Health and Well-Being

DRAFT REPORT FOR VOTING

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NATIONAL QUALITY FORUM

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Health and Well Being

DRAFT REPORT

Executive Summary

Social, environmental, and behavioral factors can have significant negative impact on health outcomes and economic stability for individuals and populations. These factors, along with other upstream determinants, contribute up to 60 percent of deaths in the United States—yet only 3 percent of national health expenditures are spent on prevention, while 97 percent is spent on healthcare services.

Population health emphasizes factors beyond disease, illness, and clinical care. It includes a focus on health and well-being, prevention and health promotion, and disparities in outcomes and improvement activities within a group and/or among groups. Given its multi-dimensional focus, developing strategies to strengthen the measurement and analysis of health and well-being can best be accomplished using a collaborative approach that includes public health, healthcare delivery systems, and other key sectors whose policies, practices, and procedures influence health. Using the right measures can determine how successful initiatives are in improving population health and help focus future health improvement initiatives in appropriate areas.

Currently, NQF's Health and Well Being portfolio includes 63 measures that assess primary prevention and/or screening (e.g., influenza immunization), health-related behaviors (e.g., smoking and diet), practices to promote healthy living community interventions (e.g., screening), community-level indicators of health and disease (e.g., disease incidence and prevalence) and modifiable social, economic, and environmental determinants of health. Several of these measures are currently used in public and/or private accountability and quality improvement programs.

The 24-member Health and Well Being Standing Committee oversees the NQF Health and Well Being portfolio, including evaluating newly-submitted and previously-endorsed measures against NQF's standard measure evaluation criteria and supplemental population-health related guidance, identifying gaps in the portfolio, providing feedback on how the portfolio should evolve over time, and serving on any ad hoc or expedited projects in the designated topic areas. All other elements of the standard endorsement process remain unchanged in this project.

For this project, the Standing Committee evaluated seven newly-submitted measures and eight measures undergoing maintenance review against NQF's evaluation criteria. One measure, stewarded by AHRQ, Measure 0280: Dehydration Admission Rate (PQI 10), was withdrawn from consideration at the request of the Committee and the developer. Thirteen of the remaining 14 measures were Recommended for Endorsement, while one measure (Measure 2518: Care Continuity, Dental Services) was designated as Consensus Not Reached by the Committee. Subsequently, all 14 measures went to Member vote.

During Member voting, all of the recommended measures, as well as Measure 2518, which was a measure where consensus as not reached, were approved with 50 percent approval or higher by the Member councils. Representatives of nine member organizations voted; no votes were received from Consumer, Provider Organizations, Public/Community Health Agency, or Supplier/Industry Council.

On September 3, 2014 the Consensus Standard Approval Committee (CSAC) recommended 13 measures for endorsement. The 13 measures that were recommended by the CSAC were:

- 0272: Diabetes Short-Term Complications Admission Rate (PQI 01)
- 0274: Diabetes Long-Term Complications Admission Rate (PQI 03)
- 0281: Urinary Tract Infection Admission Rate (PQI 12)
- 0285: Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16)
- 0638: Uncontrolled Diabetes Admission Rate (PQI 14)
- 0727: Gastroenteritis Admission Rate (PDI 16)
- 0728: Asthma Admission Rate (PDI 14)
- 2372: Breast Cancer Screening
- 2508: Prevention: Dental Sealants for 6-9 Year-Old Children at Elevated Caries Risk
- 2509: Prevention: Dental Sealants for 10-14 Year-Old Children at Elevated Caries Risk
- 2511: Utilization of Services, Dental Services
- 2517: Oral Evaluation, Dental Services
- 2528: Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services

One measure was not recommended by the CSAC:

- 2518: Care Continuity, Dental Services

Brief summaries of the measures currently under review are included in the body of the report; detailed summaries of the Committee's and CSAC's discussion and ratings of the criteria for each measure are included in Appendix A.

