Developing a Quality Measures Program: Recommendations on Primary Care Quality Measures and Formatting

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Executive Summary

At the direction of Connecticut's Office of Health Strategy this Primary Care Clinical Quality Measures and Formatting Report has been produced by the UConn Health team to identify a preferred set of primary care Quality Measures (QMs); and best practices in formatting healthcare quality reports for different stakeholders. The information and recommendations in the report are based on targeted reviews of peer-reviewed medical literature and websites of professional organizations that endorse, develop, or utilize QMs, as well as telephone conversations with representatives of the American College of Medical Quality and the National Quality Forum. The consulted national experts advise utilizing an existing primary care measure set which has already been validated and endorsed by many national organizations. Specifically, they recommended two measure sets from the Core Quality Measures Collaborative (CQMC). Updated and expanded versions of the CQMC measure sets were scheduled for release during the summer of 2020 along with guides for technical implementation and stakeholder engagement. However, the scheduled approval and voting process appears to have been delayed. Once approved and released the most recent versions of the measure sets should be utilized. These measure sets and implementation guides can serve as an excellent starting point for combined public-private quality reporting in Connecticut. There are many practical and technical questions that must be addressed to successfully achieve the goals of this initiative. Meaningful stakeholder engagement and collaboration will be critical throughout the project. Two AHRQ reports, "Confidential Physician Reports for Quality Improvement" and "Translate Health Care Quality Data into Useful Information," can be used to guide formatting of confidential provider reports for QI and public reports to guide consumer choice.

Introduction

This Primary Care Quality Measures and Formatting Report has been produced by the UConn Health team to identify: 1) a preferred set of primary care Quality Measures (QMs); and 2) best practices in formatting healthcare quality reports for different stakeholders. This report and subsequent work conducted by the UConn Health team will support the mission of the Connecticut Office of Health Strategy, i.e. "to implement comprehensive, data-driven strategies to promote equal access to high quality health care, control costs, and ensure better health for the people of Connecticut." The UConn Health team's work will also support the Health Information Alliance, a non-profit organization formed in 2019, to create a state-wide Health Information Exchange (HIE). This HIE, called ConnIE (Connecticut Information Exchange), is currently under development and will become operational later in 2020. Once the HIE is operational and QMs have been selected, the Office of Health Strategy can utilize these in a variety of ways to accomplish its mission. Some potential applications of QMs distributed with an HIE include:

1. Quality Improvement – Confidential feedback to health care providers on their performance relative to peers on individual QMs facilitates targeting of improvement interventions and follow-up impact assessments;
2. Public Reporting – Summarized health care provider performance data shared publicly informs consumer choice and augments health care professionals' motivation for improvement;
3. Value-Based Payment – Aggregate quality and cost data shared with health care providers and payers supports payment vs. penalties based on provider performance relative to pre-set goals;
4. Identification of Inequities – Data on processes and outcomes of care profiled in different population groups highlights disparities and informs corrective interventions for a variety of stakeholder groups;
5. Point of Care Clinical Decision Support – Clinical data on individual patients provided confidentially to clinicians whenever and wherever care is provided facilitates data reconciliation, e.g. drugs and allergies, and informs joint clinical decision-making with patients;
6. Biosurveilance Tracking – Aggregate public health data, e.g. COVID-19 infections, hospitalizations, and deaths per geographic area, made publicly available informs public and health care provider actions;
7. Personal Health Records – Diagnoses, tests, treatments, medications, allergies and other important clinical information assembled from participating health care providers' data allows patients to create a comprehensive personal health record to share with current and future providers.

Other entities that are collaborating with the CT Office of Health Strategy, the Health Information Alliance, and the UConn Health team to build the HIE are the Analytics and Information Solutions (AIMS) group and Diameter Health. AIMS is part of the UConn School of Nursing and is responsible for building the HIE infrastructure. Diameter Health is a Connecticut-based health care data and technology company that is responsible for preparing the data to be used within the HIE.

