HIT Policy Committee
Quality Measures Workgroup

POPULATION AND PUBLIC HEALTH TIGER TEAM

October 28, 2010

The Quality Measures Workgroup is one of seven workgroups within the HIT Policy Committee that will provide initial recommendations on quality measure prioritization and the quality measure convergence process pertaining to measure gaps and opportunities for Stage 2 Meaningful Use.

The workgroup was divided into six tiger teams, each focused on a different measure domain. These tiger teams were charged with identifying a set of sub-domains, prioritizing these sub-domains, and identifying key measure concepts within each sub-domain.

The Population and Public Health Tiger Team members include Jesse Singer, Ahmed Calvo, H. Westley Clark, Theresa Cullen, Carol Diamond, Patrick Gordon, Cary Senett, and Steven Solomon.

The Population and Public Health Tiger Team's deliberations to date have highlighted a number of sub-domains and key measure concepts that should be addressed to further integrate quality measures and health information technology in order to improve population and public health. The group first focused its attention on identifying a set of sub-domains and then identified a broad range of measure concepts, including—

• Smoking cessation focused specifically on the quit rate for patients within a reporting period. • Body mass index (BMI) focused specifically on tracking longitudinal change to determine patient outcome. • Screening for alcohol use using a validated tool. • Blood pressure focused specifically on tracking longitudinal change to determine patient outcome. • Glucose monitoring focused specifically on tracking longitudinal change to determine patient outcome. • Mental health screening using a validated instrument.	• Health equity, focused on measures with no discrepancy when comparing rates among priority populations—for example, racial and ethnic minorities, recent immigrant and limited-English-proficient populations, low-income groups, women, children (< 18), older adults (≥ 65), residents of rural areas, persons with special healthcare needs, those with maximum education level of less than a high school education and high school graduates, and the uninsured.[1]

The group examined these seven concepts using the following criteria: the state of measure development; endorsement status; potential impact to improve population health and reduce burden of illness; ability to enable longitudinal assessment of condition-specific, patient-focused, episodes of care; and the ability to address previously unmet needs of population/public health.

[1] http://www.ahrq.gov/qual/qrdr09.htm

The group also noted during discussions that quality measures in population and public health should focus on measure concepts that are innovative and outcome based. In addition, an opportunity exists to improve population and public health by using delta measures (measures of improvement) in the measure concepts. The group recommended the following three sub-domains and associated measure concepts:

1. **Healthy Lifestyle Behaviors**
   Definition: Longitudinal outcome measures of improvement (or lack of improvement) resulting from patient health-related behaviors.

   In 2007, the United States Department of Health and Human Services Centers for Disease Control and Prevention National Center for Health Statistics National Vital Statistics System National Vital Statistics released a report, *Deaths: Final 2007 Data*, documenting the leading causes of deaths in the United States.[2] The group selected Healthy Lifestyle Behaviors as a sub-domain in order to focus on these leading causes. Consequently, all-cause mortality served as a major criterion for the selection of measure concepts.

   The group obtained additional knowledge regarding the recommended measure concepts from the 2009 report, *The Preventable Causes of Death in the United States: Comparative Risk Assessment of Dietary, Lifestyle, and Metabolic Risk Factors*.[3]

   Recommended Measure Concept 1.1: Smoking cessation focused specifically on the quit rate for patients within a reporting period.

   Discussions on this measure concept focused on the aforementioned report. The report focuses on the mortality effects of 12 modifiable dietary, lifestyle, and metabolic risk factors, one of which is smoking. Smoking and high blood pressure are responsible for the greatest number of deaths in the United States. To address this issue, the group recommends a longitudinal, delta-focused approach to development of smoking cessation measures.

   Sample measure:

   Numerator: Number of patients in the denominator with smoking status of "former smoker" as their most recent status within the reporting period.
   Denominator: Number of patients with smoking status of "current smoker" as their earliest status within the reporting period.

