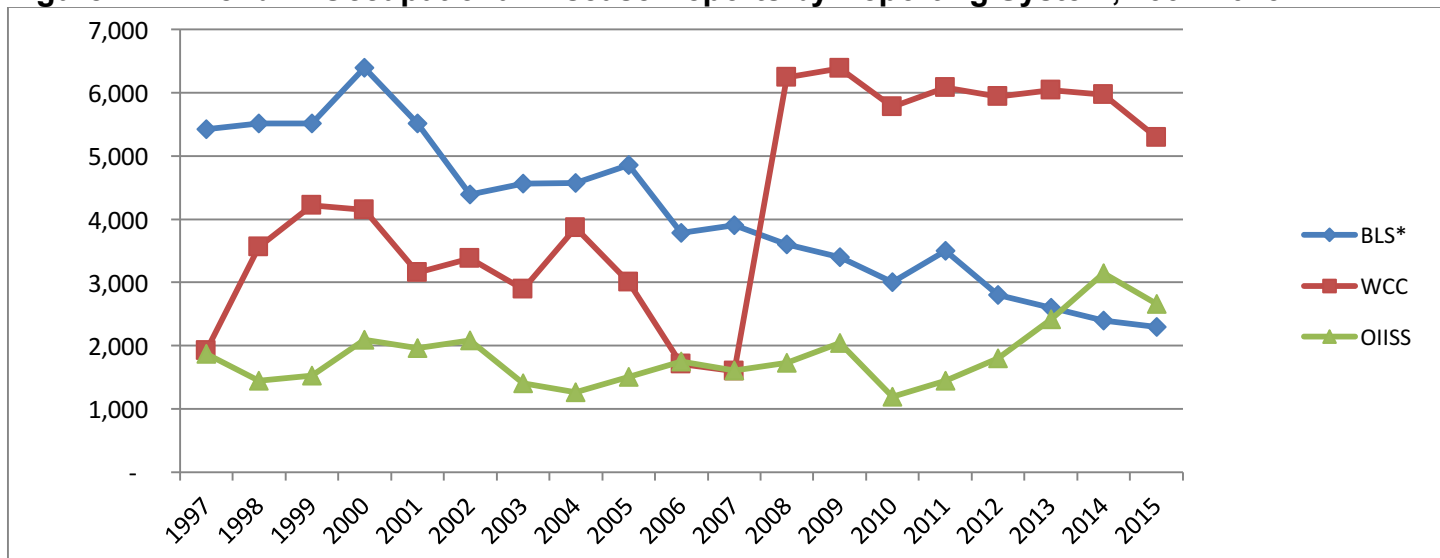
**Table B-1: Matched, Unique, and Estimated Total Cases of Occupational Illness, CT, 2015**

Illness Type	Matched	ODSS Only	WC Only	Unique	Estimated Unreported	Estimated Total
Infectious	173	1,217	872	2,262	6,134	8,396
Lung	31	147	333	511	1,579	2,090
MSD	162	572	2,669	3,403	9,424	12,827
Other	28	167	844	1,039	5,034	6,073
Skin	34	132	144	310	559	869
<b>Total</b>	<b>428</b>	<b>2,235</b>	<b>4,862</b>	<b>7,525</b>	<b>25,389</b>	<b>32,914</b>

There were a total of 428 cases that were reported to **both** workers' compensation (WC) and by physicians (OIIS system); 2,235 cases were reported only by the physician report system, and an additional 4,862 cases were reported only to the workers' compensation system. This gives a total of 7,525 unique cases that were reported to at least one of the two systems, with approximately 2,300 infectious cases, 500 lung cases, 3,400 musculoskeletal (MSD) cases, 300 skin conditions, and 1,000 "other" cases.

Using a statistical method called "capture-recapture" analysis, an estimate was made of the unreported cases (cases not reported to either workers' compensation nor by physicians), which was about 25,000 cases. When combined with the unique cases, this provides an estimate of approximately 33,000 occupational illness cases in Connecticut for 2015.

**Figure B-2: Trend in Occupational Disease Reports by Reporting System, 1997-2015**



**Notes:** BLS= Bureau of Labor Statistics/Conn-OSHA survey; WCC= Workers' Compensation First Report of Injury; OIIS= Occupational Illness and Injury Surveillance System (physician reports).

**\*Note:** BLS figures in 2002 not comparable to prior years due to changes in data collection. WCC data may not be complete for 2003 and 2005-2007. OIIS was not complete for 2010, and did not include most bloodborne infectious diseases/exposures in 2011.

## C. Bureau of Labor Statistics/Connecticut Occupational Safety and Health Administration Surveys

In cooperation with the U.S. Bureau of Labor Statistics (BLS), Conn-OSHA conducts an annual survey of employers for job-related injuries and illnesses; data on injuries in Connecticut can be accessed through the national Bureau of Labor Statistics website at <https://www.bls.gov/iif/oshstate.htm>. Our report focuses on illnesses, and includes data from Conn-OSHA that is not published in that report. Since these statistics are based on a survey rather than a census, numbers and rates are estimated and rounded. The Connecticut Department of Labor acknowledges that the BLS/Conn-OSHA survey under-counts occupational diseases, particularly chronic diseases, since these are frequently not recognized nor reported.

### Occupational Illnesses in 2015

There were approximately 2,300 reported cases of occupational illnesses in 2015 (Table C-1 and Figure C-1) with an overall rate of 17.7 per 10,000 workers, approximately a 5% decrease from the prior year.

**Table C-1: Occupational Disease by Type, BLS/Conn-OSHA 2014-2015**

	2014		2015		% Change in Rate
	Cases	Rates	Cases	Rates	
Respiratory	200	1.9	200	1.5	-21%
Skin	400	3.4	400	3.0	-12%
Hearing Loss	300	2.1	200	1.7	-19%
Poisonings	--	--	--	0.2	--
Other*	1,400	11.0	1,500	11.3	3%
<b>Total</b>	<b>2,400</b>	<b>18.7</b>	<b>2,300</b>	<b>17.7</b>	<b>-5%</b>

**Source:** BLS/Conn-OSHA; Rates are per 10,000 workers, adjusted for hours worked. The data includes public sector. Blanks indicate numbers that are too small or unreliable to publish. Total Illnesses may differ from sum due to rounding errors.

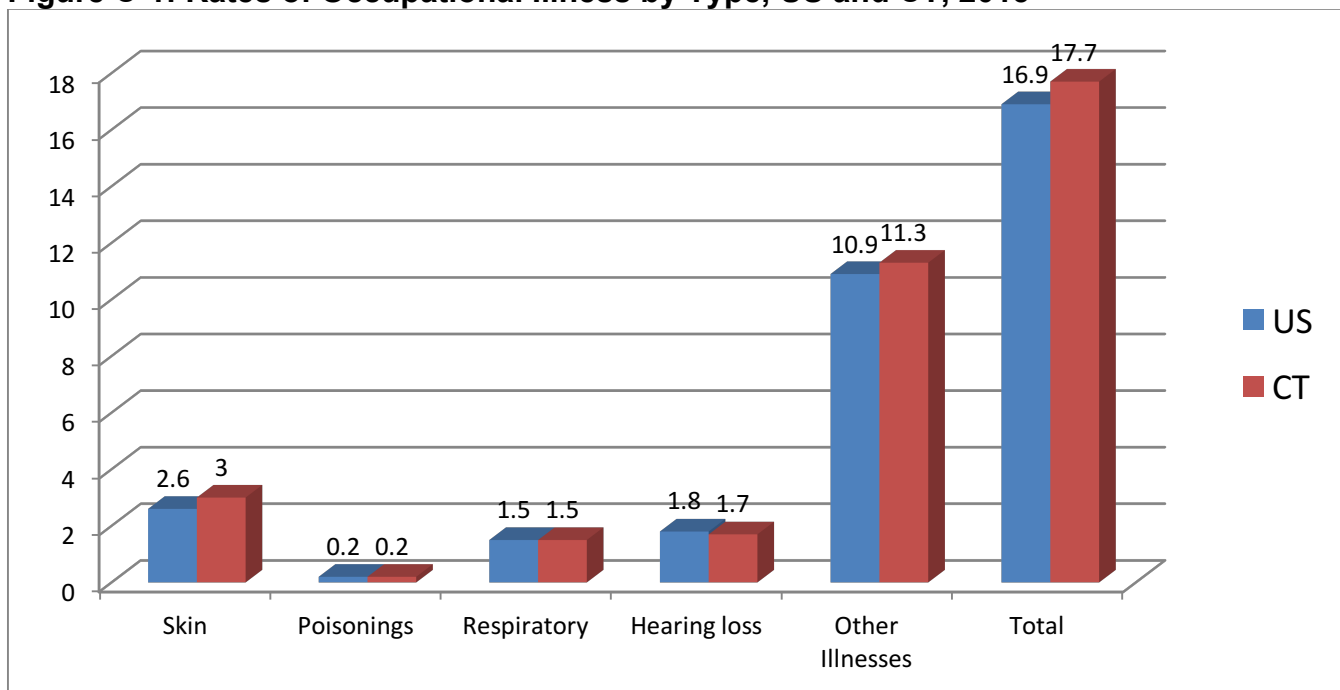
\*Musculoskeletal disorders (MSD) is categorized under the "Other" category by BLS.

Overall rates for Connecticut in 2015 were higher than the U.S., driven primarily by the large category of "Other Illnesses" (which includes repetitive trauma cases such as carpal tunnel syndrome and tendonitis) and skin conditions (Figure C-1). The overall Connecticut rate (17.7 cases per 10,000 workers) was 5% higher than the U.S. rate of 16.9. Rates decreased in 2015 for both Connecticut and the U.S.

Connecticut's illness rate ranked 18<sup>th</sup> highest out of 42 states with publishable data (seventeen states had higher rates and 24 had lower rates). Maine had the highest rate of 38.1 and The District of Columbia had the lowest at 7.5 (Texas was next lowest at 9.4). Private sector rates for occupational illness were 15.4 in Connecticut and 14.6 nationally. Connecticut's public sector rate was 35.4; the U.S. public sector rate was 32.0.

In Connecticut, the rate of illnesses increased slightly from 2002-2005, then generally decreased through 2015 with the exception of 2011 (Figure C-2).

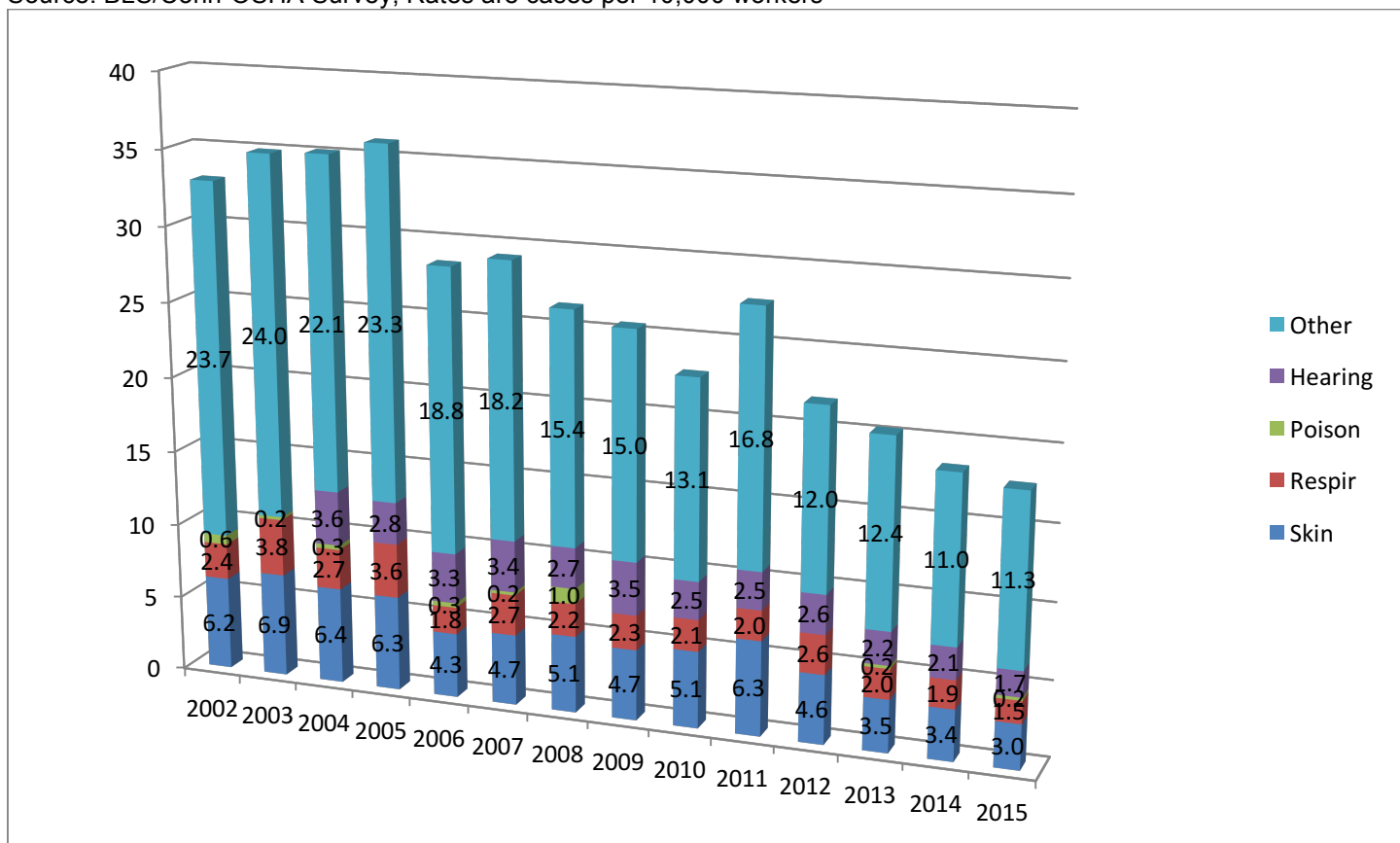
**Figure C-1: Rates of Occupational Illness by Type, US and CT, 2015**



Source: BLS and Conn-OSHA. Rates per 10,000 workers, adjusted for hours worked.

**Figure C-2: Rates of Occupational Disease by Type and Year, CT, 2002-2015**

Source: BLS/Conn-OSHA Survey; Rates are cases per 10,000 workers



## Illnesses by Industry

Numbers and rates by industry sector for 2015 are presented in Table C-2. Overall, the adjusted rate was 17.7 cases of occupational illness per 10,000 CT workers, 5% lower than the 2014 rate of 18.7. The overall private sector rate was 15.4 (compared to 15.8 in 2014), with a government rate of 35.4 (compared to 40.9 in 2014, and more than double the private sector rate).

**Table C-2: Illness Rates per 10,000 Workers by Industry and Type of Illness, CT, 2015**

	Total		Skin		Respiratory		Poison		Hearing		Other	
	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.
<b>All industries and government</b>	17.7	2.3	3.0	0.4	1.5	0.2	0.2	--	1.7	0.2	11.3	1.5
<i>PRIVATE INDUSTRY</i>	15.4	1.8	1.8	0.2	1.2	0.1	0.2	--	1.8	0.2	10.4	1.2
<b>Goods Producing</b>	25.0	0.5	2.4	0.1	--	--	--	--	8.0	0.2	13.5	0.3
Natural resources and mining	--	--	--	--	--	--	--	--	--	--	--	--
Construction	7.0	--	--	--	--	--	--	--	--	--	6.4	--
Manufacturing	31.1	0.5	3.3	0.1	--	--	--	--	10.8	0.2	16.2	0.3
<b>Service Providing</b>	13.1	1.2	1.6	0.2	1.3	0.1	--	--	0.4	--	9.7	0.9
Trade, transportation, and utilities	13.1	0.3	1	--	1.2	--	--	--	--	--	10.4	0.2
Information	10.2	--	--	--	--	--	--	--	7.1	--	--	--
Financial activities	3.8	--	--	--	--	--	--	--	--	--	3.5	--
Professional and business services	10.2	0.2	1.6	--	--	--	--	--	--	--	5.6	0.1
Education and health services	25	0.6	3.1	0.1	1.8	--	--	--	--	--	20	0.5
Leisure and hospitality	5.3	0.1	2.4	--	--	--	--	--	--	--	2.3	--
Other services	--	--	--	--	--	--	--	--	--	--	--	--
<i>STATE AND LOCAL GOVERNMENT</i>	35.4	0.5	12.2	0.2	4.1	0.1	--	--	1.1	--	18	0.3
State Government	31.9	0.2	20.6	0.1	--	--	--	--	--	--	8.9	--
Local Government	37.3	0.4	7.5	0.1	5.0	--	--	--	1.7	--	23.1	0.2

**Source:** Conn-OSHA; Rates are adjusted for hours worked, and are per 10,000 full-time workers. Blanks indicate too little data for reliable estimates.

Local government had the highest sector rate at 37.3 cases per 10,000 workers, with the highest rates for respiratory disorders (5.0) and other illnesses (23.1). State government had the second highest specific sector rate at 31.9, with the highest rate for skin disorders (20.6). Manufacturing had the third highest rate at 31.1, with the second highest rate of “other illnesses” (16.2) and the highest rate of hearing loss (10.8).

## Lost-Time Illnesses

BLS obtains additional data for the subset of cases that result in lost worktime and provide additional detail on specific conditions and causes. The following draws from this data for conditions that are more chronic in nature (usually classified as occupational illness). (Restricted work cases are not included in this section, which is about half again the number of lost worktime cases.)