Introduction

Social, environmental and behavioral factors can have significant negative impact on health outcomes and economic stability.[1] These, along with other upstream determinants, contribute up to 60 percent of deaths in the United States[2]; yet only 3 percent of national health expenditures are spent on prevention, while 97 percent is spent on healthcare services.[3]

Population health emphasizes factors beyond disease, illness, and clinical care. It includes a focus on health and well-being, prevention and health promotion, and eliminating disparities in outcomes and improvement activities within a group and/or among groups. Developing strategies to strengthen the measurement and analysis of health and well-being, given its multi-dimensional focus, can be best accomplished using a collaborative approach that includes public health, healthcare delivery systems, and other key sectors whose policies, practices, and procedures influence health. Using the right measures can determine how successful initiatives are in improving population health and help focus future health improvement initiatives in appropriate areas.[4]

NQF's prior and current work on health and well-being has emphasized alignment with the National Quality Strategy (NQS), as well as the National Prevention Strategy (NPS), and seeks to utilize opportunities to advance stakeholder engagement on this important initiative. Building on the previous Population Health Endorsement Maintenance project and NQF's commissioned paper by Jacobson and Teutsch, "Integrated Approaches for Defining and Measuring Total Population Health", this current project seeks to identify and endorse measures that can be used to assess health and well-being across all levels of analysis, including healthcare providers and communities. The project evaluates measures that assess health-related behaviors, community-level indicators of health and disease, primary prevention and screening, practices to promote healthy living, community interventions, and modifiable social, economic, environmental determinants of health with demonstrable relationship to health and well-being.

Concurrent activities on population health also are underway within the NQF-convened Measure Applications Partnership (MAP). The MAP Population Health Task Force has identified a family of population health measures for possible selection in federal programs. Based on the framework and broad measurement domains identified in the commissioned paper, these include measures of total population health, determinants of health, and health improvement activities. In an effort to focus on the tenets NQS' aim of ensuring healthy people and healthy communities, the Task Force has not only identified clinical preventative services measures, such as screenings and immunizations, but also many measures that address topics outside of the traditional healthcare system as part of this Population Health Family of Measures.

Community Level Indicators of Disease

As part of this project, two Pediatric Quality Indicators (PDIs) and seven Prevention Quality Indicators (PQIs) from the Agency for Healthcare Research and Quality (AHRQ) were evaluated by the Standing Committee. First endorsed by NQF in 2007, the PDIs provide a population-level perspective on the quality of pediatric healthcare[5], while the PQIs are used to identify quality of care for "ambulatory care sensitive conditions" using hospital inpatient discharge data; these are upstream measures used to track the particular areas around which care coordination should be focused.[6]

Both sets of measures reflect that good outpatient care can potentially prevent the need for hospitalization, or that early intervention can prevent complications or more severe illness.[7] In a study examining potentially preventable hospitalizations over a 3-year period, AHRQ found the rate of hospitalizations declined from 1,617 to 1,510 per 100,000 adults, with significant declines among non-Hispanic whites, Asian/Pacific Islanders, and Hispanics. These data suggested greater attention to care coordination by hospitals and primary care providers led to the decline.

Oral Health

The 2000 report, *Oral Health in America: A Report of the Surgeon General* first described oral health disease as a "silent epidemic," strongly suggesting that it extends far beyond just achieving and maintaining healthy teeth. The report underscored the essential link between oral health and general health and well-being.[8] Today, oral disease remains a serious national health problem, one that afflicts 53 million adults and children across the United States.[9] The impact of oral disease in the United States is dramatic and widespread: Dental caries (tooth decay) remain the single most common chronic childhood disease. [10] Additionally, significant disparities exist in oral diseases amongst many disadvantaged and underserved populations.[11]

Previous NQF projects have examined the need for oral health performance measures that are applicable to oral health safety-net dental programs, the Child Health Insurance Program Reauthorization Act (CHIPRA), the Medicare and Medicaid core measures set, and for use by other programs, health plans, and payers.[12] During this project, the Committee reviewed six oral health measures, all of which were specified at the program or health plan levels.

Primary Screening and Prevention

Standardized measurement of preventive care services and screenings has contributed substantially to increased utilization of such services. Building on previous work at NQF, this project sought to continue progress toward the goals set forth in the NPS[13] and NQS[14] Preventive care services and screenings must continue to be a priority of efforts to improve the overall population health and reduce the number of preventable, premature deaths. NQF's Health and Well Being Portfolio of measures currently has 25 measures related to primary prevention and screening.