[2] National Vital Statistics Report, Vol 58, No 19, Deaths: Final Data for 2007.
[3] Danaei G, et al. (2009) The Preventable Causes of Death in the United States: Comparative Risk Assessment of Dietary, Lifestyle, and Metabolic Risk Factors. PLoS Med 6(4): e1000058. doi:10.1371/journal.pmed.1000058

Measure Concept Recommendation 1.2: BMI focused specifically on tracking longitudinal change to determine patient outcome.

In creating the BMI measure concept, the group reviewed the Danaei et al. report's finding that certain risk factors, in this case obesity, often result in death from cardiovascular diseases.[4]

The group discussed providers' concerns about tracking patient BMI, and the need for health information technology systems to be capable of calculating percentage improvements in BMI. In developing this measure concept, the group also examined the current Stage 1 Meaningful Use Measures. As a result, this recommended measure concept is intended to stimulate creation of a longitudinal, delta-focused approach for development of BMI measures.

Sample measure:

Numerator: Number of patients in the denominator with BMI of "overweight" or "normal weight" or ≥ 10 percent weight loss as their most recent status within the reporting period.
Denominator: Number of patients with a BMI of obese as their earliest status within the reporting period.

Measure Concept Recommendation 1.3: Screening for alcohol use using a validated tool.

The group based this measure concept on the Danaei et al. report's finding that unhealthy alcohol use is one of the major modifiable risk factors for cardiovascular diseases, cancers, and other illnesses.

This measure concept is intended to address the need to create a longitudinal, delta-focused approach for developing alcohol use screening measures.

Sample measure:

Numerator: Number of patients in the denominator who were screened during the past year for unhealthy alcohol use with a validated alcohol screening tool.
Denominator: The total number of active clinical patients, aged 18 years and older seen for a visit within the reporting period.

2. **Effective Preventive Services**
   Definition: Longitudinal outcome measures of improvement (or lack of improvement) resulting from the use of preventive health care.

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[4] Danaei G, et al. (2009) The Preventable Causes of Death in the United States: Comparative Risk Assessment of Dietary, Lifestyle, and Metabolic Risk Factors. PLoS Med 6(4): e1000058. doi:10.1371/journal.pmed.1000058

The group selected Effective Preventive Services as a sub-domain based on the leading causes of death identified in *Deaths: Final 2007 Data*. Information on the mortality causes taken from this report provided a rudimentary basis for the group's selection of measure concepts.

The group obtained additional knowledge regarding the recommended measure concepts from the report, *The Preventable Causes of Death in the United States: Comparative Risk Assessment of Dietary, Lifestyle, and Metabolic Risk Factors*, which provided more information on attributable risks – like high blood pressure, high blood glucose, and depression – that contribute to the leading causes of death.

Measure Concept Recommendation 2.1: Blood pressure focused specifically on tracking longitudinal change to determine patient outcome.

High blood pressure is responsible for the greatest number of deaths in the United States. One study stated that tobacco smoking and high blood pressure are responsible for an estimated 467,000 (95 percent confidence interval 436,000–500,000) and 395,000 (372,000–414,000) deaths respectively, accounting for about 1 in 5 or 6 adult deaths in the United States.[5] As a result, the group prioritized this measure concept because of high blood pressure's association with death.

This measure concept is intended to address the need to create a longitudinal, delta-focused approach for development of blood pressure measures.

Sample measure:

Numerator: Number of patients in the denominator with a Seventh Report of the Joint National Committee on the Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC7) classification of Stage 1 (140–159/90–99) or controlled (<140/90) as their most recent status within the reporting period.
Denominator: Number of patients with a JNC7 blood pressure classification of Stage 2 (≥160/≥100) and no diagnosis of diabetes mellitus or renal disease, as their earliest status within the reporting period.

Measure Concept Recommendation 2.2: Glucose monitoring focused specifically on tracking longitudinal change to determine patient outcome.

The group discussed the importance of using percentage markers to track glucose improvement for future stratifications of diabetes control. Consequently, this measure concept is intended to address the need to create a longitudinal, delta-focused approach for developing high blood glucose measures.