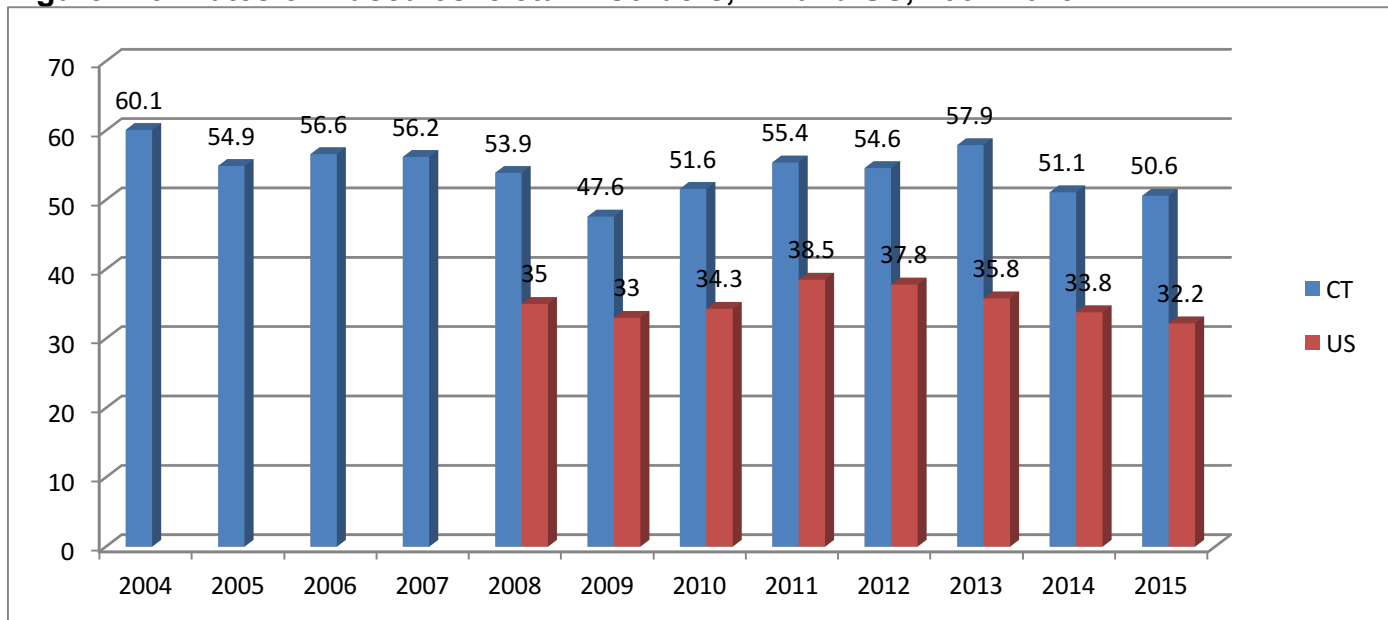
### Musculoskeletal Conditions

The rate of musculoskeletal disorders (MSD) with lost time was 1% lower than the previous year at 50.6 cases per 10,000 workers (Figure C-3). The Connecticut rate is 57% higher than the national MSD rate of 32.2. MSD rates in Connecticut have generally decreased over the last five years. National rates for all private and public employees have only been available since 2008.

Musculoskeletal conditions are the most common category of specific injury and illness conditions, and is a category that includes both chronic conditions and sprains and strains from overexertion. BLS defines this fairly complex category as “includes cases where the nature of the injury or illness is pinched nerve; herniated disc;

meniscus tear; sprains, strains, tears; hernia (traumatic and non-traumatic); pain, swelling, and numbness; carpal or tarsal tunnel syndrome; Raynaud's syndrome or phenomenon; musculoskeletal system and connective tissue diseases and disorders, when the event or exposure leading to the injury or illness is overexertion and bodily reaction, unspecified; overexertion involving outside sources; repetitive motion involving microtasks; other and multiple exertions or bodily reactions; and rubbed, abraded, or jarred by vibration.”

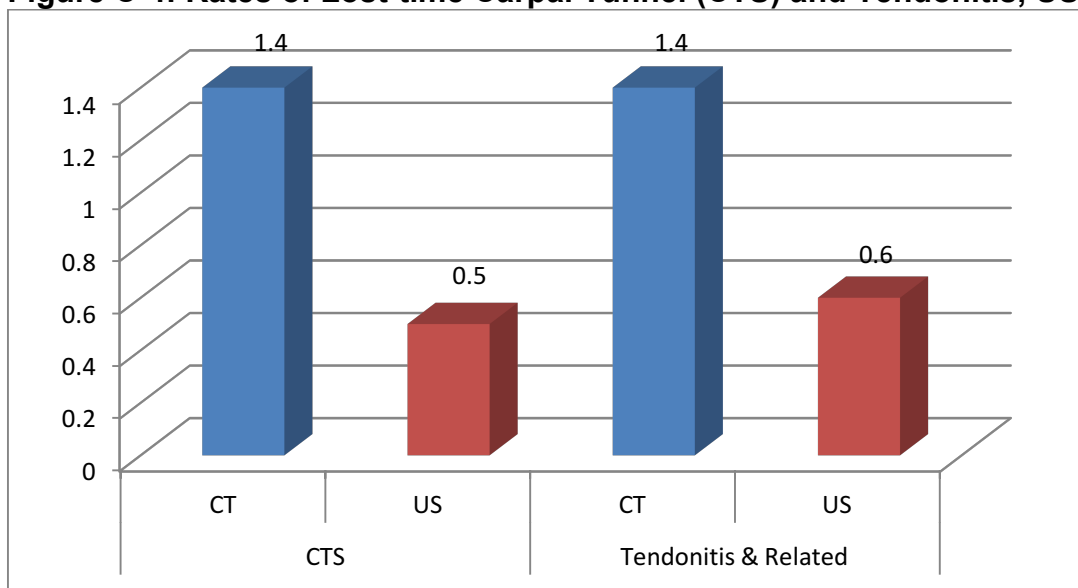
**Figure C-3: Rates of Musculoskeletal Disorders, CT and US, 2004-2015**



Source: BLS Website <http://data.bls.gov/gqt/ProfileState>  
 Rates are cases per 10,000 full time employees.

**Carpal Tunnel Syndrome (CTS)** was the most common specific illness in CT, with a rate of 1.4 cases per 10,000 workers in 2015 (Figure C-4), and 1.4 cases per 10,000 of **tendonitis**. The rate of CTS in CT was 180% higher than the national rate, and 133% higher for tendonitis. CTS had a very high number of lost work days, with a median of 30 days of lost time per case (compared to 8 days for all cases of injury and illness) in CT. Tendonitis (and related soft-tissue disorders) was also high at 32 days.

**Figure C-4: Rates of Lost-time Carpal Tunnel (CTS) and Tendonitis, US & CT, 2015**



Source: BLS Website <http://www.bls.gov/iif/data.htm>; cases per 10,000 full time employees.

Connecticut lost time cases coded as “**repetitive motion**” for cause increased to 3.9 cases per 10,000 workers from 2.5 in the previous year. Computer tasks was the largest specific cause of repetitive motion (Table C-3). The CT rate was 77% higher than the national rate of 2.2. Repetitive motion lost time cases in CT had a median of 23 days away from work.

**Table C-3: Injuries involving Repetitive Motion by Type, 2014-2015**

<b>Repetitive Motion Injuries</b>	<b>2014</b>	<b>2015</b>
Microtasks (unspecified)	0.8	0.9
Typing and computer	0.6	1.1
Tools	0.2	0.5
Grasping, placing, moving	*	0.6
Hand use (not tools)	0.4	0.4
Multiple types of repetitive motions	0.3	0.1
Other microtasks	0.2	0.3
<b>All repetitive with microtasks (total)</b>	<b>2.5</b>	<b>3.9</b>

## D. Workers' Compensation First Report of Injury Data

There were a total of 5,290 reports in the Workers' Compensation First Report of Injury Database for 2015 (Table D-1), an 11% decrease from 2014, with a 30% decrease in lung disorders, a 23% decrease in skin disorders, a 19% decrease in infectious diseases, and a 7% decrease in musculoskeletal disorders (MSD).

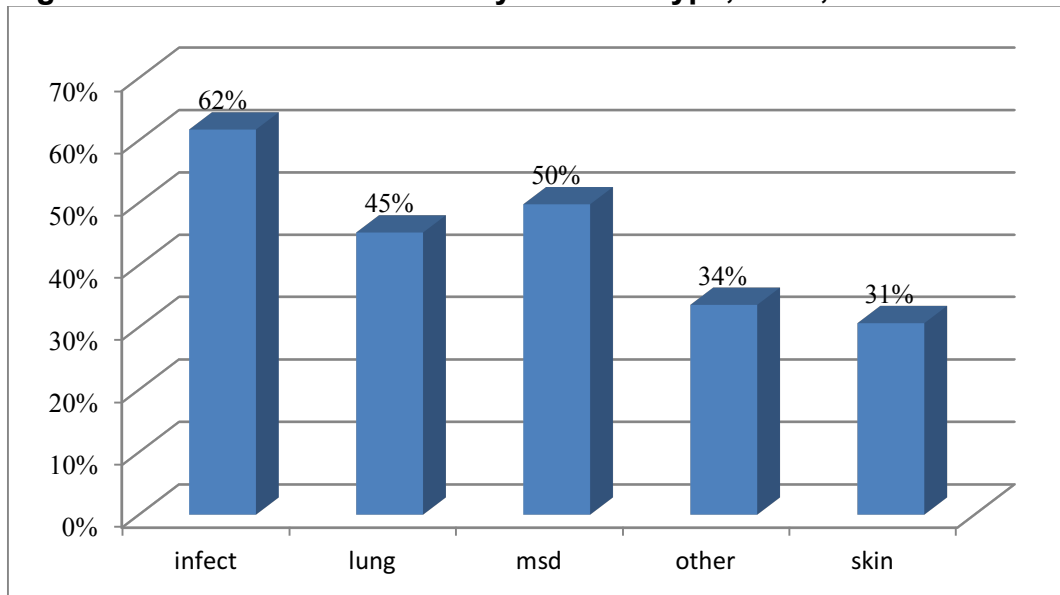
Over half (54%) of reports were due to chronic musculoskeletal disorders (MSD) such as carpal tunnel syndrome and tendonitis. Infectious diseases accounted for 20% of the cases, lung diseases (including nonspecific respiratory illness and chronic lung conditions such as asthma and asbestos-related illnesses and exposures) 7%, skin diseases 3%, and "Other Illnesses" (which includes heart conditions, stress cases, noise-induced hearing loss, and other conditions), 16%.

**Table D-1: Occupational Disease by Type, WCC, 2014-2015**

Illness type	2014	2015		% Change
	Cases	Cases	% of total	
Musculoskeletal Disorders (MSD)	3,028	2,831	54%	-7%
Infectious Disease	1,287	1,045	20%	-19%
Lung Disorders	520	364	7%	-30%
Skin Disorders	230	178	3%	-23%
Other Illnesses	903	872	16%	-3%
<b>Total</b>	<b>5,968</b>	<b>5,290</b>	<b>100%</b>	<b>-11%</b>

Overall, 49% of reports were for women, but this varied by type of case, with higher proportions than average for infectious diseases (62% women) but equal or lower for all other types of illness (Figure D-1). Reported occupational illnesses occurred more in older workers, with over half involving workers between 40 and 59 years old (Table D-2).

**Figure D-1: Percent of Women by Disease Type, WCC, 2015**



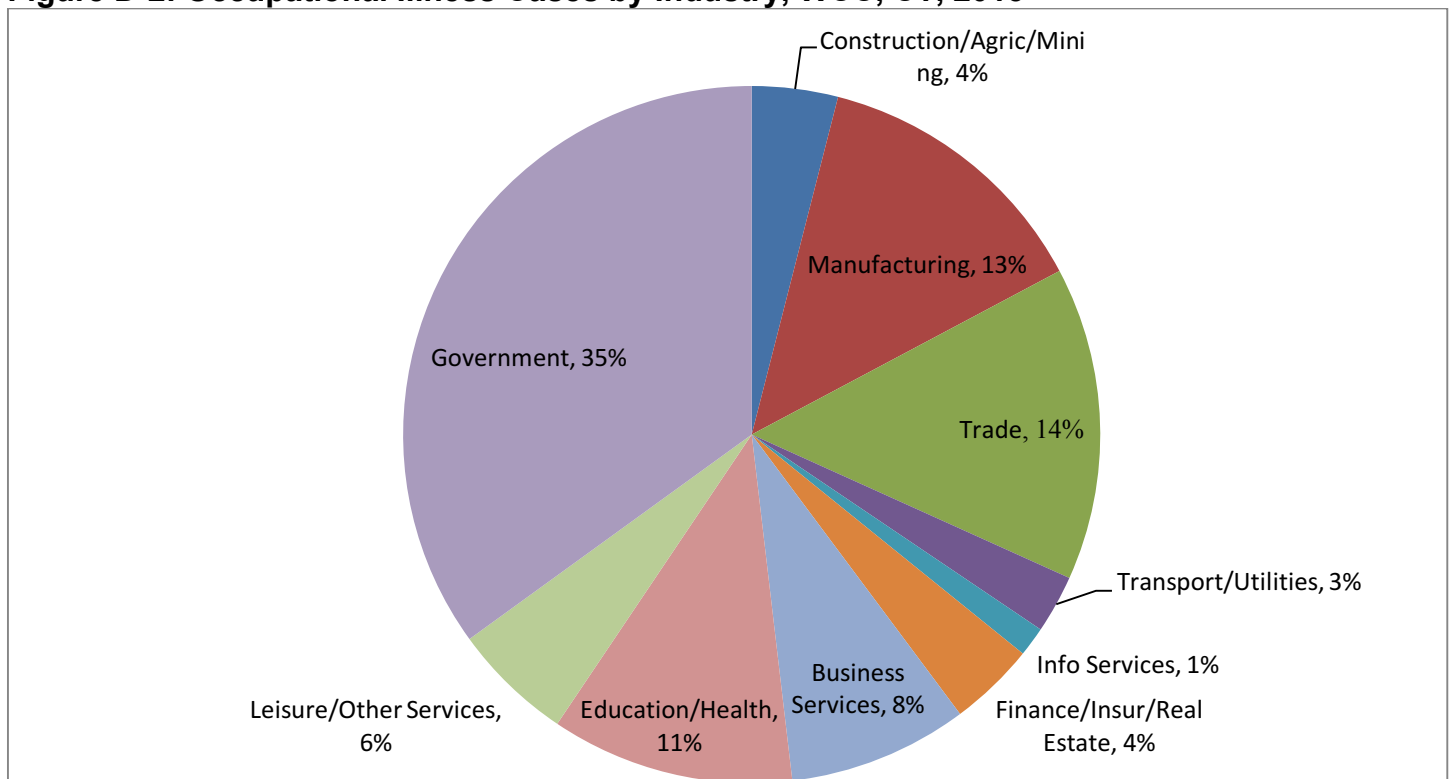


**Table D-2: Occupational Illness by Age Range, 2015**

Age Range	Cases	Percent
Under 20	60	1%
20-29	793	15%
30-39	1,003	19%
40-49	1,241	23%
50-59	1,481	28%
60-69	649	12%
70+	50	1%
<b>Total</b>	<b>5,277</b>	<b>100%</b>

Numbers and rates of occupational illnesses by industry sector are presented by major North American Industry Classification System (NAICS) classifications in Figure D-2 and Table D-3. Ninety-nine percent (99%) of reported cases were able to be coded for major industry sector. The largest sectors in terms of overall numbers were Government (35%), Trade (14%), Manufacturing (13%), and Education/Health (11% of all cases; there are also health and education cases classified under government, such as employees in public schools).

**Figure D-2: Occupational Illness Cases by Industry, WCC, CT, 2015**



The number of illnesses by industry may be compared to the size of employment in those industries to understand which industries are at higher risk for illness. Table D-3 shows these figures, excluding cases where the industry was unknown. Overall, the rate of illness is 31.8 cases per 10,000 workers. The highest rates were for Government (78.6, 155% higher than the overall rate) and Manufacturing (43.8 or 38% higher).

Table D-4 provides the detail of industry sector by type of condition. Patterns of illness by industry differed by the type of illness, although Government was relatively high in all categories, particularly when considering there are additional cases counted as part of the Education and Health sector. Table D-4 is based on **numbers** of

cases and not **rates**, so they are not adjusted for employment in the different sectors (rates are shown in Tables D-3 and D-5).

**Table D-3: Cases of Occupational Disease by Major Industry Sector, WCC, 2015**

NAICS Sector	Cases	%	Employment	%	Rate
Construction/Agriculture/Mining	210	4%	63,357	4%	33.1
Manufacturing	697	13%	158,955	10%	43.8
Trade	765	14%	247,210	15%	30.9
Transport/Utilities	142	3%	49,348	3%	28.8
Info Services	72	1%	32,352	2%	22.3
Finance/Insurance/Real Estate	210	4%	128,020	8%	16.4
Business Services	439	8%	216,665	13%	20.3
Education/Health	594	11%	319,054	19%	18.6
Leisure/Other Services	295	6%	212,857	13%	13.9
Government	1,842	35%	234,430	14%	78.6
Unknown	24	0%	574		
<b>Total</b>	<b>5,290</b>	<b>100%</b>	<b>1,662,822</b>	<b>100%</b>	<b>31.8</b>

**Notes:** Employment is adjusted for hours worked. A small number of reports that could not be coded for industry are categorized as unknown. Rates are illnesses per 10,000 workers.

\*Government sector includes cases that could alternately be classified under health and education.

Government dominated in all categories of illnesses. **Infectious diseases** were concentrated in Government (61%) and Education/Health (16%). **Lung diseases** were concentrated in Government (55%) and Manufacturing (10%). **Musculoskeletal disorders** (MSD) were most prevalent in Government (21%), Trade (20%), Manufacturing (18%), and Education/Health (12%). **Skin disorders** were spread across Government (35%), Business Services (17%), Education/Health (11%), Manufacturing (10%), and Leisure/Other Services (10%). **“Other” illnesses**, including heart and hypertension, stress, and hearing loss cases (see below) were most common in Government (42%), Manufacturing (13%) and Trade (13%).

**Table D-4: Type of Disease by Industry Sector, WCC, 2015**

	Other		Lung		Infectious		MSD		Skin		Total	
Construction/Agric/Mining	38	4%	16	4%	13	1%	138	5%	5	3%	210	4%
Manufacturing	115	13%	37	10%	14	1%	513	18%	18	10%	697	13%
Trade	111	13%	20	6%	51	5%	569	20%	14	8%	765	15%
Transport/Utilities	23	3%	5	1%	9	1%	100	4%	5	3%	142	3%
Information Services	16	2%	5	1%	4	0%	45	2%	2	1%	72	1%
Finance/Insurance/RE	34	4%	8	2%	18	2%	146	5%	4	2%	210	4%
Business Services	70	8%	23	6%	84	8%	232	8%	30	17%	439	8%
Education/Health	53	6%	32	9%	165	16%	325	12%	19	11%	594	11%
Leisure/Other Services	41	5%	18	5%	49	5%	169	6%	18	10%	295	6%
Government	368	42%	198	55%	634	61%	579	21%	63	35%	1,842	35%
<b>Subtotal</b>	<b>869</b>	<b>100%</b>	<b>362</b>	<b>100%</b>	<b>1,041</b>	<b>100%</b>	<b>2,816</b>	<b>100%</b>	<b>178</b>	<b>100%</b>	<b>5,266</b>	<b>100%</b>
Unknown	3		2		4		15		0		24	
<b>Total</b>	<b>872</b>		<b>364</b>		<b>1,045</b>		<b>2,831</b>		<b>178</b>		<b>5,290</b>	

Table D-5 shows those specific industry (3-digit NAICS code) sectors that reported 25 or more cases of occupational illness in 2015, ordered by the rate of illness. Local Government and State Government do not

show detailed sector (such as Education or Health) since the data did not provide reliable detail. State government had the highest rate of 102.2 per 10,000 workers, followed by local government at 77.0. The next highest rates were Transportation Equipment Manufacturing (57.7) and Miscellaneous Retail Stores (52.9). Although all of the specific sectors in the table had over 25 cases reported, 20 of them were at or below the average overall rate of 31.8 per 10,000 workers (primarily because they are sectors that employ relatively large numbers of workers).