Methods

The information and recommendations in this report are based on targeted reviews of peer-reviewed medical literature and websites of professional organizations that endorse, develop, or utilize QMs, as well as telephone conversations with the president of the American College of Medical Quality (Don Casey, Jr, MD, MPH, MBA) and the National Quality Forum staff member participating in the Core Quality Measures Collaborative (Nicolette Mehas, PharmD). Websites that were extensively reviewed for primary care QMs and guidance on formatting reports include:

- National Quality Forum (NQF)
- National Committee for Quality Assurance (NCQA)
- Centers for Medicare & Medicaid Services (CMS)
- American Medical Association (AMA)
- Consumer Assessment of Healthcare Providers and Systems (CAHPS)
- Core Quality Measures Collaborative (CQMC)
- Agency for Healthcare Research and Quality (AHRQ)

Findings

Identification of Primary Care Quality Measures

Telephone Interviews

Drs. Casey and Mehas have extensive experience and knowledge of the strengths and weaknesses of various types of data; quality measure development, validation, and use for various purposes; multi-stakeholder consensus-building and endorsement; and related national QI/QM activities. After learning about the Connecticut initiative, their advice was to start with a focus on measure sets which have already been validated and are widely endorsed by national organizations. Once a measure set is selected, other factors, e.g. intended use and local availability of data, will drive decisions on whether the entire measure set or individual measures are most appropriate. The measure sets that they identified as already validated and most widely endorsed are those of the Core Quality Measures Collaborative.

National Quality Forum

The National Quality Forum (NQF) is a non-profit, membership organization that utilizes a transparent, consensus-based process with federal and private stakeholders to endorse individual quality measures which have been developed and tested by other organizations. Currently, NQF has over 300 measures in use by federal, private, and state public reporting and pay for performance programs. The U.S. Department of Health and Human Services relies heavily on NQF's Measures Application Partnership to foster use of uniform measures across federal programs.

Core Quality Measures Collaborative

The Core Quality Measures Collaborative (CQMC) was initially convened in 2015 by America's Health Insurance Plans (AHIP) to identify consensus core sets of quality measures. CQMC now includes NQF, CMS, individual health insurance companies, professional physician societies, consumer groups, purchasers, and other health care quality stakeholder groups working together to achieve the following aims:

- Identify high value, high impact, evidence-based measures that promote better patient outcomes and provide useful information for improvement and payment processes;
- Align measures from public and private health care payers to achieve congruence for quality improvement, transparency, and payment; and
- Decrease the burden of measurement by eliminating low value measures, redundancies and inconsistencies in measure specifications, and reporting requirements across payers.

CQMC's continuing work is to maintain and update core measure sets to reflect changes in clinical practice guidelines, data sources, and risk adjustment, as well as expanding to new clinical areas. CQMC's Accountable Care Organization (ACO) / Patient Centered Medical Home (PCMH) Measure Set and its Pediatrics Measure Set were released in 2016 and are especially relevant for use as primary care measure sets in the CT Office of Health Strategy initiative. Updated and expanded core measure sets are scheduled for release during the summer of 2020 along with guides for technical implementation and stakeholder engagement (Personal communication with NQF staff). [1]

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[1] For details on participating the CQMC see Appendix C.

Other Commonly Used Primary Care Quality Measures

The following measure sets were reviewed and are reasonable for use although they are not as broadly endorsed as the CQMC measure sets.

- 2020 NCQA Healthcare Effectiveness Data and Information Set (HEDIS) Measures
- 2020 CMS Merit-based Incentive Payment Program (MIPS) Measures
- 2020 CMS Medicaid Adult and Child Core Measure Sets
- AMA Physician Consortium For Performance Improvement (PCPI) Measures
- CAHPS Clinician and Group Survey Measures, Version 3.0

Best Practices in Formatting Healthcare Quality Reports

There are a variety of technical issues that must be addressed when data are presented in healthcare quality reports. Several of these are listed below and are discussed in greater detail in several AHRQ reports addressing quality reporting for physicians (and other clinicians) or for consumers.