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[5] Danaei G, et al. (2009) The Preventable Causes of Death in the United States: Comparative Risk Assessment of Dietary, Lifestyle, and Metabolic Risk Factors. PLoS Med 6(4): e1000058. doi:10.1371/journal.pmed.1000058

Sample measure:

Numerator: Number of patients in the denominator with a hemoglobin A1c < 9 percent as their most recent status within the reporting period.
Denominator: Number of patients with Hba1c ≥ 9 percent as their earliest status within the reporting period.

Measure Concept Recommendation 2.3: Mental health screening using a validated instrument.

Depressive disorders are common, chronic, and costly. The United States Preventive Services Task Force found good evidence that screening improves the accurate identification of depressed patients and decreases clinical morbidity in treating depressed adults identified in primary care settings.[6] Greater benefits have been observed in studies in which the communication of screening results was coordinated with effective follow-up and treatment. In another summary recommendation for adolescents (12–18 of age), the Task Force recommended screening of and follow-up with adolescents for major depressive disorder when systems are in place to ensure accurate diagnosis, and psychotherapy.[7]

Building on the referenced rationale of the Task Force, the group discussed the importance of using a validated screening instrument and composite depression measure concepts for adults and adolescents. Accordingly, this measure concept is intended to address the need to create a longitudinal, delta-focused approach for development of mental health screening measures.

Sample measure:

Numerator: The number of patients in the denominator who were screened at least once during the past year for depression using a validated screening instrument.
Denominator: The number of active clinical patients, aged 12 years and older who were seen for a visit within the reporting period.

3. Health Equity

Definition: Longitudinal outcome measures that evaluate the quality of health care across priority populations to track and prevent inequities and health care disparities.

In 2009, the Agency for Healthcare Research and Quality released a disparities report that examined racial, ethnic, and socioeconomic differences in quality of health care and access to health care in the United States.[8] The report also included a charge to examine disparities in priority populations – groups with unique health care needs or issues that require special attention; for example, racial and ethnic minorities, recent immigrant and limited-English-proficient populations, low-income groups, women, children (< 18), older adults (≥ 65), residents of rural areas, persons with special health care needs, those with maximum

[6] http://www.uspreventiveservicestaskforce.org/uspstf/uspsaddepr.htm#summary
[7] http://www.uspreventiveservicestaskforce.org/uspstf/uspschdepr.htm
[8] http://www.ahrq.gov/qual/qrdr09.htm

education level of less than a high school education and high school graduates, and the uninsured.

The group identified Health Equity as a prioritized sub-domain because of the need to address disparities, social determinants, and environmental factors. As a result, the group recommends a measure concept stratified across disparity demographics, that uses innovative and outcome based measures. Considering the importance of equity in health care, the group sees an opportunity to improve population and public health by using longitudinal, outcome measures that focus on differences within and across priority populations to prevent inequities and healthcare disparities.

Measure Concept Recommendation 3.1: Health Equity focuses on measures with no discrepancy when comparing rates among those within priority populations—for example, racial and ethnic minorities, recent immigrant and limited-English-proficient populations, low-income groups, women, children (< 18), older adults (≥ 65), residents of rural areas, persons with special health care needs, those with maximum education level of less than a high school education and high school graduates, and the uninsured.

The group focused on measure concepts that show no discrepancy when comparing rates among priority populations. The group agreed on the need to use measure concepts to monitor inequities within vulnerable populations to improve the access to and quality of interventions. With the ability to address previously unmet needs within population and public health, the group also recognizes an opportunity to use sophisticated geographical information system approaches and a host of social determinants to evaluate the quality of health care and prevent inequities and health care disparities across priority populations.

This measure concept is intended to address the need to create a longitudinal, delta-focused approach to development of health equity measures.

Sample measure:

Numerator: Number of domains where no discrepancy exists among the measures included in sub-domain Healthy Lifestyle Behaviors and Effective Preventive Services.
Denominator: Total number of domains applicable.

Numerator: Number of patients in the denominator with insurance status of “insured” as their most recent status within the reporting period.
Denominator: Number of patients with insurance status of “uninsured” as their earliest status within the reporting period.