**Table D-5: Specific Industry Sectors with over 25 Cases of Occupational Disease, WCC, 2015**

<b>Specific Industry Sector</b>	<b>NAICS</b>	<b>Cases</b>	<b>Employt</b>	<b>Rate</b>
State Government		685	67,002	102.2
Local Government		1,153	149,709	77.0
Transportation Equipment Manufacturing	336	234	40,703	57.5
Misc. retail stores	453	50	9,451	52.9
Health and personal care stores	446	63	13,105	48.1
Computer and Electronic Product Manufacturing	334	57	12,267	46.5
Plastics and rubber products manufacturing	326	26	5,600	46.4
Electric Power Generation	221	26	5,611	46.3
Wholesale Electronic Markets and Agents and Brokers	425	65	14,194	45.8
Merchant Wholesalers, Nondurable Goods	424	88	19,741	44.6
Fabricated Metal Product Manufacturing	332	129	29,233	44.1
Residential Building Leasing	531	64	14,759	43.4
Electrical Equipment, Appliance, and Component Manufacturing	335	35	8,522	41.1
Miscellaneous Manufacturing	339	36	8,922	40.3
Telecommunications	517	35	9,125	38.4
Food products	311	29	7,574	38.3
Merchant Wholesalers, Durable Goods	423	107	28,576	37.4
Non residential construction	236	41	11,263	36.4
Specialty Trade Contractors	238	134	40,429	33.1
Chemical manufacturing	325	32	9,781	32.7
Transit and ground passenger transport	485	47	14,725	31.9
General Merchandise Stores	452	88	28,949	30.4
Food and Beverage Stores	445	133	44,420	29.9
Administrative and Support Services	561	229	82,243	27.8
General Purpose Machinery Manufacturing	333	39	14,132	27.6
Repair and maintenance	811	37	13,549	27.3
Accommodation	721	31	11,764	26.4
Nursing and Residential Care Facilities	623	147	62,878	23.4
Physician Offices	621	191	87,576	21.8
Hardware Stores	444	31	15,031	20.6
Professional, Scientific, and Technical Services	541	196	95,690	20.5
Amusement, Gambling, and Recreation Industries	713	40	20,460	19.6
Motor vehicle dealers	441	41	21,193	19.3
Hospitals	622	112	58,552	19.1

Clothing and clothing accessories	448	31	17,819	17.4
Educational Services	611	96	56,564	17.0
Credit Intermediation and Related Activities (Banks)	522	39	25,672	15.2
Personal and Laundry Services	812	31	20,786	14.9
Insurance Carriers and Related Activities	524	74	57,031	13.0
Food Services and Drinking Places	722	137	112,692	12.2
Social Assistance	624	48	53,484	9.0

### Illnesses by Town/Municipality

Occupational illnesses were coded by the town where the illness occurred (typically the town where the employer is located). Table D-6 and Figure D-3 shows the rates of illness per 10,000 employees per town (based on total employment by town of employment, provided by the CT Labor Department) for all towns and municipalities with at least 50 cases of occupational illness reported in 2015; the table is ordered by rates. The lower the rank, the higher the rate of illness. Rates of illness varied widely by municipality; often these appear to be related to large employers in high rate industries. The overall state mean (average) was 31.8 cases per 10,000 employees. For towns with at least 50 cases, Cromwell had the highest rate at 70 cases per 10,000 employees, well over double the median rate for these towns (29). Cromwell was followed by Farmington (55 cases per 10,000), Vernon (53), Middletown (50), Cheshire (45), South Windsor (45), Groton (45), Stratford (44), New London (40), and Berlin (40). A longer table for towns with at least 10 cases, listed alphabetically by town, is located in the Appendix. The median rate for towns with at least 10 reports was 28.2.

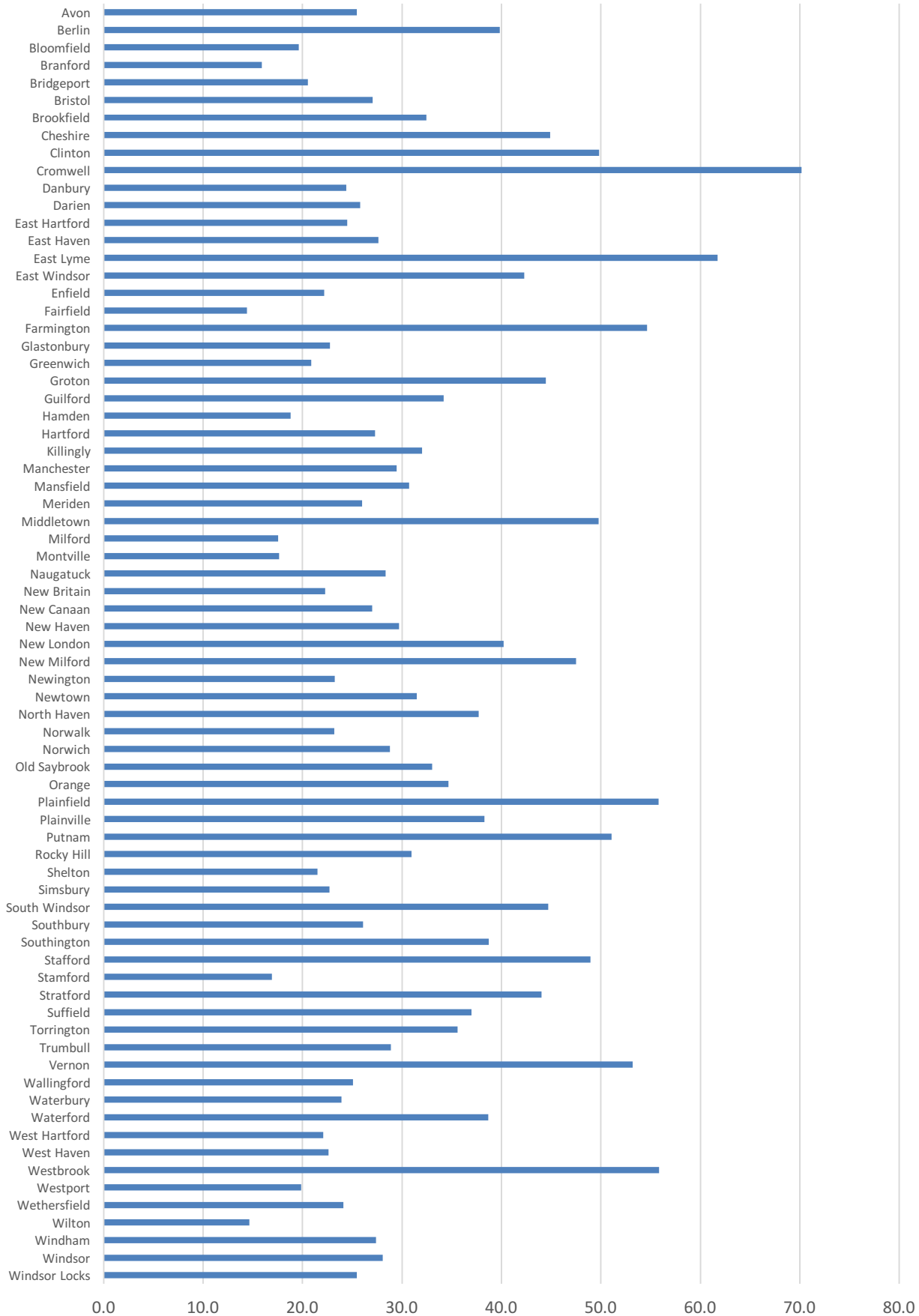
**Table D-6: Illnesses by Town/Municipality, 50 or more cases, WCC, 2015**

Town	Cases	Employment	Rate per 10,000	Rank*
Cromwell	56	7,982	70.2	1
Farmington	204	37,335	54.6	2
Vernon	52	9,780	53.2	3
Middletown	163	32,750	49.8	4
Cheshire	81	18,048	44.9	5
South Windsor	63	14,100	44.7	6
Groton	132	29,696	44.5	7
Stratford	121	27,485	44.0	8
New London	63	15,657	40.2	9
Berlin	50	12,560	39.8	10
Southington	66	17,037	38.7	11
North Haven	70	18,573	37.7	12
Torrington	64	17,982	35.6	13
Rocky Hill	58	18,737	31.0	14
Mansfield	57	18,582	30.7	15
New Haven	277	93,349	29.7	16
Manchester	91	30,912	29.4	17
Norwich	58	20,147	28.8	18
Windsor	74	26,356	28.1	19
Hartford	360	132,103	27.3	20
Bristol	66	24,395	27.1	21
Meriden	64	24,651	26.0	22
Wallingford	75	29,936	25.1	23
East Hartford	81	33,063	24.5	24
Danbury	121	49,628	24.4	25
Waterbury	109	45,590	23.9	26

Norwalk	117	50,328	23.2	27
New Britain	67	30,081	22.3	28
West Hartford	70	31,721	22.1	29
Shelton	52	24,183	21.5	30
Greenwich	80	38,302	20.9	31
Bridgeport	105	51,140	20.5	32
Milford	54	30,804	17.5	33
Stamford	138	81,733	16.9	34

\*Low rank indicates higher rates of illness (i.e. the town ranked first has the highest rate of illness). Ranks are based on the towns with at least 50 cases of illness reported in either year. Employment figures are based on the town of employment.

## Illness Rate per 10,000, by Town (20 cases or more), 2015



## Musculoskeletal Disorders (MSD)

“Musculoskeletal disorders” is the currently-used term for conditions also known as cumulative trauma disorders or repetitive strain injuries. There were 2,831 cases of MSD reported to Workers’ Compensation in 2015, a 7% decrease from 2014 (Table D-7). MSD accounted for just over half (54%) of the reported occupational diseases to Workers’ Compensation. MSD do not include cases for conditions determined to be injuries caused from sudden events. Most cases for the lower back are not included, unless they specifically noted that they were due to repetitive exposures (since the descriptions of back conditions are typically insufficient to be able to distinguish between acute injuries and cumulative back injuries that result in disease).

Strains and sprains (which does not include acute strains or sprains such as those from single events/accidents) was the most common category of MSD, with 73% of reports (Table D-7) coded for the general category. Carpal Tunnel Syndrome (CTS), which is a very debilitating pinching of the median nerve at the wrist, accounted for 12% of total MSD reports. Other nerve-related problems (with descriptions of numbness or tingling) accounted for an additional 3% of cases. Tendon-related problems included tendonitis and tenosynovitis, epicondylitis (“tennis elbow” or “golfer’s elbow”), trigger finger, and rotator cuff, combining for 4% of cases. A large number of cases did not have a specific description other than “inflammation” or swelling, “pain”, or no specific description.

**Table D-7: Musculoskeletal Disorders (MSD) by Type, WCC, 2014-2015**

MSD Type	2014	2015		Change
	Cases	Cases	%	
Sprain/strain	2,203	2,070	73%	-6%
Carpal Tunnel Syndrome	333	347	12%	4%
Numbness	115	98	3%	-15%
Tendonitis/tenosynovitis	62	40	1%	-35%
Rotator cuff	21	22	1%	5%
Trigger finger	25	20	1%	-20%
Epicondylitis	22	20	1%	-9%
Ganglion cyst	14	12	0%	-14%
Arthritis/bursitis	9	10	0%	11%
Other/Unknown	224	192	7%	-14%
<b>Total</b>	<b>3,028</b>	<b>2,831</b>	<b>100%</b>	<b>-7%</b>

**Table D-8: Musculoskeletal Disorders by Part of Body, WCC, 2015**

Part of body	Cases	Percent
Lower Arm, Wrist, Hand	1,172	41%
Upper Arm, Shoulder, Upper Extremity	616	22%
Legs, Knees, and Feet	342	12%
Elbow	251	9%
Multiple	245	9%
Neck, Back, Torso	181	6%
Other/Unknown	24	1%
<b>Total</b>	<b>2,831</b>	<b>100%</b>

Almost three-quarters (72%) of the cases of MSD were in the upper limbs of the body such as hands, arms, elbows, and shoulders (Table D-8). Another 12% were for the lower extremity (legs, knees and feet), and 6% for the neck, upper back, and torso (note that lower back cases were excluded from these figures unless they explicitly indicated they were due to cumulative exposures).

Causes of conditions were often incomplete, overlapping, and not consistently coded nor described. Approximately 80% of MSD cases had enough description to show some cause. Of the MSD that could be classified (Table D-9), the most frequently mentioned cause was the broad category of “repetitive” (26% of cases). This term is often used as a general description to describe any chronic musculoskeletal problem. Repetitive cause was followed by pushing or pulling (17%), lifting (17%), tool use (including references specifically to pneumatic tools or vibration exposure) (8%), and computing and clerical tasks (8%).

**Table D-9: Musculoskeletal Disorders (MSD) with Identified Cause, WCC, 2015**

<b>Cause of MSD</b>	<b>Reports</b>	<b>%</b>
Repetitive	613	26%
Push/Pull	397	17%
Lifting	388	17%
Tools/vibration	188	8%
Computer/clerical	176	8%
Reaching	105	4%
Twisting	56	2%
Shoveling/sweeping/mopping	49	2%
Assembly	48	2%
Carrying	47	2%
Patient care	47	2%
Bending/kneeling/crawling	42	2%
Cleaning	31	1%
Grasping/gripping/squeezing	27	1%
Walking/running/moving	26	1%
Driving	26	1%
Machine	23	1%
sitting/standing	18	1%
Climbing	12	1%
Scanning/cashier	11	0%
Selecting/sorting/inspecting/packing	9	0%
<b>Sub-Total</b>	<b>2,339</b>	<b>100%</b>
<b>Unknown/other</b>	<b>492</b>	
<b>Total</b>	<b>2,831</b>	

## **Infectious Diseases**

There were 1,045 reports of infectious diseases or exposures in the database for 2015 (Table D-10), a 19% decrease from the previous year. Infectious disease reports include both actual disease and exposure to infectious agents. There were 834 reports of exposure to bloodborne pathogens (including reports of exposure to HIV/AIDS and Hepatitis C), accounting for 80% of all infectious disease reports. These included 316 needlestick injuries or cuts from sharps or surgical instruments that may have resulted in exposure to a patient’s blood, 363 reports of exposures to human bites (cases were excluded if they specifically indicated the skin was



not broken), and 155 reports of skin or eye exposure to blood or bodily fluids. There were additional reports of exposure to “spit” or “sputum” that are not reported here, since risks tend to be extremely low from such exposures. Diseases that can be contracted through blood and body fluid exposures include hepatitis B, C and HIV. Human bites are considered to be relatively low risk exposures in terms of bloodborne disease transmission. Exposure to blood and fluids are somewhat higher risk (especially if the worker has open wounds or sores). Sharps (i.e. scalpels) and needlesticks are considered the highest risk (especially if they are deep cuts or injections). Altercations or arrests with prisoners or clients (including special needs students) accounted for the vast majority of human bites as well as some of the other bloodborne exposures. The data does not have consistent information on whether the source patient is known to be infected with a bloodborne illness such as HIV or hepatitis, so many of these incidents will have no risk of transmission. However, preventive efforts focus on universal precautions, so it is important to reduce these incidents regardless of whether patients are known to be infected.

**Table D-10: Infectious Diseases and Exposures by Type, WCC, 2014-2015**

Illness	2014		2015		Change
	Cases	%	Cases	%	
Bloodborne: Human bite	307	24%	363	35%	18%
Bloodborne: Sharp and needlestick exposures	388	30%	316	30%	-19%
Bloodborne: Blood/body fluids	211	16%	155	15%	-27%
Lyme Disease/Tick bite	79	6%	75	7%	-5%
TB/ppd conversion/exposure	117	9%	37	4%	-68%
Scabies/lice	70	5%	22	2%	-69%
Meningitis exposure	13	1%	17	2%	31%
Chicken pox, measles, whooping cough	8	1%	7	1%	-13%
MRSA/staph/strep	33	3%	4	0%	-88%
Rabies	5	0%	3	0%	-40%
Other infectious	54	4%	46	4%	-15%
<b>Total</b>	<b>1,285</b>	<b>100%</b>	<b>1,045</b>	<b>100%</b>	<b>-19%</b>

There were 75 reports of tick bites, rashes from tick bites and/or a diagnosis of Lyme disease attributed to occupational exposures. There were 37 cases of tuberculosis infection, usually determined by PPD conversion (which is a skin test based on immune response) or based on exposure to clients with TB. This was a decrease of 68% from 2014, when there was one particularly large outbreak. In addition, there were 22 cases of scabies or lice exposures/illnesses, 17 cases of meningitis exposure, 7 cases of chicken pox, measles or whooping cough, 4 reports of exposure or cases of MRSA (Methicillin-resistant Staphylococcus aureus, or staph infection that responds poorly to antibiotics) or other staph or strep infections and 3 cases of exposure to rabies.

Court decisions have broadened the definition of compensable disease under Workers’ Compensation to include exposures, particularly where exposure requires medical treatment such as prophylactic treatments for tuberculosis (TB) and AIDS (HIV) exposures. It is often difficult to determine whether the first report of injury was actual disease or only exposure (for example, actual Lyme disease or only a report of a tick bite).

### **Respiratory Illness and Poisonings**

*Chronic* lung disease such as asbestos-related illnesses, asthma, and lung cancer are addressed in the following section. In addition to these chronic conditions, there were 225 cases of respiratory illnesses (mostly nonspecific respiratory illness from relatively acute chemical or biological exposures) for 2015 (Table D-11), a 38% decrease, and there were 20 cases of poisonings from carbon monoxide, other gases, mercury, or lead, a decrease of 50% from the previous year.

Chemical exposures were the most common cause of respiratory illness, (35% of cases) followed by smoke or fire (25%), general indoor air quality (IAQ) or mold (18%), and dust or fumes (12%). There were 14 cases of poisoning from exposure to carbon monoxide or other gases and fumes, but only 1 Workers' Compensation reports of lead or mercury poisoning or exposure in 2015.

Specific chemical exposures included turpentine (5), OC Spray (3), nitric acid (3), roofing fumes (2), floor stripper (2), Clorox (2), chlorine (2), kerosene (2), bleach, aerosol spray, paint (2), anhydrous ammonia, Pine Sol, Goo Gone, disinfectant, Saber Red Spray, pool chemicals, clay, magnesium chloride, acid vapors, Freon, chloroform, fire extinguisher spray, insulation spray, chloropicrin, glycol, caustics, Lysol, rubbing alcohol, mace, pepper spray, sulfuric acid, antifreeze, zinc oxide, and glue adhesive.