1) Data source - Claims, EHR, and survey data have all been used to assess healthcare providers' performance. Each has relative strengths and weaknesses based on the intended use of the report.
2) Intended audience and use - Clinicians, administrators, payers, policy-makers, and consumers have different levels of understanding of quality data and measures as well as varying perspectives on what is most important.
3) Unit of analysis – Scientifically valid quality measurement requires a minimum number of cases ($\geq$ 30) which may not be available for individual measures or health care providers. Potential methods to address this are to aggregate individual measures into domains of care provided by a specific clinician or to aggregate health care providers into groups and report on individual measures for the groups. Identification of the accurate unit of analysis will be critical in developing and sharing meaningful and objective reporting.
4) Risk Adjustment and Comparisons – For outcome measures, it is important to account for differences in severity of illness and level of comorbidity among patient panels. This can be accomplished by utilizing multivariable statistical techniques or by creating comparison groups whose patients are recognized as similar.

Other technical considerations are discussed in an informative report from AHRQ, "Select Health Care Quality Measures for a Consumer Report."

Confidential Physician Reports for Quality Improvement

Best practices in designing impactful reports are listed below, based on the AHRQ guide for creating confidential QI reports for physicians.

1. Identify a Clinical Focus - This can be accomplished in a variety of ways, e.g. by choosing measures reflecting the quality domains of the National Academy (Institute) of Medicine (Safe, Timely, Effective, Efficient, Patient-Centered and Equitable) or from the traditional quality domains of Dr. Avedis Donabedian (Structure, Process, and Outcome). When choosing quality measures, it is important to make selections that are viewed as important by physicians and for which opportunities for improvement exist.[2]

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[2] See Appendix A for a sample physician feedback report from AHRQ.

2. Ensure that the underlying data support the aims of the report – The underlying data must be valid, credible to recipient physicians, timely, and updated frequently.
3. Optimize user functionality – Actual performance should be displayed alongside a desirable comparator. In addition, target performance levels should be indicated, patterns of performance highlighted, and improvement interventions provided.
4. Deliver the report in a way that promotes impact – The method of delivery should ideally include a verbal review by a trusted source and ongoing feedback should be routine and anchored in an overarching QI structure.

The AHRQ guide goes on to make recommendations that relate to continuous improvement of the reporting system.

- Build a reporting system that allows clinicians access to patient-level data. This will facilitate correction of data errors and identification of patients to be contacted for needed services.
- Conduct pre-release testing with the target audience to maximize understandability and usability of reports. Testing can be done with cognitive testing, semi-structured interviews or focus groups.
- Monitor post release impact of the reports with on-line tracking tools for web-based reports, user surveys, and analysis of performance data.

Public Reporting for Consumers

Similar to QI reporting for physicians, AHRQ has created an on-line document providing guidance to those who would generate reports on health care quality for consumers, "Translate Healthcare Quality Data into Usable Information." This detailed report should be read carefully. It provides outstanding "how to" descriptions and examples on the following topics:

- Why Good Presentation Matters – describes how to keep readers' attention and support their understanding of the data;
- Generating Scores that Show Differences in Performance – describes how to develop valid and reliable scores that are fair to providers and easy for consumers to understand , compare, and use;
- Describing Measures in User-Friendly Ways – describes how to create labels and definitions that translate medical terminology into plain English and provide helpful information to users;
- Organizing Measures to Prevent Information Overload – describes how to organize measures and scores into understandable quantities and help people to get the information they want;
- Choosing a Point of Comparison – describes the advantages and disadvantages of several approaches to simplify identification of high and low performers;
- Displaying the Data – describes how to display data with graphs, tables, legends, symbols and how to layer the displays to help readers get the detail they want;[3]
- Taking Advantage of Web Functionalities – describes how to make a web-based report easy to search and navigate and how to help the audience customize their experience of a report so that it meets their needs.

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[3] See Appendix B for a sample consumer focused report.

Discussion

This UConn Health report represents an early preparatory step in the process of assembling Connecticut health care data and sharing it with stakeholders to improve population health, quality, cost and access to care. Concurrently, collaborating entities are accomplishing other necessary steps, i.e. building the HIE infrastructure (AIMS) and preparing data for analysis and sharing (Diameter Health). To move forward and achieve the stated goals, many practical and technical questions must be answered by the CT Office of Health Strategy and the Health Information Alliance with input from the UConn Health team, AIMS, Diameter Health and external stakeholders on the Advisory Panel. Some important questions for the leaders of this initiative to consider include:

- How will engagement and collaboration occur with important CT stakeholders?
- What are the most important applications of QMs for the HIE to address first?
- What sources of data will be used first? What follows and when?
- How will the data be validated?
- Which measure sets or individual measures will be used first? What follows and when?
- What is the unit of analysis? Individual health care providers? Practice groups? Geographic regions?
- How will differences in risk of adverse outcomes be adjusted for?
- What performance comparators will be used?
- How and with whom will report usability be tested?
- What training in use of the reports will be provided to end users?
- How will the reports be disseminated?
- How will these reports be integrated with reports from other entities?
- What improvement interventions, if any, will be coupled with the reports?
- How and when will impact assessments be conducted?