**Table D-11: Respiratory Conditions and Poisonings by Cause, WCC, 2014-2015**

Cause	2014		2015		Change
	Cases	%	Cases	%	
<b>Respiratory</b>					
Chemical Exposure	92	25%	78	35%	-15%
Smoke, Fire	61	17%	56	25%	-8%
IAQ/mold/odor	118	33%	41	18%	-65%
Dust/fumes	61	17%	27	12%	-56%
Other Respiratory	30	8%	23	10%	-23%
<b>Respiratory subtotal</b>	<b>362</b>	<b>100%</b>	<b>225</b>	<b>100%</b>	<b>-38%</b>
<b>Poisoning</b>					
Carbon monoxide/gas	36	90%	14	70%	-61%
Lead	0	0%	1	5%	
Other Poisoning	4	10%	5	25%	25%
<b>Poisoning Subtotal</b>	<b>40</b>	<b>100%</b>	<b>20</b>	<b>100%</b>	<b>-50%</b>
<b>Total Respiratory and Poisoning</b>	<b>402</b>	<b>100%</b>	<b>245</b>	<b>100%</b>	<b>-39%</b>

### Chronic Lung Conditions

There were 119 cases of chronic lung conditions in 2015, a 2% increase from the previous year (Table D-12). These included asbestos-related diseases and exposures, occupational asthma, and other chronic lung diseases. Acute respiratory illnesses are classified under respiratory conditions and poisonings (above).

#### Asbestos

There were 30 reports of asbestos-related disease or exposures in 2015. The descriptions of the cases often make it difficult to determine whether the cases are actual disease or current exposure to asbestos; the notations may be either describing historic exposures that contributed to current disease, or current exposures that raise the risk of future disease. Cancers, including those caused by asbestos, are noted below (under "other illnesses").

**Table D-12: Chronic Lung Diseases by Type, WCC, 2014-15**

Illness	2014	2015	Change
Asthma/bronchitis	20	32	60%

Asbestos-related	39	30	-23%
Allergies	25	14	-44%
Other chronic lung	33	43	30%
<b>Total</b>	<b>117</b>	<b>119</b>	<b>2%</b>

Asbestos exposure is known to increase the risk of lung disease and cancer. If disease occurs as a result, it often appears between 10-40 years after exposure. Asbestos disease may be under-reported by traditional surveillance sources such as Workers' Compensation. The main industry for asbestos conditions was transportation equipment manufacturing (10 cases).

### Other Chronic Lung Conditions

There were 32 occupational asthma cases reported in 2015 (a 60% increase over the prior year), 14 lung-related allergies, and 43 other chronic lung conditions. The causes mentioned for asthma and other lung conditions were mold (7), dust (7), cleaning (6), smoke (4), perfume (2), floor stripping, chlorine, Clorox, paint, a skunk smell (from a patient), an oil smell, a gas leak, antifreeze, hex chrome dust, and gasoline odor.

### Skin Conditions

There were 178 skin conditions in the database in 2015 (Table D-13), a decrease of 23% over the previous year. These included 77 cases of contact dermatitis from poison ivy or other plants (43% of all skin cases). There were 28 cases of skin conditions caused by chemicals, as well as 19 additional cases attributed specifically to cleaning chemicals. There were 10 cases caused by allergic reactions to clothing, gloves, or latex, and 10 other allergic skin conditions.

In addition to cleaning chemicals and latex, specific substances associated with skin conditions included glue (2), solvent, beta mercaptoethanol, an ice melt salt (2), a chemical sealant for exhausts, a mouthwash spill, Purell, paint, polypropylene, alodine, and formaldehyde.

**Table D-13: Skin Diseases by Cause, WCC, 2014-2015**

Category	2014	2015	%	Change
Poison Ivy/plants	86	77	43%	-10%
Chemical	45	28	16%	-38%
Soap/Cleaning	16	19	11%	19%
Allergic	18	10	6%	-44%
Gloves/Latex/clothing	14	10	6%	-29%
Rash/Other/Unknown	51	34	19%	-33%
<b>Total</b>	<b>230</b>	<b>178</b>	<b>100%</b>	<b>-23%</b>

### Stress and Heart Conditions

#### Heart and Hypertension

There were 290 cases involving heart conditions, stroke, chest pain, hypertension, or stress in the database for 2015 (Table D-14), a 6% decrease from the previous year. Reports noted 138 cases of heart attacks, myocardial infarctions or acute heart events and 15 reported strokes or blood clots, often associated with emergency care at a hospital. There were 20 cases that described the condition as hypertension or "heart and hypertension" (the usual legal term for heart or hypertension cases that are covered under workers' compensation for police and fire fighters).

Approximately one-third of the heart cases appeared to involve police or firefighters or other municipal employees who are frequently covered under heart and hypertension laws that consider those conditions to be work-related for Workers' Compensation purposes.

Though not generally well described, causes of the heart cases included exertion (including shoveling, lifting and running, 16 cases), stress (5 cases), firefighting, live fire training, and smoke (5), while driving (4), electrical shock, welding, and medications. Several others just noted while doing normal job duties, or working at desk. Four reports noted that cases resulted in death.

**Table D-14: Heart and Hypertension Conditions by Type, WCC, 2014-2015**

Category	2014	2015	%	Change
Heart attack/severe symptoms	147	138	48%	-6%
Hypertension	26	20	7%	-23%
Angina	17	1	0%	-94%
Stroke/clots	15	15	5%	0%
Stress/anxiety/depression	102	116	40%	14%
<b>Total</b>	<b>307</b>	<b>290</b>	<b>100%</b>	<b>-6%</b>

### Mental Stress

There were a total of 116 stress-related claims in the database in 2015, a 14% increase over the previous year. Approximately one third (30%) of the cases where cause was noted referred to violence or post-traumatic stress disorders after violence (Table D-15), and 17 cited either harassment or a hostile work environment.

Cases included threatening armed robberies (6), being attacked by a patient or students (6), witnessing a child being shot or other killing (3), sexual assault (2), witnessing a suicide (2), being in a car that caught on fire, unsuccessfully administering CPR to an inmate, seeing a client die from being tasered, security concerns at a state building, excessive hours, being pulled into and locked in a house while canvassing, a fatal pedestrian accident while driving a truck, a threatening email, wage discrimination, being trapped in a bathroom, and being stabbed while collecting rent.

Stress-related claims that are not also associated with a physical injury are typically not compensable under the Workers' Compensation statute, so it is likely that there are additional unreported cases. It should be noted that this report is based on First Reports of Injury for compensation, and the number of cases that were ultimately awarded compensation was not determined.

**Table D-15: Stress Conditions by Cause, WCC, 2015**

Sources of Stress Conditions	2015	%
Violence/robbery/trauma	35	30%
Harassment/hostile environment	17	15%
Supervisor/co-worker	11	9%
Excessive work demands	11	9%
Motor vehicle accident	5	4%
Unknown/other	37	32%
<b>Total</b>	<b>116</b>	<b>100%</b>

## Other Occupational Diseases

### Hearing Loss

There were 84 reports of hearing loss in 2015 (Table D-16), 39% fewer than the previous year. Of these cases, 14 appeared to be caused by acute (single incident) noises or injuries such as sudden machine or tool sounds, explosions, very close gunshots, a student screaming in ear, a screaming customer on phone call, vehicle air horn, truck or mower backfire (2 cases), burglar alarm, and a truck tire blow out. The rest that had information (60 cases) appeared due to long-term exposure to noise, or were noted as being found on routine audiograms. Most cases were from manufacturing (49 cases), in particular transportation equipment manufacturing (45 cases), and schools/police/firefighting/government (16 cases).

### Other Disease Conditions

There were 99 reports of eye exposures to chemicals (this does not include other physical acute eye injuries such as particles or dust). There were 80 reports of workers becoming dizzy, fainting, or similar conditions such as seizures, a 5% decrease. Some of these are likely from pre-existing conditions that occurred while at work (such as epilepsy or diabetes) and some of which were accompanied by an injury from a fall. There were 79 reports of temperature-related problems from heat or cold, a 36% increase from the previous year.

There were 63 cases of allergic reactions reported in addition to those noted above under respiratory and skin conditions, a 28% decrease. There were 9 cases of cancer reported, which included asbestos-related cancers. There were 171 “other” conditions that were difficult to classify, usually due to incomplete information.

**Table D-16: Other Occupational Illnesses, WCC, 2014-2015**

Type of illness	2014	2015	%	Change
Chemicals in eye	92	99	17%	8%
Hearing loss	138	84	14%	-39%
Dizziness/passing out/seizure	84	80	14%	-5%
Cold/heat related conditions	58	79	14%	36%
Allergic	87	63	11%	-28%
Cancer	28	9	2%	-68%
Other conditions	109	171	29%	57%
<b>Total</b>	<b>596</b>	<b>585</b>	<b>100%</b>	<b>-2%</b>

## E. Occupational Illnesses and Injury Surveillance System (OISS)

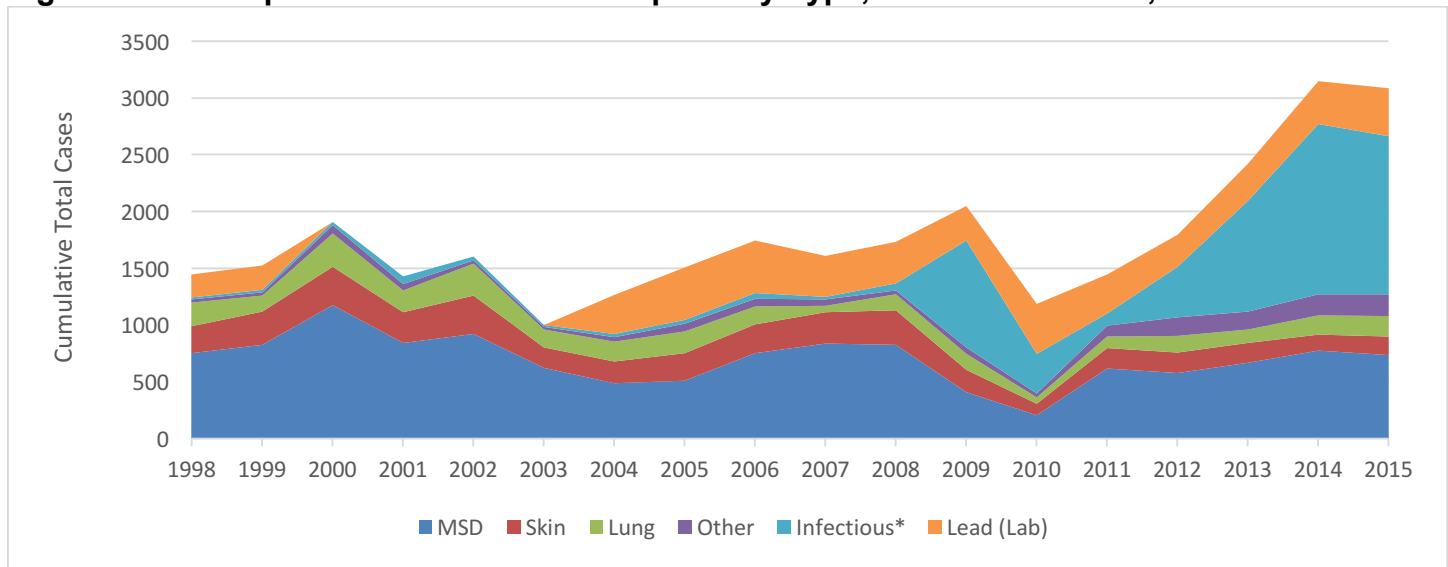
Physicians are required to report known and suspected occupational disease to the Occupational Illnesses and Injury Surveillance System (OISS) that is maintained by the Department of Public Health. Although all physicians are required to report, most reports are received from Connecticut’s occupational health clinics and industrial medicine programs. Information on blood lead level laboratory reports are taken from the Connecticut Adult Blood Lead Epidemiology and Surveillance (ABLES) program. Data for lead and infectious diseases were incomplete for certain years prior to 2012 (as noted for the table and figure below), so comparisons for total disease with earlier years should be made cautiously.

**Table E-1: Occupational Disease Case Reports by Type, OISS and ABLES, 2006-2015**

Category	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	% change 2014-15
Infectious*	50	20	66	939	347	103	443	973	1500	1390	-7%
MSD	751	838	827	411	208	616	580	666	774	734	-5%
Lung	154	59	142	140	56	101	146	120	171	178	4%
Skin	256	273	302	193	102	183	180	174	140	166	19%
Other	69	58	31	59	33	96	164	159	184	195	6%
<b>Sub-total</b>	<b>1,280</b>	<b>1,248</b>	<b>1,368</b>	<b>1,742</b>	<b>746</b>	<b>1,099</b>	<b>1,513</b>	<b>2,092</b>	<b>2,769</b>	<b>2,663</b>	<b>-4%</b>
Lead (Lab)	465	363	364	304	443	345	283	327	379	425	12%
<b>Total</b>	<b>1,745</b>	<b>1,611</b>	<b>1,732</b>	<b>2,046</b>	<b>1,189</b>	<b>1,444</b>	<b>1,796</b>	<b>2,419</b>	<b>3,148</b>	<b>3,088</b>	<b>-2%</b>

\*Infectious did not include most bloodborne pathogen exposures up to 2008, and again in 2011

**Figure E-1: Occupational Disease Case Reports by Type, OISS and ABLES, 1998-2015**



\*Infectious category did not include most bloodborne pathogen exposures up to 2008, and again in 2011.

\*\* Lead values for 1998-99 did not include cases in the blood lead level range of 10-19 micrograms per deciliter (ug/dl).

There were 2,663 occupational illness reports received from physicians for 2015 (Table E-1). Physician reports declined slightly (4%) in 2015 compared to the year before. Infectious disease (such as bloodborne diseases and exposure) was the largest category of reports, accounting for 52% of the reports, followed by musculoskeletal conditions (MSD) such as tendonitis and carpal tunnel syndrome (28%). Skin disorders (including poison ivy and chemicals as causes), lung conditions (including respiratory conditions, asthma, and other lung diseases), and “other” conditions (including heart disease, stress, noise-induced hearing loss) each accounted for

approximately 6-7% of reports. There were 425 reports of blood lead levels in adults of 10 micrograms per deciliter (ug/dl) or more, giving a total of 3,088 occupational illnesses reported by physicians or laboratories in 2015.

In 2015, 89 physicians from 16 clinics (at 21 locations) reported at least one case to the OIIS. Twenty-six of the physicians reported 20 or more cases, and accounted for 84% of the reports; six reported 100 or more cases, and accounted for 43% of reports. Six clinic networks reported 100 or more cases, and contributed 76% of the cases.

Many workers with occupationally-related illness seek care from their primary care providers. Although it is a state law that known and suspected occupational diseases diagnosed by any physician in the state must be reported to CT Departments of Labor and Public Health (CGS § 31-40a), the majority of reporters are from the academic occupational health clinics and auxiliary occupational health clinics. Therefore, these reports should be viewed as a small portion of physician-diagnosed occupational diseases in Connecticut.

Eighty-eight percent (88%) of the cases were classed as “high certainty” for being an occupationally-related disease, 10% were “moderate certainty,” and 2% “low certainty”, where certainty was reported. There was a fairly low amount of reporting on whether exposure was continuing or if others are likely to be exposed, but 18% of those reported that the exposure that caused the illness was continuing, and 12% reported others were likely to be exposed to the same hazard.

Of the 1,488 reports where race was known, 272 (16%) were identified as black, and 200 (8%) were identified as Hispanic (where ethnicity was known).

**Figure E-2: Occupational Disease by Age Range, OIIS, 2015**

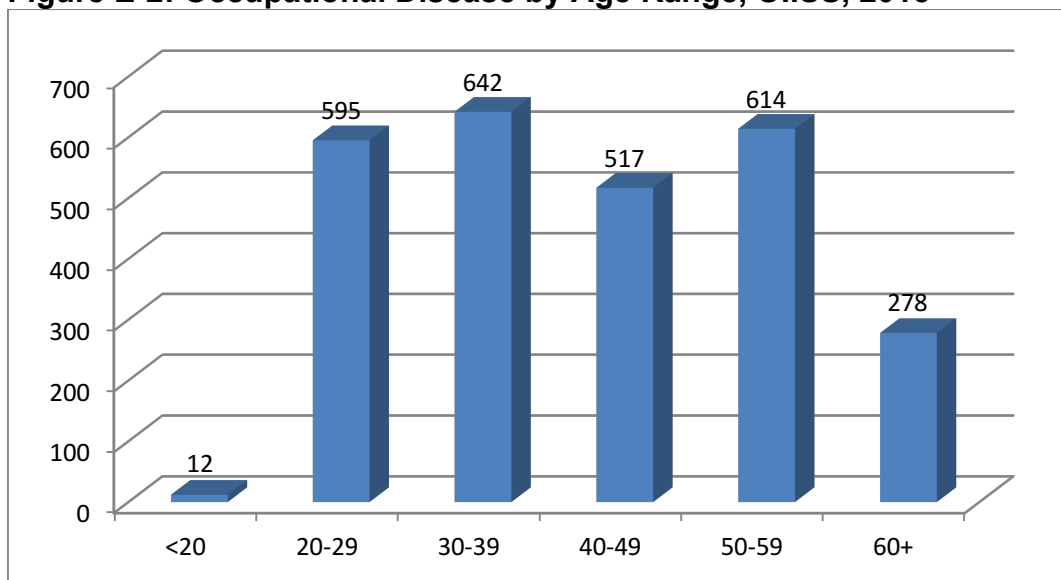
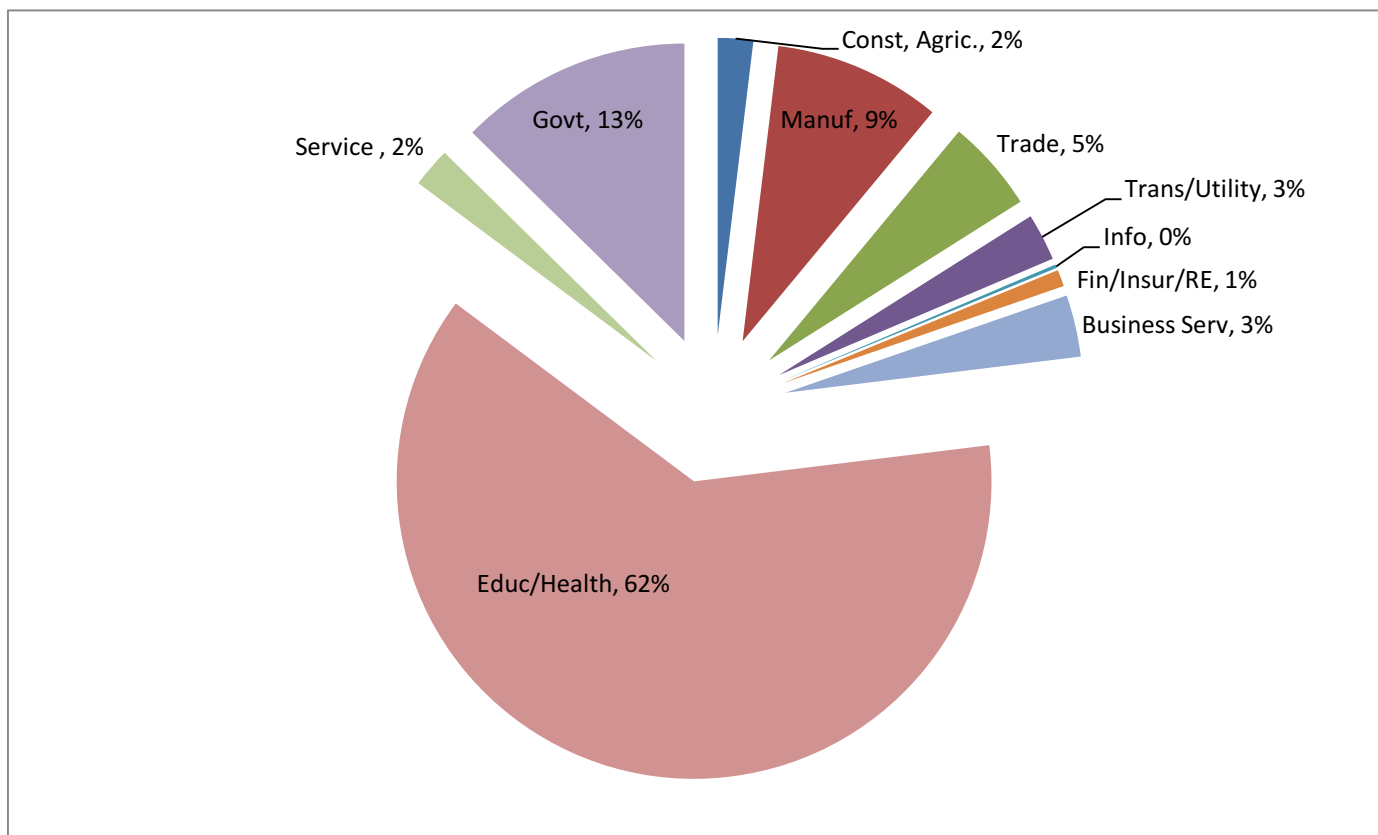


Figure E-2 shows the age distribution of reported cases (where data was available). There were similar proportions (between 19%-24%) for workers in their 20’s, 30’s, 40’s and 50’s. Only 10% were 60 or older, and only 12 cases were reported in workers less than 20 years of age.

The Education and Health sector had the most cases (62%), followed by Government (13%), Manufacturing (9%), and Trade (5%); see Figure E-3 and Table E-2. It should be noted that the Education and Health sector also includes some government workers.

**Figure E-3: Occupational Disease by Industry Sector, OIIS, 2015**



Industry distribution was somewhat different by condition (Table E-2), though Education and Health led all the categories of illness. Infectious disease was highly concentrated in Education and Health (84%), with Government contributing another 10%. MSD were primarily from Education and Health (35%), Manufacturing (20%), Government (13%), and Trade (13%). Dermatitis (skin disorders) was primarily from Education and Health (42%), Government (20%), and Manufacturing (20%). Respiratory cases (“Lung”) were primarily from Education and Health (42%), Manufacturing (14%), and Government (13%).

**Table E-2: Type of Illness by Industry Sector (NAICS\*), OIIS, 2015**

Industry	All		Infectious		Lung		MSD		Other		Skin	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Construction/ Agriculture	51	2%	6	0%	10	6%	25	3%	5	3%	5	3%
Manufacturing	241	9%	13	1%	25	14%	148	20%	22	11%	33	20%
Trade	133	5%	15	1%	8	4%	92	13%	14	7%	4	2%
Transport/Utilities	68	3%	11	1%	10	6%	38	5%	8	4%	1	1%
Information Services	5	0%	0	0%	0	0%	1	0%	3	2%	1	1%
Finance/Insur/Real Estate	24	1%	3	0%	3	2%	13	2%	3	2%	2	1%
Business Service	89	3%	31	2%	9	5%	33	4%	4	2%	12	7%
Education/Health	1,647	62%	1,161	84%	74	42%	259	35%	83	43%	70	42%
Other Services	57	2%	9	1%	8	4%	24	3%	11	6%	5	3%
Government	335	13%	137	10%	26	15%	97	13%	42	22%	33	20%
Unknown	13	0%	4	0%	5	3%	4	1%	0	0%	0	0%
<b>Total</b>	<b>2,663</b>	<b>100%</b>	<b>1,390</b>	<b>100%</b>	<b>178</b>	<b>100%</b>	<b>734</b>	<b>100%</b>	<b>195</b>	<b>100%</b>	<b>166</b>	<b>100%</b>

\*The North American Industry Classification System



## Musculoskeletal Disorders (MSD)

There were a total of 734 reports of musculoskeletal disorders (MSD) in 2015, a decrease of 5% from the previous year (Table E-3). This table excludes lower back diagnoses unless specifically defined as caused by cumulative strain, and does not include MSD caused by acute incidents such as falls or individual lifts. The most common specific diagnoses for musculoskeletal disorders were epicondylitis (tennis elbow) with 19% of the cases, tenosynovitis (16%), strain/sprain (14%), and carpal tunnel syndrome (12%). The largest number of MSD was from Education and Health (259 cases), followed by Manufacturing (148), Government (97) and Trade (92); see Figure E-4 and Table E-2.

**Table E-3: Musculoskeletal Disorders (MSD) by Type, OIISS, 2014-2015**

Illness	2014	2015	Percent	Change
Epicondylitis	133	143	19%	8%
Tenosynovitis	128	114	16%	-11%
Strain/Sprain	148	105	14%	-29%
Carpal Tunnel Syndrome (CTS)	82	87	12%	6%
Bursitis/Arthritis	42	69	9%	64%
Tendonitis	47	64	9%	36%
Other Neuropathy (nerve disorder)	37	43	6%	16%
Trigger Finger	23	27	4%	17%
Rotator Cuff	26	24	3%	-8%
Plantar fasciitis	12	20	3%	67%
Ganglion	19	14	2%	-26%
Other MSD	77	24	3%	-69%
<b>Total</b>	<b>774</b>	<b>734</b>	<b>100%</b>	<b>-5%</b>

Musculoskeletal disorders (also referred to as cumulative trauma disorders or repetitive strain injuries) include tendon-related conditions, nerve problems, circulatory, as well as combined conditions.

### *Tendon Disorders*

- Tendonitis: swelling of the tendons
- Epicondylitis: tendon irritation in the elbow area, including “golfer’s elbow” and “tennis elbow”
- Rotator Cuff Syndrome: tendonitis in the shoulder area
- Tenosynovitis: inflammation of the tendon sheaths, lubricated covers that surround the tendons, particularly in the hand
- DeQuervain’s Syndrome: tendon sheath disorder of side of wrist and base of thumb
- Trigger Finger: a bump on the tendon that catches on the tendon sheath that makes the finger or thumb difficult to move
- Ganglion Cysts: swelling of the tendon sheaths from excess lubricating fluid
- Bursitis: inflammation of the fluid-filled sacs around ligaments and tendons

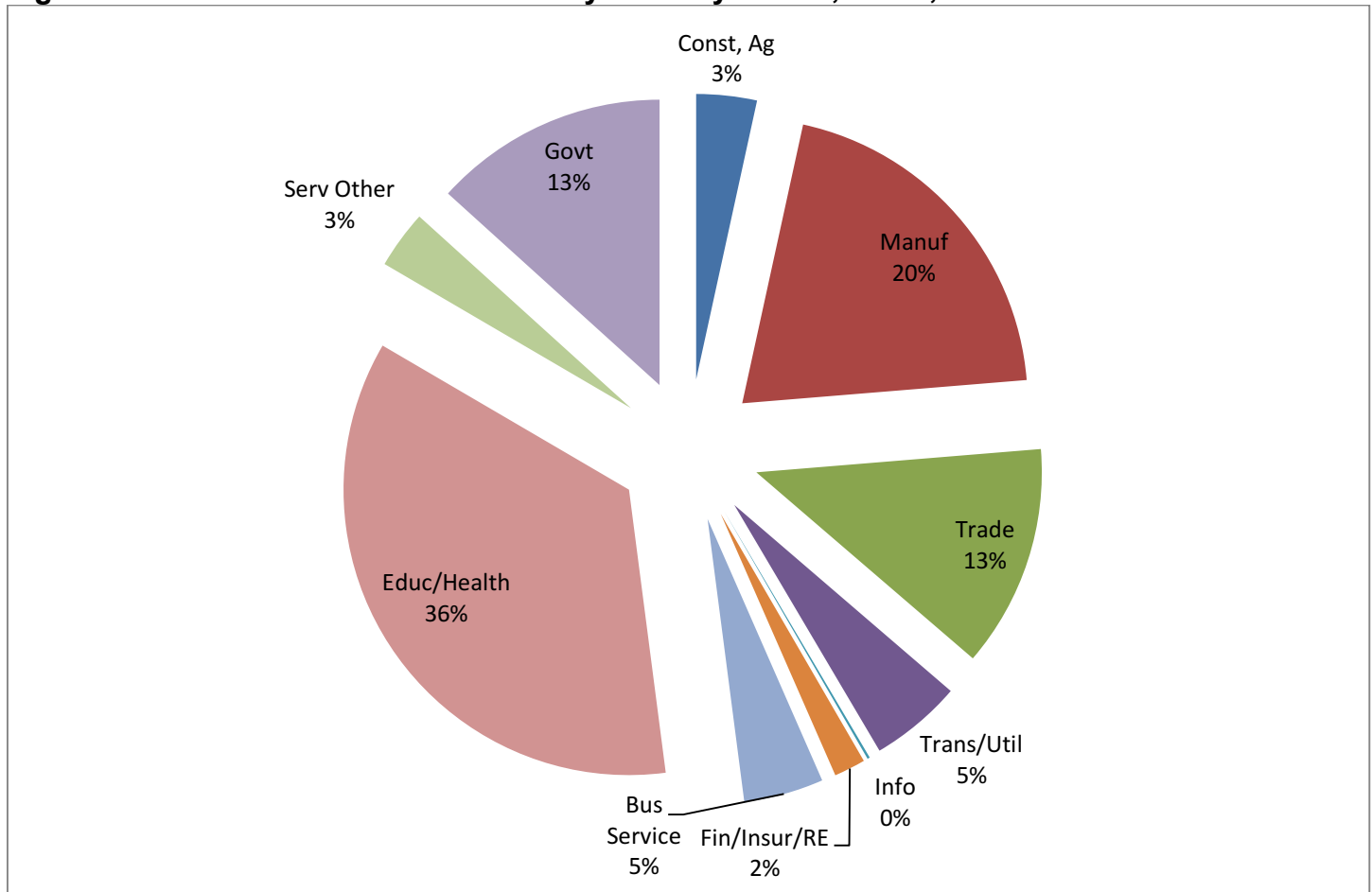
### *Nerve Disorders*

- Carpal Tunnel Syndrome: pinching of the median nerve in the wrist, usually by swollen tendons that pass through the carpal tunnel (the median nerve can also be pinched in the elbow, shoulder, or neck areas)

### *Circulatory/Combined/Other*

- Thoracic Outlet Syndrome: pinching of the nerves and blood vessels in the neck/ shoulder area

**Figure E-4: Musculoskeletal Disorders by Industry Sector, OIIS, 2015**



**Table E-4: Common causes of MSD, OIIS, 2015**

Cause	Cases
Repetitive	24
Lifting	19
Computer/clerical	11
Patient-related	9
Tools & Vibration	7
Push/pull	6
Assembly	5
Kneeling	4
Standing/walking/running	3

Causes for MSD are difficult to classify since they are frequently described differently by the various people recording the case, and most case reports do not describe cause. The most common specific cause noted for MSD (Table E-4) was lifting (19 cases) and followed by computer use and data entry (11). An additional 24 cases were attributed to the general description of “repetitive”.

## Skin Conditions

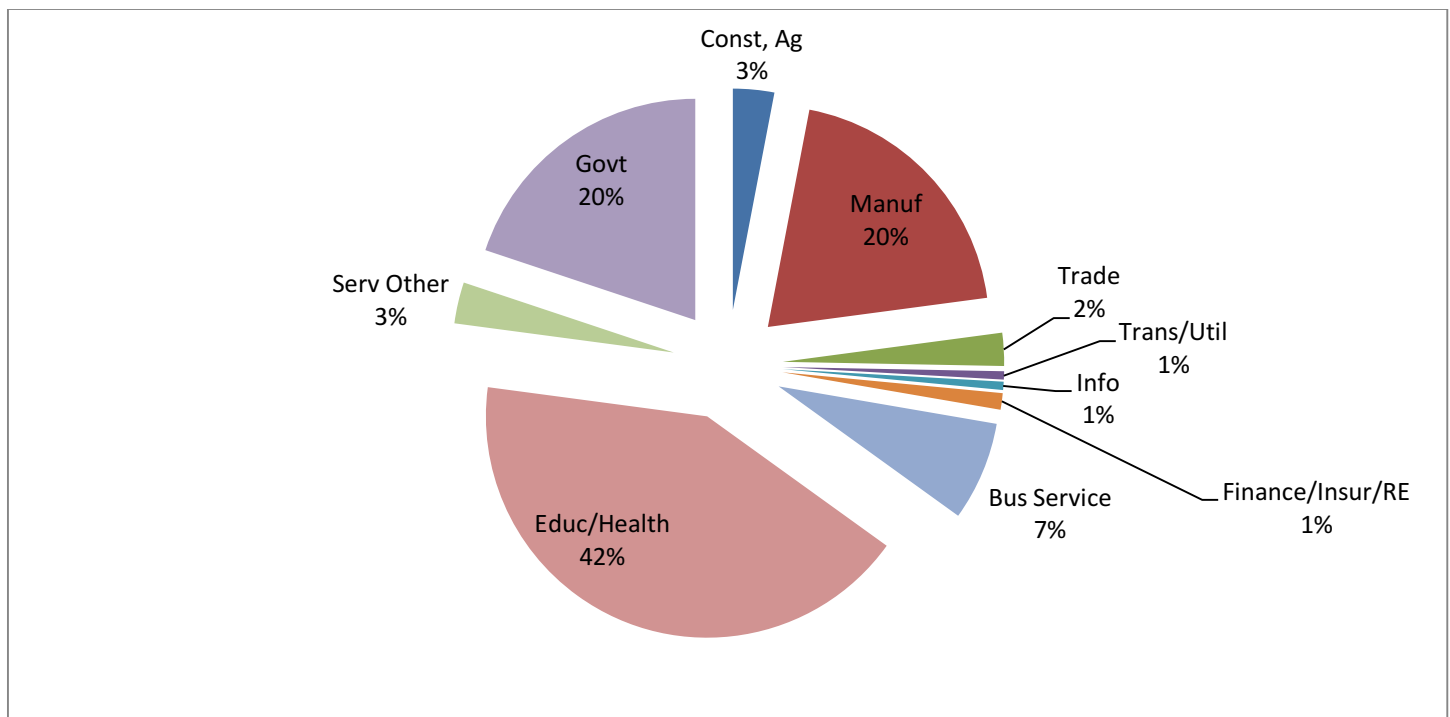
There were 166 reports of skin disorders in 2015 (Table E-5), a 19% increase from the previous year. The largest single cause was poison ivy or other plant exposures (24% of all cases). Other causes included chemicals (37 cases) and cleaning or cleaning chemicals (15 cases).

**Table E-5: Skin Conditions by Type, OIIS, 2014-2015**

Illness	2014	2015	Percent	Change
Poison ivy & other plants	57	40	24%	-30%
Dermatitis	71	116	70%	63%
Other skin conditions	12	10	6%	-17%
<b>Total</b>	<b>140</b>	<b>166</b>	<b>100%</b>	<b>19%</b>

Skin conditions (Figure E-5) occurred most commonly in Education and Health (42%), Manufacturing (20%), and State and Local Government (20%).

**Figure E-5: Skin Conditions by Industry Sector, OIIS, 2015**



## Lung/Respiratory Diseases and Poisonings

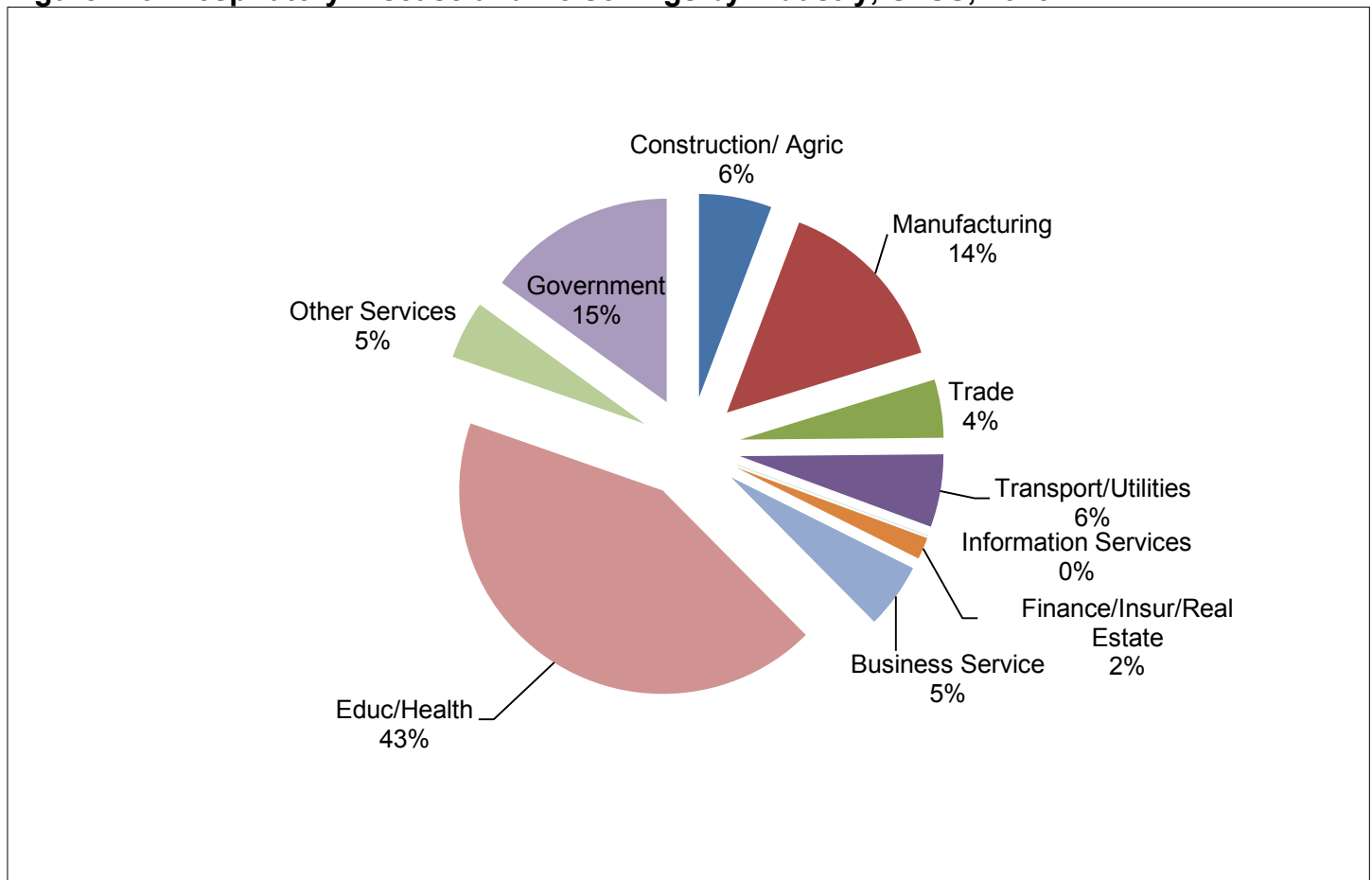
There were 178 cases of lung, other respiratory diseases and poisonings reported by physicians in 2015 (Table E-6), an increase of 4% from the previous year. Nonspecific respiratory illnesses were the most common type of condition, with 40% of reports, followed by asthma or reactive airways dysfunction syndrome (RADS) with 14%. In addition to asbestos (some of the asbestos cases appeared to be reports of exposures rather than asbestos-related disease) noted in Table E-6, exposures associated with respiratory conditions included fumes (including gas or carbon monoxide) with 51 cases, mold or indoor air quality (17 cases), chemicals (including solvents, cleaning chemicals, epoxy, and oil; 15 cases), and smoke (5 cases).