Answers to some of the above questions will become apparent as initial data are obtained, validated, and analyzed. Assistance with other questions can come from existing AHRQ reports and pending CQMC guides.

Recommendations

Having laid out the findings of our literature and website review, the input of national experts, identified technical challenges, and remaining questions to be answered by leadership, the UConn Health team makes the following recommendations relating to selection of primary care QMs and design of physician QI and consumer choice reports.

Selection of Primary Care Quality Measures

1. Utilize the updated and expanded CQMC ACO / PCMH measure set for adult primary care measures and the CQMC implementation guides once released.
2. If the ACO / PCMH measure set is considered insufficient because it doesn't contain pediatric measures, augment it with the pending CQMC Pediatrics measure set.
3. Consider joining CQMC or getting on the mailing list in order to stay informed and to provide input on a national level. [4]

Quality Report Formatting

1. Utilize the AHRQ reports, "Confidential Physician Reports for Quality Improvement" and "Translate Health Care Quality Data into Useful Information" to structure provider QI and consumer choice reports.

Quality Workgroup

1. Create a small multi-stakeholder group to review proposed measures and reporting. Include end user clinicians, participants with an understanding of how data is structured and recorded, and participants with the ability to validate reports produced. This group would play a role in the following activities:
   a. Identify a method for evaluating and demonstrating the value of measures and their subsequent reporting.
   b. Monitor measure set updates on a continual basis to ensure relevance.[5]
   c. Review and select validated measures (CQMC adult/pediatric sets) for implementation.
   d. Participate in the CQMC.
   e. Promote the development and implementation of usable provider and consumer reports.
2. Establish support for this group, with responsibility for monitoring measure updates, evolving best practices, new developments, and communicating them to stakeholders.

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[4] See Appendix C for information on joining the CQMC
[5] See Appendix D for the Resources section for a list of measure resource sets.

Appendices

Appendix A: Sample Physician Feedback Reports from AHRQ

Figure 1. Excerpt of feedback report to convey primary care physicians' performance in treating patients with diabetes

Physician	N of Patients	A1C <8%	BP < 140/90	LDL < 100	Aspirin	Smoking Cessation
Target Goal	--	**40%**	**30%**	**35%**	**80%**	**80%**
Physician A	113	48.7%	67.3%	42.5%	98.2%	92.0%
Physician B	171	66.1%	71.9%	46.2%	97.1%	80.7%
Physician C	107	57.1%	71.4%	28.6%	100.0%	85.7%
Physician D	308	75.0%	85.1%	42.9%	97.1%	74.7%
Physician E	254	61.4%	69.7%	42.5%	98.0%	76.0%
Physician F	207	56.5%	70.5%	59.4%	99.5%	67.1%
Practice Site	1,160	63.4%	74.5%	46.6%	97.9%	76.8%
Network	5,596	63.6%	73.2%	48.6%	97.5%	82.0%

Figure 2. HealthPartners Medical Group feedback report excerpt on vascular care

Optimal Vascular Care – December 2013 Summary Report

Aims & Measures

Aim: To improve to 62% the percentage of patients who meet the Optimal Vascular Care by December 31, 2013.
Measure: % of patients with ischemic vascular or cardiovascular disease who have had an LDL screen in last 15 months with a value ≤99, last recorded blood pressure ≤139 and ≤89, documented non-tobacco user, and documented regular aspirin use.
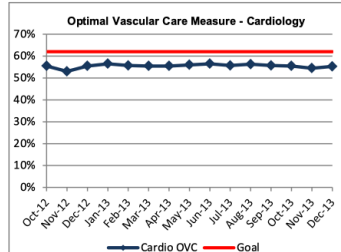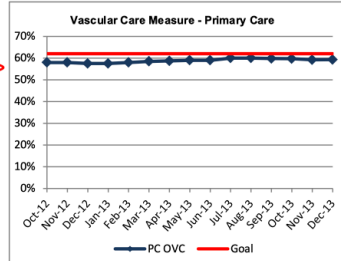
Eligible Population: All patients age 18 to 75 with a diagnosis of ischemic vascular or cardiovascular disease and 2 or more ambulatory visits in the last 24 months and a visit for any reason in the last 12 months.