**Table E-6: Respiratory Diseases and Poisoning by Type, OISSL, 2014-2015**

Illness	2014	2015	Percent	Change
Respiratory	96	72	40%	-25%
Asthma/RADS	24	25	14%	4%
Rhinitis	14	15	8%	7%
Poisoning	2	10	6%	400%
Bronchitis	0	10	6%	
Asbestos exposure/disease	30	3	2%	-90%
Other Lung	5	43	24%	760%
<b>Total</b>	<b>171</b>	<b>178</b>	<b>100%</b>	<b>4%</b>

Respiratory disease and poisoning cases mainly occurred in Education and Health (43% of cases), Government (15%), and Manufacturing (14%); see Figure E-6).

**Figure E-6: Respiratory Disease and Poisonings by Industry, OISSL, 2015**



**Lead Poisoning (Laboratory Reports)**

Connecticut requires laboratories to report all blood lead tests of 10 micrograms per deciliter (ug/dl) of whole blood or greater to the Connecticut Department of Public Health (CGS § 19a-110). These cases are classified into childhood (less than 16 years of age) and adult cases (only the latter are reported here), with the majority of adult cases being attributed to an individual’s occupation (although some cases occur in individuals engaged in hobbies such as home improvement or target shooting). The numbers are based on the highest level measured for each individual during the calendar year; they do not include multiple tests on the same individual. OSHA

medical removal protections apply at the level of 50 ug/dl of whole blood or above (and require a reduction to 40 ug/dl to return to work). Lead can have neurological and other negative effects on health at much lower levels of exposure.

The total number of lead poisoning reports in 2015 (425 cases) increased 12% from the previous year. The lowest category (10-24 ug/dl) of recorded elevated lead levels accounted for 83% of all cases (Table E-7). There was an increase in all categories of lead levels except the 50-59 micrograms per deciliter group. Almost all of the reported lead poisoning cases (96% of cases where gender was known) occurred in men; there were only 18 reports for women. Thirty percent (31%) were under 40 years old and 26% were age 60 or older.

**Table E-7: Lead Cases by Level of Blood Lead, CT ABLES, 2014-2015**

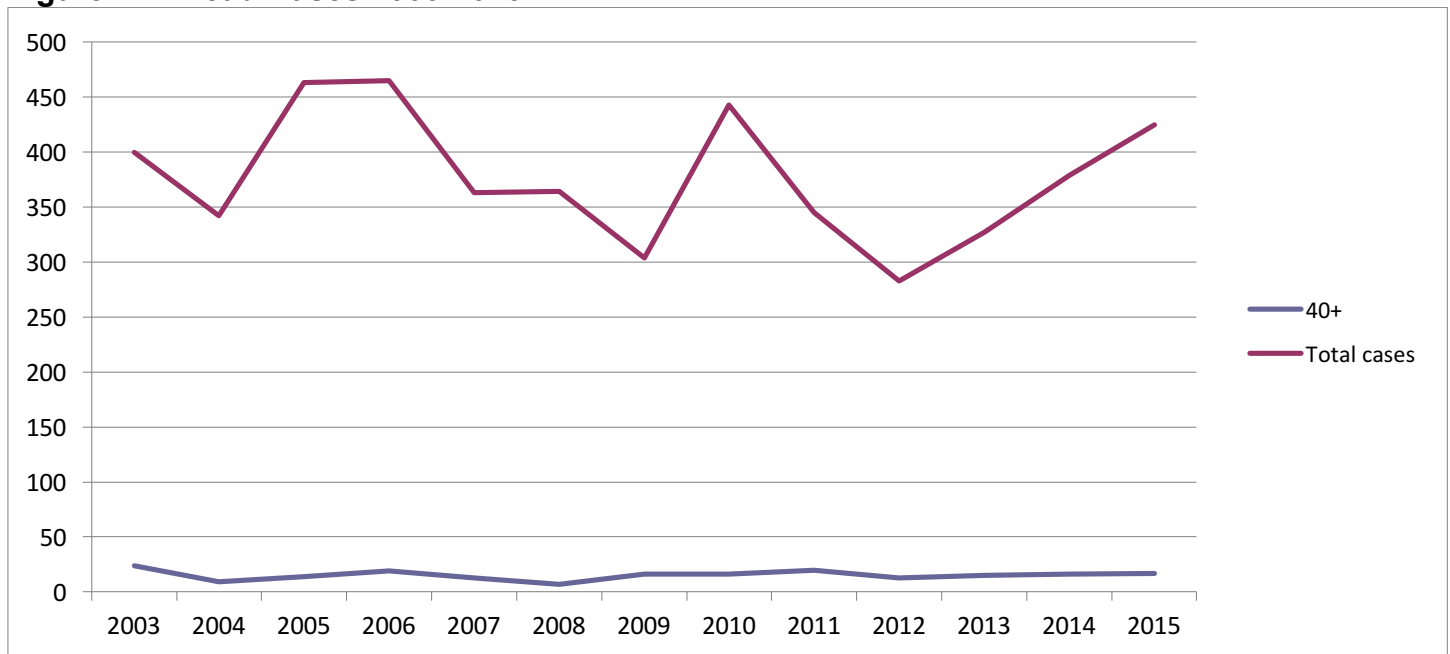
Blood lead level*	2014	2015	Percent	Change
10-24	316	351	83%	11%
25-39	47	57	13%	21%
40-49	11	12	3%	9%
50-59	4	2	0%	-50%
>=60	1	3	1%	200%
<b>Total</b>	<b>379</b>	<b>425</b>	<b>100%</b>	<b>12%</b>

Source: Connecticut Adult Blood Lead Epidemiology and Surveillance (ABLES program)

\* micrograms per deciliter (ug/dl) of whole blood.

Overall, lead cases have fluctuated over the previous 12 years, from 400 in 2003 to 425 in 2015, with a high of 465 cases in 2006 and a low of 283 cases in 2012. Cases at or above the OSHA level of 40 ug/dl have stayed relatively constant at 15 to 20 cases since 2004 (Figure E-7).

**Figure E-7: Lead Cases 2003-2015**



## Infectious and Other Diseases

Bloodborne pathogen exposures (to needlesticks, blood, body fluids or human bites) or diseases (such as HIV or Hepatitis) were the most common infectious diseases reported, with 1,144 reports in 2015, a 14% increase over 2014. Bloodborne exposures are of most concern when there is a needlestick or other sharp injury, particularly if there is an injection of blood into the caregiver's body. These reports do not generally specify whether the source patient/client was infected with a bloodborne illness such as HIV or Hepatitis B or C. Of the bloodborne exposures, 58% were due to a needlestick or sharps injury, despite OSHA regulations that require safe needle devices where available. Twenty-one percent (21%) of the reports were due to blood or body fluid exposures. Exposure to saliva is not included in these numbers, since the risk of disease transmission is very low in those cases. Finally, 21% were from a human bite; typically, there is not a description on whether these bites actually penetrated the skin.

There was a dramatic decrease in reports of potential exposure to tuberculosis (TB), with 28 cases in 2015 compared to 416 cases reported in 2014. Most of the previous year's cases were potential exposures at a single employer. In addition to bloodborne disease/exposures and TB exposures, there were 52 reports related to meningitis, 46 cases of conjunctivitis (not tracked in the prior year), and 22 cases of scabies reported. Most of the "Other Infectious" cases were not well defined in the database, and may include some of the more common reports (such as bloodborne or Tb); they also several cases of exposure to sewage and a case of CMV.

In addition to the infectious diseases, there were 195 other occupational illnesses reported by physicians in 2015 (Table E-8). This included 36 cases of headache, dizziness, or similar symptoms, 33 cases of chemical exposures to the eyes, 17 cases of hearing loss, and 11 cases of either heart or stress-related conditions.

**Table E-8: Infectious and Other Illnesses, 2013-2014**

Illness	2014	2015	% Change
Bloodborne	1,000	1,144	14%
TB/PPD	416	28	-93%
Scabies	22	22	0%
Meningitis	20	52	160%
Conjunctivitis	0	46	
MRSA	8	0	-100%
Measles	7	5	-29%
Rabies	3	7	133%
Lyme/tick bite	5	7	40%
Other infectious	19	79	316%
<b>Subtotal: Infectious</b>	<b>1,500</b>	<b>1,390</b>	<b>-7%</b>
Headache/dizzy	26	36	38%
Chemicals in eyes	66	33	-50%
Hearing loss	12	17	42%
Stress/heart	2	11	450%
Allergic	29	7	-76%
Heat/cold	3	4	33%
Other	46	87	89%
<b>Subtotal: Other</b>	<b>184</b>	<b>195</b>	<b>6%</b>
<b>Total</b>	<b>1,684</b>	<b>1,585</b>	<b>-6%</b>



## F. Appendix 1: Databases and Methods

Determining the incidence of occupational illness in Connecticut is difficult. The problem is two-fold: 1) occupationally-related illness is not consistently recognized as work-related; and 2) the cases reported to either the Department of Labor and/or the Occupational Health Surveillance Division of the Department of Public Health are not complete. Consequently, this assessment of occupational disease reviews a number of sources of information: the Workers' Compensation Commission's First Report of Injury database, the Bureau of Labor Statistics/Connecticut Occupational Safety and Health Administration Survey of Occupational Injuries and Illnesses, the Occupational Illnesses and Injury Surveillance System, and the Connecticut Adult Blood Level Epidemiology Surveillance Program. The Workers' Compensation database was provided in electronic form from the CT Workers' Compensation Commission and the physicians' reports from the CT Department of Public Health. The BLS/Conn-OSHA survey data was provided in table form from the Connecticut Department of Labor.

### Assumptions and Conventions

The Workers' Compensation Commission's First Reports of Injury database and the Occupational Illnesses and Injury Surveillance System (OISS, referred to as Physicians' Reports) were reviewed in depth. A rationale for the data review was developed to differentiate occupational illnesses from injuries and to classify the workplace reports by nature and cause of the illness. Each entry was reviewed for internal consistency and reasonableness. Specifically, the process employed the following steps:

- 1) **Clear acute injuries were eliminated** (approximately 90% of the Workers' Compensation database, and 30% of the Physicians Reports). In assessing the Workers' Compensation First Reports of Injury, a line by line review of injury descriptions, nature descriptions and codes, listed causes, and part of body were used to differentiate whether an injury or illness was described. The determination relied most heavily on the text description and then on the other data fields in the order listed above.

The Physicians' Reports are organized differently. Numerical "Nature of Injury or Illness" codes from the Bureau of Labor Statistics Occupational Injury and Illness Classification System (ANSI Z16.2-1995, American National Standard for Information Management for Occupational Safety and Health) were used as the primary indicator to evaluate the records. Cause, certainty, diagnosis, ICD codes, suspected agent and symptom fields were also reviewed in determining illness or injury. Categories that were eliminated included all burns, eye problems such as conjunctivitis or chemical exposures, lower back problems (including sciatica), hernias, infected wounds or burns, insect and animal bites (with the exception of tick bites because of the relationship with Lyme Disease), and electrical shocks.

- 2) **Validity of remaining records was determined.** Records were reviewed to be sure that the coding of types of disease was consistent with other information in the record. In addition, diseases were categorized by type of disease.
- 3) **Fields were either revised or added to the databases:** *Illness Type* and *Nature of Illness*. The *Nature of Illness* was based on the information in the databases, research, and general information about the illnesses. Then each entry was categorized by *Illness Type*. The specific nature categories were grouped into broader categories to support graphic representation. For the Workers' Compensation database, the description of injury was used as the key description of the illness if it disagreed with the coding for other variables.



- 4) **Employers were coded for industry** utilizing a comprehensive list of Connecticut employers from the CT Department of Labor and coded based on the NAICS (North American Industry Classification System) for the BLS and workers' compensation data. Rates were calculated using employment figures from the Occupational Safety and Health Statistics Division of the CT Labor Dept.
- 5) **Data was cleaned, tabulated and put into presentation form** using Microsoft Access, Excel, and Word software.
- 6) **The report is reviewed** by the Connecticut Workers' Compensation Commission prior to publication.

## G. Appendix 2: Occupational Disease Detail by Type and Year

**Table G-1: Cases of Occupational Disease, by Type, Bureau of Labor Statistics/Conn-OSHA, 1979 – 2015**

	Employ.*	All Ill	Skin	MSD	Lung-dust	Respir.	Poison	Physical	Other
1979	1,358	3,322	1,716	471	25	317	175	250	368
1980	1,394	3,066	1,586	513	88	214	66	199	400
1981	1,409	3,214	1,509	701	38	290	89	192	395
1982	1,400	2,549	1,130	580	31	223	31	216	323
1983	1,419	2,930	1,236	665	20	154	152	176	519
1984	1,490	2,735	1,109	665	24	273	65	162	432
1985	1,528	2,809	928	727	44	233	51	130	693
1986	1,567	2,719	808	761	39	274	65	235	538
1987	1,607	4,643	1,352	1,430	31	300	62	704	754
1988	1,637	4,364	1,257	405	35	332	56	405	733
1989	1,634	5,844	1,248	2,629	57	277	74	468	1,087
1990	1,593	5,307	1,032	2,535	93	457	54	496	641
1991	1,518	6,094	946	3,454	62	422	113	501	591
1992	1,483	6,458	1,084	3,852	37	471	53	349	612
1993	1,487	8,369	965	5,526	52	512	166	346	802
1994	1,502	7,319	957	4,482	74	410	97	313	986
1995	1,520	6,787	884	4,220	80	323	35	349	896
1996	1,538	6,021	827	3,711	40	418	34	235	756
1997	1,570	5,419	620	3,335	21	287	70	150	936
1998	1,597	5,510	989	3,398	10	459	45	92	517
1999	1,630	5,513	793	3,306	20	386	71	265	671
2000	1,653	6,396	897	3,827	65	438	29	137	1,003
2001	1,572	5,514	916	3,220	10	630	29	118	591
	Employ.*	All Ill	Skin			Respir.	Poison	Hearing	Other
2002	1,602	4,387	831			320	78		3,159
2003	1,605	4,559	903			490	32		3,132
2004	1,603	4,572	832			354	35	466	2,886
2005	1,614	4,850	848			480	8	381	3,134
2006	1,636	3,787	575			235	38	439	2,500
2007	1,667	3,904	624			358	22	457	2,443
2008	1,675	3,562	690			293	130	360	2,088
2009	1,629	3,400	600			300	--	500	2,000
2010	1,629	3,000	700			300	--	300	1,700
2011	1,578	3,500	800			300	--	300	2,100
2012	1,628	2,800	600			300	--	300	1,500
2013	1,640	2,600	500			300	--	300	1,600
2014	1,653	2,400	400			200	--	300	1,400
2015	1,663	2,300	400			200	--	200	1,500

Source: BLS/Conn-OSHA. Data collection methods and categories changed in 2002, and are not comparable to prior years. Employment in thousands. Since this data is based on a weighted survey, some of these numbers (particularly the smaller numbers) are not reliable.

**Table G-2: Rate per 10,000 Workers of Occupational Disease, by Type, Bureau of Labor Statistics/Conn-OSHA, 1979-2015**

Year	Employed	Skin	MSD	Resp/Lung	Poisoning	Other	Hearing	Total
1979	1,358,000	12.6	3.5	2.5	1.3	8.2		24.5
1980	1,394,000	11.4	3.7	2.2	0.5	8.6		22
1981	1,409,000	10.7	5	2.3	0.6	9.4		22.8
1982	1,400,000	8.1	4.1	1.8	0.2	8.2		18.2
1983	1,419,000	8.7	4.7	1.2	1.1	9.7		20.6
1984	1,490,000	7.4	4.5	2	0.4	8.6		18.4
1985	1,528,000	6.1	4.8	1.8	0.3	10.4		18.4
1986	1,567,000	5.2	4.9	2	0.4	10		17.4
1987	1,607,000	8.4	8.9	2.1	0.4	18.2		28.9
1988	1,637,000	7.7	2.5	2.2	0.3	9.6		26.7
1989	1,634,000	7.6	16.1	2	0.5	26		35.8
1990	1,593,000	6.5	15.9	3.5	0.3	23.6		33.3
1991	1,518,000	6.2	22.8	3.2	0.7	30.4		40.1
1992	1,483,000	7.3	26	3.4	0.4	32.7		43.5
1993	1,487,000	6.5	37.2	3.8	1.1	45.2		56.3
1994	1,501,800	6.4	29.8	3.2	0.6	39		48.7
1995	1,520,000	5.8	27.8	2.7	0.2	36.5		44.7
1996	1,538,000	5.4	24.1	3	0.2	30.8		39.1
1997	1,570,500	3.9	21.2	2	0.4	28.3		34.5
1998	1,596,900	6.2	21.3	2.9	0.3	25.2		34.5
1999	1,630,100	4.9	20.3	2.5	0.4	26.1		33.8
2000	1,653,000	5.4	23.2	3	0.2	30.4		38.7
2001	1,571,000	5.8	20.5	4.1	0.2	25.1		35.1
Year	Employ	Skin		Respiratory	Poison	Other	Hearing	Total
2002*	1,602,000	6.2	*	2.4	0.6	23.7	*	32.9
2003	1,605,000	6.9	*	3.8	0.2	24	*	34.9
2004	1,603,100	6.4	*	2.7	0.3	22.1	3.6	34.9
2005	1,614,100	6.3	*	3.6	*	23.3	2.8	36
2006	1,635,700	4.3	*	1.8	0.3	18.8	3.3	28.4
2007	1,666,600	4.7	*	2.7	0.2	18.2	3.4	29.2
2008	1,666,600	4.7	*	2.7	0.2	18.2	3.4	29.2
2009	1,675,000	5.1	*	2.2	1	15.4	2.7	26.3
2010	1,639,300	5.1	*	2.1	*	13.1	2.5	23.1
2011	1,578,200	6.3	*	2	*	16.8	2.5	27.8
2012	1,628,028	4.6	*	2.6	*	12.0	2.6	21.9
2013	1,640,223	3.5	*	2.0	0.2	12.4	2.2	20.3
2014	1,653,545	3.4		1.9	*	11.0	2.1	18.7
2015	1,662,822	3.0	*	1.5	0.2	11.3	1.7	17.7

Source: BLS/Conn-OSHA

\*Data collection methods and categories changed in 2002, and are not comparable to prior years.

“Other” includes the pre-2002 categories of MSD, Physical, Lung-dust, and Other.

## H. Appendix 3: Occupational Illness Rates by Town/Municipality

**Table H-1 Occupational Illness Rates by Town/Municipality: 2015 (10 or more cases)**

Town	Cases	Employment	Rate per 10,000	Rank*
Avon	23	9,041	25.4	57
Berlin	50	12,560	39.8	22
Bethel	15	7,919	18.9	80
Bloomfield	40	20,391	19.6	79
Branford	22	13,839	15.9	88
Bridgeport	105	51,140	20.5	77
Bristol	66	24,395	27.1	50
Brookfield	26	8,018	32.4	34
Brooklyn	10	2,140	46.7	13
Cheshire	81	18,048	44.9	14
Clinton	23	4,617	49.8	9
Colchester	14	4,546	30.8	38
Cromwell	56	7,982	70.2	2
Danbury	121	49,628	24.4	60
Darien	24	9,303	25.8	54
Derby	12	5,282	22.7	68
East Hartford	81	33,063	24.5	59
East Haven	20	7,244	27.6	47
East Lyme	44	7,129	61.7	3
East Windsor	33	7,801	42.3	20
Ellington	10	4,142	24.1	61
Enfield	49	22,115	22.2	72
Fairfield	41	28,478	14.4	90
Farmington	204	37,335	54.6	6
Glastonbury	42	18,450	22.8	67
Greenwich	80	38,302	20.9	76
Griswold	17	1,852	91.8	1
Groton	132	29,696	44.5	16
Guilford	29	8,480	34.2	31
Hamden	42	22,358	18.8	81
Hartford	360	132,103	27.3	49
Killingly	32	9,995	32.0	35
Litchfield	14	4,278	32.7	33
Madison	15	5,843	25.7	55
Manchester	91	30,912	29.4	41
Mansfield	57	18,582	30.7	39
Meriden	64	24,651	26.0	53
Middlebury	10	4,146	24.1	63
Middletown	163	32,750	49.8	10
Milford	54	30,804	17.5	86
Monroe	12	6,465	18.6	82
Montville	37	21,000	17.6	85
Naugatuck	24	8,460	28.4	45
New Britain	67	30,081	22.3	71
New Canaan	21	7,784	27.0	51
New Haven	277	93,349	29.7	40
New London	63	15,657	40.2	21

New Milford	45	9,474	47.5	12
Newington	48	20,647	23.2	65
Newtown	32	10,158	31.5	36
North Haven	70	18,573	37.7	27
Norwalk	117	50,328	23.2	66
Norwich	58	20,147	28.8	44
Old Saybrook	23	6,959	33.1	32
Orange	38	10,960	34.7	30
Plainfield	28	5,016	55.8	5
Plainville	40	10,450	38.3	25
Plymouth	11	2,583	42.6	19
Putnam	34	6,655	51.1	8
Ridgefield	11	11,831	9.3	91
Rocky Hill	58	18,737	31.0	37
Shelton	52	24,183	21.5	75
Simsbury	24	10,581	22.7	69
South Windsor	63	14,100	44.7	15
Southbury	26	9,972	26.1	52
Southington	66	17,037	38.7	23
Stafford	20	4,087	48.9	11
Stamford	138	81,733	16.9	87
Stonington	15	8,091	18.5	83
Stratford	121	27,485	44.0	17
Suffield	21	5,679	37.0	28
Thomaston	12	3,180	37.7	26
Tolland	19	4,424	42.9	18
Torrington	64	17,982	35.6	29
Trumbull	49	16,980	28.9	43
Vernon	52	9,780	53.2	7
Wallingford	75	29,936	25.1	58
Waterbury	109	45,590	23.9	64
Waterford	47	12,157	38.7	24
Watertown	16	8,987	17.8	84
West Hartford	70	31,721	22.1	73
West Haven	45	19,913	22.6	70
Westbrook	24	4,297	55.9	4
Westport	34	17,111	19.9	78
Wethersfield	32	13,263	24.1	62
Wilton	20	13,636	14.7	89
Winchester	12	4,149	28.9	42
Windham	38	13,869	27.4	48
Windsor	74	26,356	28.1	46
Windsor Locks	36	14,144	25.5	56
Woodbridge	10	4,559	21.9	74

\*Ranking: #1 is the highest rate of illness

Only towns with at least 10 cases are shown.

Rates are based on workers' compensation reports based on the town of illness (employer location); workforce is based on total employment by town of employment (business location), provided by the CT Labor Department

# I. Appendix 4: Internet Resources for Job Safety and Health; 2016

## General Health and Safety Sites

One of the best sources of information for job health and safety on the internet is the **OSHA (Occupational Safety and Health Administration)** homepage, which includes an ergonomics homepage, a searchable index of standards, and many other resources.

<http://www.osha.gov>

To look up **OSHA citations** by company or industry: <http://www.osha.gov/pls/imis/establishment.html>

The Bureau of Labor Statistics tracks occupational injuries and illnesses <https://www.bls.gov/iif/>

**NIOSH** (the National Institute for Occupational Safety and Health) is another good general source. A searchable section on diseases and injuries briefly describes conditions with updates on current research and guidance on prevention.

<http://www.cdc.gov/niosh/homepage.html>

<http://www.cdc.gov/niosh/topics/diseases.html>

**EPA** (the Environmental Protection Agency) has a number of sites relevant to occupational health on indoor air quality, office and school environments, and other topics.

[www.epa.gov](http://www.epa.gov)

[www.epa.gov/iaq/](http://www.epa.gov/iaq/)

The **North Carolina Occupational Safety and Health Education and Research Center** is the home for the occupational health forum (formerly based at Duke), directed particularly to health care professionals, with a good set of technical links to other occupational health resources.

<http://www.occhealthnews.net>

The **Canadian Centre for Occupational Health and Safety** has hundreds of resources on their health and safety internet resource list. Start at their home page, then choose “Free Resources” (on the side bar).

<http://www.ccohs.ca>

New Jersey Department of Health has 1,600 excellent **chemical hazard factsheets** that are free, independently researched, and clearly written (900 in Spanish) on hundreds of substances.

<http://web.doh.state.nj.us/rtkhsfs/indexfs.aspx>

Vermont Safety Information Resources, Inc. has a database of **material safety data sheets (MSDS)** from a large number of chemical companies.

<http://www.siri.org> <http://www.siri.org/msds/index.php>

**Several safety organizations have useful websites:**

[www.nsc.org](http://www.nsc.org)

The National Safety Council

[www.aiha.org](http://www.aiha.org)

The American Industrial Hygiene Association

[www.asse.org](http://www.asse.org)

American Society of Safety Engineers

[www.nfpa.org](http://www.nfpa.org)

National Fire Protection Association

[www.safetycentral.org](http://www.safetycentral.org) International Safety Equipment Association

For a labor perspective, the **national AFL-CIO** includes a health and safety page.

<http://www.aflcio.org/Issues/Job-Safety>,

**NYCOSH** (New York Committee for Occupational Safety and Health) covers many news topics.

<http://www.nycosh.org>

The **Connecticut Business and Industry Association** has a health and safety page that helps businesses understand what OSHA laws apply to them, and provides information on upcoming conferences and events.

<http://www5.cbia.com/hr/osha/>

The **Environmental Defense Fund** has a “pollution information site” called Scorecard with information about 11,200 chemicals and their recognized and suspected health effects. The site offers information with an interactive data based on the 2002 Toxics Release Inventory and is currently working on providing an update.

<http://www.scorecard.org/>

The Cal-OSHA Reporter carries current stories on job health and safety.

<http://www.cal-osha.com>.

Some **blogs carry job health and safety news and commentary.**

Jordan Barab has a labor perspective on OSHA and job health and safety

<http://jordanbarab.com/confinedspace/>

The USMWF United Support and Memorial for Workplace Fatalities posts current stories about workers who have been killed on the job and their families <https://www.facebook.com/USMWF> or [www.usmwf.org](http://www.usmwf.org)

The Pump Handle connects to Facebook and Twitter, and continues the legacy of Jordan Barab’s blog <http://scienceblogs.com/thepumphandle/>.

Workers’ compensation issues are covered at <http://workerscompinsider.com>.

The **Toxic Use Reduction Institute** at UMass Lowell has extensive resources on safer alternatives to toxic substances, including a database on alternatives to solvents.

<http://www.turi.org>.

**UMass-Lowell’s Center for Sustainable Production** has information on changing chemical policies.

<http://www.sustainableproduction.org/>

The **Health and Safety Executive of Great Britain** has extensive information on the new European Union’s REACH (Registration, Evaluation, and Authorization of Chemicals).

<http://www.hse.gov.uk/reach/index.htm>.

OSHA has a discussion of the US program that responds to the International Globally Harmonized System for Hazard Communication.

<http://www.osha.gov/dsg/hazcom/global.html>.

## **State of Connecticut and Select Other Resources**

The **Connecticut Workers’ Compensation Commission** has an excellent website, including information on the locations of offices, a searchable version of the workers’ compensation statutes, new decisions, and other information.

<http://wcc.state.ct.us>

The **Connecticut (CT)** website allows access to all branches of state government including agencies.

<http://www.state.ct.us>

The **CT Department of Public Health** includes a site for the occupational health program, including Occupational Health Fast Facts, Health Alerts and Fact Sheets.

<http://www.ct.gov/dph/occupationalhealth>

The **CT Department of Labor** includes an occupational health services site, which includes information on their free consultation program and a great set of links to other health and safety sites. CONN-OSHA offers a variety of consulting services to both public and private employers in Connecticut, available at no charge.

<http://www.ctdol.state.ct.us/osha/osha.htm>   <https://www.ctdol.state.ct.us/osha/consulti.htm>

The **Connecticut General Assembly** website lets you search for any bill being considered, or get information about relevant committees such as Labor and Public Employees or Public Health.

<http://www.cga.ct.gov>

You can track national bills on the **National Library of Congress** site.

<https://www.congress.gov/>

You can search the medical literature at **US National Library of Medicine PubMed**.

<http://www.ncbi.nlm.nih.gov/pubmed/>

You can search general academic literature through **Google Scholar**.

<http://scholar.google.com/schhp?tab=ws> .

**UCONN HEALTH's Division of Occupational and Environmental Medicine** has information and links on job health and safety.

<http://health.uconn.edu/occupational-environmental>

The **Center for the Promotion of Health in the New England Workplace (CPH-NEW)** is a research-to-practice initiative led by investigators from the UMASS Lowell and UCONN HEALTH.

<http://health.uconn.edu/occupational-environmental/academics-and-research/cph-new/>

The **UCONN HEALTH's Center for Indoor Environments and Health** provides guidance on environmental exposures in indoor settings including schools and office buildings

<http://health.uconn.edu/occupational-environmental/consultation-and-outreach/cieh/>

## **Ergonomic Sites and Links**

**Ergoweb** has good factsheets, documents, and news.

<https://ergoweb.com/>

**Tom Bernard's** website at **University of South Florida** has many of the standards and excellent free electronic ergonomic analysis tools such as the NIOSH lifting equation.

<http://personal.health.usf.edu/tbernard/ergotools/index.html>.

**Tom Armstrong** at the **University of Michigan** runs one of the most respected university training programs for ergonomics, and has extensive information, tools, and lectures.

<http://www-personal.umich.edu/~tja>

**Cornell University's Alan Hedge** has an active ergonomics program, with reports posted on graduate student projects and evaluation of ergonomic products.   <http://ergo.human.cornell.edu>

**The University of Virginia** has ergonomics training and resources. <http://ehs.virginia.edu/Ergonomics.html>



**Human Factors and Ergonomics Society** is the main professional association in ergonomics.

<http://www.hfes.org>

Since 1994, the **National Ergonomics Conference & Ergo Expo** has provided a forum on ergonomics, safety and wellness programs.

<http://www.ergoexpo.com/>

The **Typing Injury FAQ** has links and information on repetitive strain injuries from user and injured workers groups.

<http://www.tifaq.org/>

**The National Health Service/UK** has information about repetitive strain injuries/RSI

<http://www.nhs.uk/conditions/Repetitive-strain-injury/Pages/Introduction.aspx>

Paul Landsbergis has a good website on job stress. <http://unhealthywork.org/about-us/team/paul-a-landsbergis/>

The **European Agency for Health and Safety at Work's Job Stress Network** web page is dedicated to increasing communication among researchers and others interested in job stress and its impact on health

<https://osha.europa.eu/data/links/795>

*Internet Resources for Job Safety and Health is compiled by Tim Morse, Ph.D., at UConn Health. To update or add a listing, please contact Tim at [tmorse@uchc.edu](mailto:tmorse@uchc.edu).*

## J. Appendix 5: Who's Who: Resources in Connecticut on Job Safety and Health

### Academic Programs and Courses

#### Central Connecticut State University, School of Technology

**Type of Degree:** Certificate Program in Environmental and Occupational Safety

**Faculty contact:** Ravindra Thamma, Department Chair

**Address:** Copernicus Hall - Room 2120900, CCSU, 1615 Stanley Rd., New Britain, CT 06050

**Phone:** 860-832-3516

**e-mail:** [thammarav@ccsu.edu](mailto:thammarav@ccsu.edu)

**Web:** <http://www.ccsu.edu/mcm/environmentalOccupationalSafetyOCP.html>

#### UCONN College of Agriculture, Health and Natural Resources, Department of Allied Health Sciences

**Type of Degree and Program:** Bachelor in Allied Health Sciences with an Occupational Environmental Health Sciences Concentration; and an Online Occupational Safety and Health Post-Baccalaureate Certificate Program

**Faculty contact:** Paul Bureau, MS MS CIH

**Address:** Koons Hall Room 306, 358 Mansfield Road, Unit 1101, Storrs, CT 06269-1101

**Phone:** (860) 486-0040

**e-mail:** : [paul.bureau@uconn.edu](mailto:paul.bureau@uconn.edu)

**Web:** <http://www.alliedhealth.uconn.edu/majors/oshConcentration.php> and <http://osh.uconn.edu>

#### UConn Health, Department of Community Medicine

**Type of Degree:** Masters in Public Health program with ergonomic/occupational health courses

**Director:** David Gregorio, PhD

**Address:** UCONN Health, 263 Farmington Ave., Farmington, CT 06030-6325

**Phone:** (860) 679-5480

**Fax:** (860) 679-1581

**e-mail:** [gregorio@nso.uhc.edu](mailto:gregorio@nso.uhc.edu)

**Web:** <http://commed.uhc.edu/education/mph/index.html>

#### UCONN HEALTH, Department of Medicine

**Type of Degree:** Ph.D. in Public Health with a concentration in Occupational and Environmental Health Sciences

**Faculty Contact:** Jennifer Cavallari, ScD, CIH

**Address:** UCONN Health, 263 Farmington Ave., Farmington, CT 06030-6210

**Phone:** (860) 679-4720

**Fax:** (860-679-1349

**e-mail:** [cavallari@uhc.edu](mailto:cavallari@uhc.edu)

**Web:** <http://health.uconn.edu/community-medicine/ph-d-in-public-health>

## OSHA

**Connecticut Department of Labor's Division of Occupational Safety and Health/CONN-OSHA:** CONN-OSHA enforces state occupational safety and health regulations as they apply to state and municipal employees, and offers free consultations to public agencies, school districts and private companies.

**Director:** Kenneth C. Tucker III

**Address:** 200 Folly Brook Boulevard, Wethersfield, CT 06109

**Phone:** (860) 263-6900

**Fax:** (860) 263-6940

**Web:** <http://www.ctdol.state.ct.us/osha/osha.htm>

**Publications:** ConnOSHA Quarterly <https://www.ctdol.state.ct.us/osha/Quarterly/coqtrly.htm>

**OSHA (Occupational Safety and Health Administration):** Federal OSHA inspects workplaces in the private sector for violations of standards, and also has information and pamphlets.