Top 10 Primary Clinics or Specialty Dept for Vascular Care

Primary Care Clinic/ Specialty Dept*	# Eligible Patients	% Met Criteria
C	100	70.0%
A	172	69.2%
B	125	66.4%
E	172	66.3%
F	425	65.4%
D	28	64.3%
H	142	64.1%
I	193	63.2%
J	144	63.2%
G	344	62.5%

*All clinics met goal.
Excludes clinics with <25 patients

HPMG Vascular Care Summary — Vascular Care Measure - Primary Care (PC OVC / Goal)

Optimal Vascular Care Measure - Cardiology (Cardio OVC / Goal)

Top 25 Providers for Vascular Care

Provider*	# Eligible Patients	% Met Criteria
G	36	88.9%
K	20	85.0%
A	19	84.2%
B	50	84.0%
E	22	81.8%
F	16	81.3%
D	10	80.0%
H	18	77.8%
I	22	77.3%
J	13	76.9%
C	21	76.2%
M	20	75.0%
N	31	74.2%
R	57	73.7%
L	72	73.6%
O	22	72.7%
S	43	72.1%
P	21	71.4%
Q	21	71.4%
T	14	71.4%
X	66	71.2%
W	79	70.9%
Y	23	70.8%
U	34	70.6%
V	30	70.0%

*All providers met goal.
Excludes providers with <10 patients

Appendix B: Sample Consumer Focused Reports Recommended by AHRQ

Nursing home information ⓘ ▲▼	Overall Rating ⓘ ▲▼	Health inspections ⓘ ▲▼	Staffing ⓘ ▲▼	Quality measures ⓘ ▲▼	Distance ⓘ ▲▼
NORTHBRIDGE HEALTH CARE CENTER 2875 MAIN STREET BRIDGEPORT, CT 06606 (203) 336-0232 [Add to compare] Add to My Favorites	★★★●● Average	★★★●● Average	★★★●● Average	★★★★● Above Average	5.7 Miles
GOLDEN HILL REHAB PAVILION 2028 BRIDGEPORT AVE MILFORD, CT 06460 (203) 877-0371 [Add to compare] Add to My Favorites	★★●●● Below Average	★★●●● Below Average	★★●●● Below Average	★★★★● Above Average	6.1 Miles
SPRINGS AT WATERMARK 3030 PARK, THE 3030 PARK AVENUE BRIDGEPORT, CT 06604 (203) 374-5611 [Add to compare]	★★★★★ Much Above Average	★★★★★ Much Above Average	★★★★★ Much Above Average	★★★★● Above Average	6.5 Miles

The percent of families who said the patient received the right amount of medicine for his/her pain

Hospice	Percent
In-Home Hospice of New York	98.1
Caring Hospice	97.3
River Valley Hospice	95.3
Average of hospices across New York state	93.1
Watson Hospice	88.4

Percent of families, 2007
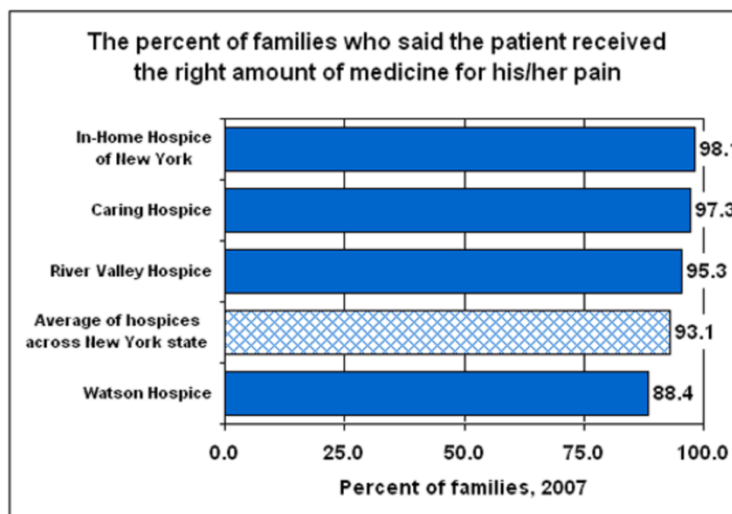
Appendix C: Joining the Core Quality Measures Collaborative