**National Website:** <https://www.osha.gov>

**OSHA Bridgeport Office** (Fairfield, New Haven, and Middlesex counties).

**Area Director (Acting until August 2017):** Kang Yi

**Address:** 915 Lafayette Blvd, Room 309, Bridgeport, Connecticut 06604

**Phone:** (203) 579-5581; National Hotline after hours, etc.: (800) 321-OSHA (6742)

**Fax:** (203) 579-5516

**OSHA Hartford Office**

**Director:** Warren Simpson

**Address:** 135 High Street, Suite 361, Hartford, CT 06103

**Phone:** (860) 240-3152; National Hotline after hours, etc.: (800) 321-OSHA (6742)

**Fax:** (860) 240-3155

## Academic Occupational Health Clinics

**UConn Occupational and Environmental Medicine Clinic**

**Clinic Director:** Marc Croteau, MD MPH

**Address:** UCONN Health, 263 Farmington Ave, Farmington, CT 06032-8077

**Clinic address:** UCONN Health Outpatient Pavilion, 2<sup>nd</sup> floor East

**Phone:** (860) 679-2893

**Fax:** (860) 679-4587

**e-mail:** [occmehs@uchc.edu](mailto:occmehs@uchc.edu)

**Web:** <http://health.uconn.edu/occupational-environmental/clinical-services/>

**Yale Occupational and Environmental Medicine Program**

**Director:** Carrie A Redlich, MD, MPH

**Address:** 367 Cedar Street, ESHA 2nd Floor, New Haven, CT 06510

**Clinic address:** 135 College St. Rm. 366, New Haven, CT 06510

**Phone:** (203) 785-4197

**Fax:** (203) 785-7391

**e-mail:** [Carrie.Redlich@yale.edu](mailto:Carrie.Redlich@yale.edu)

**Web:** <http://medicine.yale.edu/intmed/occmeh/>

## Occupational Health Clinics

### **Concentra**

**Medical Director:** David Feinstein, MD

**Address:** 701 Main Street, East Hartford, CT 06108

**Phone:** (860) 289-5561

**Fax:** (860) 291-1895

**e-mail:** [david\\_feinstein@concentra.com](mailto:david_feinstein@concentra.com)

**Web:** <http://www.concentra.com/employers/occupational-health/>

#### **Other Offices:**

972 West Main Street, New Britain (860) 827-0745

1080 Day Hill Road, Windsor (860) 298-8442

8 South Commons Rd, Waterbury (203) 759-1229

333 Kennedy Drive, Torrington (860) 482-4552

900 Northrup Rd, Wallingford (203) 949-1534

370 James Street, New Haven (203) 503-0482

60 Watson Blvd, Stratford (203) 380-5945

15 Commerce Road, 3rd Floor, Stamford, (203) 324-9100

10 Connecticut Avenue, Norwich, (860) 859-5100

### **Connecticut Occupational Medicine Partners, St. Francis Hospital and Medical Center**

**President, CEO and Administrative Director:** Derrick Amato

**Address (corporate):** 675 Tower Avenue, Suite 404B, Hartford, CT 06112

**Phone:** (860) 714-6188

**Fax:** (860) 714-2775

**Web:** <http://compllc.org/>

**Clinics: St Francis;** 1000 Asylum Ave, Ste 4320, Hartford, 860-714-4270; 1598 East Main St, Torrington, (860) 482- 3467; 100 Deerfield Road, Windsor, 860-714-9444

**ECHN Corporate Care;** 2800 Tamarack Ave., Suite 001, South Windsor, CT 06074, (860) 647-4796

**MedWorks of Bristol Hospital;** 975 Farmington Ave. Bristol (860) 589-0114

**MedWorks;** 375 East Cedar St., Newington (860) 667-4418

**Johnson Memorial Medical Center:** Director, Clinical Services: Kathy Heim, RN, MSN 155 Hazard Ave., Suite 6. Enfield, CT 06082, (860) 763-7668

### **Griffin Hospital Occupational Medicine**

**Director:** Dave Maffei, PA-C; Barry Ostroff, MD, FACOEM

**Address:** 10 Progress Drive. Shelton, CT 06484

**Phone:** (203) 944-3718

**Fax:** (203) 929-3068

**e-mail:** [dmaffei@griffinhealth.org](mailto:dmaffei@griffinhealth.org)

**Web:** <http://www.griffinhealth.org/locations/shelton/griffin-hospital-occupational-medicine-center>

### **Hartford HealthCare Rehabilitation Network**

**Director:** Eric Smullen, PT

**Address:** 181 Patricia M Genova Drive, Newington, CT 06111

**Phone:** (860) 696-2500

**Fax:** (860) 696-2525

**Web:** <https://hartfordhealthcare.org/locations-partners/hartford-healthcare-rehabilitation-network>

### **Hartford Medical Group—Occupational Medicine**

**Business Development Director:** Peter Kowalski

**Address:** 1025 Silas Deane Highway, Wethersfield, CT 06109

**Phone:** (800) 557-8389

**e-mail:** [pkowalski@harthosp.org](mailto:pkowalski@harthosp.org)

**Web:** <https://hartfordhealthcaremedicalgroup.org/specialties/primary-care/occupational-medicine>

**Other Offices;** 256 North Main Street, Manchester, (860) 696-2300; 445 South Main Street, West Hartford, (860) 696-2200, 1025 Silas Deane Highway, Wethersfield, CT (860) 696-2400; 1060 Day Hill Road, Windsor (860) 696-2450, 863 North Main Street Ext, Wallingford, 06492, (203) 694-5500, 80 Norwich-New London Tnpk, Montville, 06353, (860) 898-1297; 440 New Britain Ave, Plainville 06062 (860) 747-9441

### **Middlesex Hospital Occupational Medicine**

**Director:** Thomas J. Danyliw, MD

**Address:** 534 Saybrook Rd., Middletown, CT 06457

**Phone:** (860) 358-2750

**Fax:** (860) 348-2757

**e-mail:** [tom\\_danyliw\\_md@midhosp.org](mailto:tom_danyliw_md@midhosp.org)

**Web:** <http://middlesexhospital.org/our-services/hospital-services/occupational-medicine/overview/occupational-medicine-at-middlesex-hospital>

**Other Office:** Physical Rehabilitation Center, 192 Westbrook Road, Essex (860) 358-3840

### **St. Mary's Hospital Occupational Health and Diagnostic Center**

**Medical Director:** Erica Martinucci, MD

**Address:** 1312 West Main Street, Waterbury, CT

**Phone:** (203) 709-3740

**Fax:** (203) 709-3741

**Web:** <http://www.stmh.org/services/occupational-medicine>

### **Western Connecticut Health Network, Norwalk Hospital Occupational and Environmental Health**

**Contact:** Raj Ahsan, MD MPH

**Address:** 520 West Avenue, Norwalk, CT 06850

**Phone:** (203) 852-2417

**Fax:** (203) 852-2310

**e-mail:** [Raj.Ahsan@wchn.org](mailto:Raj.Ahsan@wchn.org)

**Web:** <http://www.norwalkhospital.org/departments/occupational-and-environmental-health-services/occupational-health>

### **Western Connecticut Health Network, Danbury Hospital Corporate Health Care**

**Contact:** Dr. Rita Ohene-Adjei, MD, MPH

**Address:** 79 Sandpit Rd, Suite 302, Danbury

**e-mail:** [Rita.Ohene-Adjei@wchn.org](mailto:Rita.Ohene-Adjei@wchn.org)

**Phone:** (203) 749-5720

**Web:** <http://www.danburyhospital.org/departments/corporate-health-care/contact-and-hours>

### **Yale-New Haven Health Systems**

**Manager for Clinical Operations (St. Raphael campus):** Andrea Santerre, RN

**Address:** 175 Sherman Avenue, New Haven, CT 06511

**Phone:** (203) 789-6216

**Fax:** (203) 789-5174

**e-mail:** [andrea.santerre@ynhh.org](mailto:andrea.santerre@ynhh.org)

**Web:** <https://www.ynhh.org/services/occupational-health.aspx>

**Other Offices:**

2080 Whitney Ave., Suite 150, Hamden (203) 789-6242

Greenwich Hospital, 5 Perry Ridge Rd, (203) 863-3483

Bridgeport Hospital, (203) 988-2551

**Lawrence and Memorial Occupational Health Center**

**Medical Director:** Geraldine Ruffa, MS, MPH, MD, (860) 446-8265 x 7074

**Director, Occupational Health Services:** Ruth E. Moreau, RN, MS, COHN-S

**Address:** 52 Hazelnut Hill Rd., Groton, CT 06340

**Phone:** (860) 446-8265 x7082

**Fax:** (860) 448-6961

**Email:** rmoreau@lmhosp.org

**Web:** <https://www.lmhospital.org/services/occupational-health.aspx>

**Other site:** Outpatient Rehabilitation Services, 40 Boston Post Road, Waterford, CT 06385, (860) 271-4900

## Organizations

### **American Lung Association (ALA) of Northeast Connecticut**

The ALA is a non-profit association geared towards preventing lung disease, including occupational lung disease.

**Director Medical and Scientific Branch:** Michelle Caul

**Connecticut Address:** 45 Ash St., East Hartford, CT 06108

**Phone:** (860) 838-4379

**e-mail:** [Michelle.Caul@lung.org](mailto:Michelle.Caul@lung.org)

**Web:** <http://www.lung.org/associations/charters/northeast/> <http://www.lung.org/associations/states/connecticut/>

### **Coalition for a Safe and Healthy Connecticut**

This is a community-based coalition of environmental, public health, and labor organizations providing resources and advocacy for reducing the use of toxic chemicals through substitution of safer alternatives.

**Coordinator:** Anne B. Hulick, RN MS JD

**Address:** c/o Clean Water Action, 2074 Park Street, Suite 308, Hartford, CT, 06106

**Phone:** (860) 232-6232

**Fax:** (860) 232-6334

**e-mail:** [ahulick@cleanwater.org](mailto:ahulick@cleanwater.org)

**Web:** <https://safehealthyct.wordpress.com>

### **Connecticut Safety Council/Safety Roundtable**

The Safety Council is associated with the Connecticut Business and Industry Association and offers seminars, training courses, consulting, and policy discussions on safety and regulations.

**Contact:** Phillip Montgomery

**Address:** 350 Church St. Hartford, CT 06103-1126

**Phone:** (860) 244-1900

**e-mail:** [phillip.montgomery@cbia.com](mailto:phillip.montgomery@cbia.com)

**Web:** <http://www.cbia.com/cbia-councils/>

### **ConnectiCOSH (The Connecticut Council for Occupational Safety and Health)**

CTCOSH is a union-based non-profit organization for education and political action on job safety and health. They have conferences, fact sheets, and speakers.

**Director:** Mike Fitts

**Address:** 683 No. Mountain Rd, Newington, CT 06111

**Phone:** (860) 953-COSH (2674)

**Fax:** (860) 953-1038

**e-mail:** [mike.ctcosh@snet.net](mailto:mike.ctcosh@snet.net)

**Web:** <http://connecticosh.org>

### **The Center for the Promotion of Health in the New England Workplace (CPH-NEW)**

CPH-NEW is a NIOSH-funded center for scientific research and education, based in participatory action research, integrating occupational health and safety with worksite health that is administered jointly by UMASS Lowell and UCONN Health.

**Director:** Martin Cherniack, MD, MPH

**Address:** 263 Farmington Ave, Farmington, CT 06030-8077

**Phone:** (860) 679-4916

**Fax:** (860) 679-1349

**e-mail:** [cherniack@uchc.edu](mailto:cherniack@uchc.edu)

**Web:** <http://health.uconn.edu/occupational-environmental/academics-and-research/cph-new/>

### **The Ergonomic Technology Center (ErgoCenter) at UCONN Health**

The ErgoCenter is a center for prevention of repetitive strain injuries based at UCONN Health, which does training, research, consulting, and clinical care.

Contact: Jennifer Garza, ScD, Ergonomist

Address: 263 Farmington Ave, Farmington, CT 06030-8077

Phone: (860) 679-4916

Fax: (860) 679-1349

Phone: 860-679-5418

Email: [garza@uchc.edu](mailto:garza@uchc.edu)

Web: <https://health.uconn.edu/occupational-environmental/consultation-and-outreach/ergonomics-consultation/>

### **UCONN Health- Center for Indoor Environments and Health (CIEH)**

The CIEH at the University of Connecticut Health Center works with public health agencies, companies, clinics and individuals to promote indoor environments which protect the health of building occupants and provide productive, creative spaces for learning and work. The website on hurricane health (below) provides educational materials on protecting workers from exposures when addressing flooded buildings after severe wet weather.

**Director:** Paula Schenck, MPH

**Address:** 263 Farmington Ave, Farmington, CT 06030-8077,

**Phone:** (860) 679-2368

**Fax:** (860) 679-1349

**e-mail:** [schenck@uchc.edu](mailto:schenck@uchc.edu)

**Web:** <http://health.uconn.edu/occupational-environmental/consultation-and-outreach/cieh/>

<http://hurricane-weather-health.doem.uconn.edu/>

## **Professional Associations**

### **American Industrial Hygiene Association (AIHA), Connecticut River Valley Section**

AIHA is a professional association for industrial hygienists.

**Contact:** Brian Bethel, CIH (Sikorsky Aircraft)

**Phone:** (203) 232-9993

**e-mail:** [bbethel@fando.com](mailto:bbethel@fando.com)

**Web:** <https://www.aiha.org/get-involved/LocalSections/ConnecticutRiverValley/Pages/default.aspx>

### **Connecticut Safety Society**

This society is a professional association for safety inspectors

**President:** Ernie St. Amant

**Phone:** (203) 260-3444

**e-mail:** [info@ctsafety.org](mailto:info@ctsafety.org)

**Web:** <http://www.ctsafety.org>

### **American Society of Safety Engineers (ASSE)**

ASSE is a non-profit association for enhancing the competence and knowledge of the safety profession.

**Connecticut Valley Chapter (Northern CT)**

**Address:** Box 106, 1131-0 Tolland Turnpike, Manchester, CT 06040

**President:** Allison Bresloff, CSP

**e-mail:** [allibrez@gmail.com](mailto:allibrez@gmail.com)

**Web:** <http://ctvalley.asse.org>



**Air & Waste Management Association (AWMA), Connecticut Chapter**

AWMA provides training, information, and networking opportunities to environmental professionals. The Connecticut Chapter, New England Section, provides periodic forums for discussion and sponsors an annual student scholarship.

**Vice Chair:** David Krochko

**Phone:** (888) 265-8969

**e-mail:** dkrochko@woodardcurran.com

**Web:** [http://www.awmanewengland.org/connecticut\\_chapter.htm](http://www.awmanewengland.org/connecticut_chapter.htm)

**Connecticut Trial Lawyers Association, Workers' Compensation Committee**

This is an association of attorneys specializing in workers' compensation, mostly for claimants.

**Executive Director:** Neil Ferstand

**Address:** 150 Trumbull Street, 2<sup>nd</sup> Floor, Hartford, CT 06103

**Phone:** (860) 522-4345

**Fax:** (860) 522-1027

**e-mail:** nferstand@cttriallawyers.org

**Web:** [https://www.cttriallawyers.org/public/workers\\_compensation.cfm](https://www.cttriallawyers.org/public/workers_compensation.cfm)

**Connecticut Bar Association, Workers' Compensation Section**

This is a professional association of attorneys who concentrate in workers' compensation.

**Chair:** Joseph Passaretti

**Phone:** (860) 659-1341

**E-mail:** jpassaretti@montmaylaw.com

**Web:** <http://www.ctbar.org/?page=WorkersCompensation>

**New England College of Occupational and Environmental Medicine/NECOEM**

NECOEM is an association for occupational medicine doctors.

**Executive Director:** Dianne Plantamura, MSW

**Address:** 22 Mill Street, Groveland, MA 01834

**Phone:** (978) 373-5597

**e-mail:** necoem@comcast.net

**Web:** <http://www.necoem.org/>

**Northeast Association of Occupational Health Nurses /NEAOHN**

NEAOHN is an association of occupational health nurses, including most of the nurses working in industry.

**CT Director:** Richard John Sandrib, NP

**Address:** 5 Research Pkwy, Wallingford, CT 06492

**Phone:** (203) 677-6441

**Web:** <http://www.neaohn.org/>

## Connecticut State Agencies

### **Department of Public Health (DPH), Occupational Health Unit**

This unit investigates clusters of occupational diseases. Programs for radon, asbestos, AIDS, lead, asthma, CT Schools Environmental Resource Team, TB control and infectious disease are also at the DPH.

**Director:** Thomas St. Louis, MSPH

**Address:** DPH/ OHP, 410 Capitol Ave, MS #11EOH, PO Box 340308, Hartford, CT 06134-0308

**Phone:** (860) 509-7740

**Fax:** (860) 509-7785

**e-mail:** [Thomas.st.louis@ct.gov](mailto:Thomas.st.louis@ct.gov)

**Web:** [http://www.ct.gov/dph/cwp/view.asp?a=3140&q=387472&dphNav\\_GID=1828](http://www.ct.gov/dph/cwp/view.asp?a=3140&q=387472&dphNav_GID=1828)

### **State Department of Emergency Services and Public Protection**

**Public Information Officer:** Scott Devico

**Phone:** (860) 685-8246

**Fax:** (860) 685-8354

**e-mail:** [scott.devico@ct.gov](mailto:scott.devico@ct.gov)

**Web:** <http://www.ct.gov/demhs/site/default.asp>

### **State Emergency Response Commission, Department of Energy and Environmental Protection**

This commission oversees plans for response to chemical accidents and collects chemical information for the public under Community Right to Know.

**Chairman:** Gerard P. Goudreau

**Address:** 79 Elm St, Hartford, CT 06106-5127

**Phone:** (860) 424-3373

**Fax:** (860) 424-4062

**e-mail:** [deep.ctepcra@ct.gov](mailto:deep.ctepcra@ct.gov)

**Web:** <http://www.ct.gov/serc>

### **Connecticut Fire Academy, Commission on Fire Prevention & Control**

Safety training & standards compliance.

**Training Director:** Bill Higgins

**Address:** 34 Perimeter Road, Windsor Locks, CT 06096-1069

**Phone:** 860-264-9272 or toll free (877) 5CT-FIRE (only in CT)

**Fax:** (860) 654-1889

**Email:** [william.higgins@ct.gov](mailto:william.higgins@ct.gov)

**Web:** <http://www.ct.gov/cfpc/site/default.asp>

### **Connecticut Department of Environmental Protection, Radiation Safety Unit**

**Director:** Jeff Semancik

**Phone:** (860) 424-4190; (860) 424-3333 24/7 Emergency

**Fax:** (860) 706-5339

**e-mail:** [jeffrey.semancik@ct.gov](mailto:jeffrey.semancik@ct.gov)

**Web:** [http://www.ct.gov/deep/cwp/view.asp?a=2713&q=324824&deepNav\\_GID=1639](http://www.ct.gov/deep/cwp/view.asp?a=2713&q=324824&deepNav_GID=1639)

**Workers' Compensation Commission  
Chairman's Office and Compensation Review Board**

The Workers' Compensation Commission (WCC) administers the workers' compensation laws of the State of Connecticut with the ultimate goal of ensuring that workers injured on the job receive prompt payment of lost work time benefits and attendant medical expenses. To this end, the Commission holds hearings on disputed matters, facilitates voluntary agreements, makes findings and awards, hears and rules on appeals, and closes out cases through full and final stipulated settlements.

The WCC Safety & Health Services unit assists employers with implementation of the workers' compensation regulations regarding "Establishment and Administration of Safety and Health Committees at Work Sites."

**Chairman:** John A. Mastropietro  
**Address:** 21 Oak St., 4<sup>th</sup> Floor, Hartford, CT 06106-8011  
**Phone:** (860) 493-1500  
**Information:** (800) 223-WORK (9675)  
**Fax:** (860) 247-1361  
**e-mail:** [wcc.chairmansoffice@po.state.ct.us](mailto:wcc.chairmansoffice@po.state.ct.us)  
**Web:** <http://wcc.state.ct.us/>

**Workers' Compensation District Offices**

1. 999 Asylum Ave., Hartford, CT 06105; (860) 566-4154; Fax: (860) 566-6137
2. 55 Main St., Norwich, CT 06360; (860) 823-3900; Fax: (860) 823-1725
3. 700 State St., New Haven, CT 06511; (203) 789-7512; Fax: (203) 789-7168
4. 350 Fairfield Ave., 2nd Floor, Bridgeport, CT 06604; (203) 382-5600; Fax: (203) 335-8760
5. 55 West Main St., Waterbury, CT 06702; (203) 596-4207; Fax: (203) 805-6501
6. 233 Main St., New Britain, CT 06051; (860) 827-7180; Fax: (860) 827-7913
7. 111 High Ridge Rd., Stamford, CT 06905-5111; (203) 325-3881; Fax: (203) 967-7264
8. 90 Court St., Middletown, CT 06457; (860) 344-7453; Fax: (860) 344-7487

*The Who's Who is compiled by Tim Morse, Ph.D., at UConn Health. To update or add a listing, please contact Tim at [tmorse@uchc.edu](mailto:tmorse@uchc.edu).*