The Core Quality Measures Collaborative welcomes new member organizations at any time during the year.

VOTING PARTICIPANTS

Voting Participants include public and private health insurance providers, medical associations, consumer groups, purchasers (including employer group representatives), and other healthcare quality collaboratives. Voting Participants are permitted to vote on CQMC workgroup and full collaborative recommendations as well as governance issues.

NON-VOTING PARTICIPANTS

Non-voting Participants are organizations who are ineligible to be Voting Participants based on the criteria for voting participants. Non-voting participants include, but are not limited to, physician groups, health systems, measure steward organizations, measure developers, EHR and other solutions providers, etc. Non-Voting Participants may serve as interested parties and may provide ideas, technical expertise, comments or information during CQMC workgroup meetings. Non-Voting Participants are not permitted to serve as a member of the Steering Committee or a co-chair of any workgroup, and they are not permitted to vote on any workgroup or full Collaborative recommendations.

TECHNICAL EXPERTS

Workgroups may invite guests who are expert in a particular clinical area, measure or implementation method to assist in their work. This does not convey participation in other workgroups or CQMC proceedings. No dues are required for participation as a Technical Expert.

If your organization is interested in joining the Core Quality Measures Collaborative, please download and complete the application. Once completed, please send to cqmc@qualityforum.org.

Appendix D: Resources

2016 CQMC ACO, PCMH and Pediatric Measures:
http://www.qualityforum.org/CQMC_Core_Sets.aspx.

2020 NCQA Healthcare Effectiveness Data and Information Set (HEDIS) Measures:
https://www.ncqa.org/hedis/measures/

2020 CMS Merit-based Incentive Payment Program (MIPS) Measures:
https://qpp.cms.gov/mips/quality-measures

2020 CMS Medicaid Adult and Child Core Measure Sets:
 https://www.medicaid.gov/medicaid/quality-of-care/quality-of-care-performance-measurement/adult-and-child-health-care-quality-measures/index.html

AMA Physician Consortium For Performance Improvement (PCPI) Measures:
https://www.thepcpi.org/page/PCPI-Stewarded-Measures

CAHPS Clinician and Group Survey Measures, Version 3.0:
https://www.ahrq.gov/cahps/surveys-guidance/cg/about/survey-measures.html

CQMC Current Measures:
 http://www.qualityforum.org/CQMC_Core_Sets.aspx

National Quality Forum (NQF):
 https://www.qualityforum.org/Home.aspx

National Committee for Quality Assurance (NCQA):
 https://www.ncqa.org/

Centers for Medicare & Medicaid Services (CMS):
 https://www.cms.gov/

American Medical Association (AMA):
  https://www.ama-assn.org/

Consumer Assessment of Healthcare Providers and Systems (CAHPS):
https://www.ahrq.gov/cahps/about-cahps/index.html#:~:text=About%20CAHPS,Research%20and%20Quality%20(AHRQ).

Core Quality Measures Collaborative (CQMC):
 http://www.qualityforum.org/cqmc/

Agency for Healthcare Research and Quality (AHRQ):
 https://www.ahrq.gov/

National Quality Forum Measures
http://www.qualityforum.org/Measuring_Performance/Measuring_Performance.aspx

Confidential Physician Reporting Guidance:
 https://www.ahrq.gov/ncepcr/tools/confid-report/refs.html

AHRQ guide for creating confidential QI reports for physicians:
https://www.psnet.ahrq.gov/issue/confidential-physician-feedback-reports-designing-optimal-impact-performance

Guidance on Public Reporting for Consumers:
https://www.ahrq.gov/talkingquality/translate/scores/index.html