During this project, the Committee evaluated Measure 2372: Breast Cancer Screening. Breast cancer is the second-leading cause of cancer death among women in the United States. Widespread use of screening, along with treatment advances in recent years, and has been credited with reductions in breast cancer mortality.[15] The previously endorsed measure 0031: Breast Cancer Screening lost endorsement in 2011 during the Cancer Endorsement Maintenance Project, when the U.S. Preventive Services Taskforce (USPSTF) guidelines for breast cancer screening changed the applicable age range from women 40-69 years to ages 50-74 years.

National Quality Strategy

As noted early, the NQS serves as the overarching framework for guiding and aligning public and private efforts across all levels (local, State, and national) to improve the quality of healthcare in the United States.[16] The NQS established the three-part aim of better care, affordable care, and healthy

people/communities, focusing on six priorities to achieve those aims: *Safety, Person and Family Centered Care, Communication and Care Coordination, Effective Prevention and Treatment of Illness, Best Practices for Healthy Living,* and *Affordable Care*.[17]

Improvement efforts for the sub-topics *Community-Level Indicators of Health and Disease, Primary Prevention and/or Screenings and Oral Health Care* of NQF's Health and Well Being portfolio are aligned with the NQS' three-part aim and with several of the NQS priority areas, including:

- **Prevention and Treatment of Leading Causes of Mortality.** As part of this project, the Committee examined several diabetes care measures. Diabetes is the seventh leading cause of death in the United States; research shows that public health and clinical strategies have the potential to greatly reduce the risk of, and long-term complications associated with, diabetes.[18] Specifically, the Centers for Disease Control and Prevention notes that comprehensive foot care programs that include components such as foot-care education and preventive therapy can reduce the rate of amputation by 45 percent to 85 percent.[19] Measure 0285: Rate of Lower-Extremity Amputation Among Patients With Diabetes provides an opportunity to measure and report amputation rates and track progress on the number of lower-extremity amputation among diabetes patients (18 years and older). Similarly, hospital admissions for diabetes-related causes are significant. Over 7.7 million hospital stays took place for diabetic patients in 2008, and out of those 7.7 million 540,000 of those stays listed diabetes as the primary diagnosis.[20] Between 2005 and 2010, hospital admissions rates for short-term diabetes complications increased from 56 per 100,000 to 69 per 100,000.[21] Measure 0271: Diabetes Short-Term Complications Admission Rate provides an opportunity to measure and report short-term diabetes complications hospital admissions rates among diabetes patients (18 years and older).
- **Best Practices for Healthy Living.** With respect to the goal of healthy living, the Committee reviewed several oral health and dental care measures. Early childhood dental caries is amongst the most prevalent disease found in children in the United States; as of 2011, 42 percent of children ages 2 to 11 had dental caries in primary teeth.[22] The American Academy of Pediatrics suggests that all children should receive oral health risk assessments by the time they are 6 months old.[23] Measure 2508: Prevention: Dental Sealants for 6-9 Year-Old Children at Elevated Caries Risk allows providers to track progress on the percentage of enrolled 6-9 year-olds identified as 'elevated risk' who receive a sealant.

National Prevention Strategy

The NPS serves as the overarching framework for improving the quality of life for individuals, families and communities by shifting the nation's focus from sickness and disease to prevention and wellness[24]. Promulgated in 2011, it established four strategic directions to guide actions with demonstrably improve health: *Healthy and Safe Community Environments, Clinical and Community Preventative Services, Empowered People, and Elimination of Health Disparities.* Data demonstrate that prevention policies and programs are often cost-effective and can reduce healthcare expenditures, while also helping to improve productivity.

NQF's Health and Well Being portfolio includes measures that support the *Healthy and Safe Community Environments* and *Clinical and Community Preventative Services* strategic directions (Table 1). Similarly, NQF has defined an endorsed set of 35 "disparities-sensitive" measures for the ambulatory setting, as well as a framework for additional measure evaluation, that addresses the strategic direction for *Elimination of Health Disparities*[25]. Still, there is a need to ensure a robust set of measures for all strategic directions of the NPS.

Table 1: Health and Well Being Measures related to the National Prevention Strategy

Strategic Direction	List of NQF Endorsed ® Measures	
Clinical and Community Preventative Services	• Cervical Cancer Screening • Colorectal Cancer Screening • Childhood Immunization Status • Flu Shots for Adults Ages 50 and Over • Influenza Immunization • Pneumonia vaccination status for older adults • Influenza Immunization in the ESRD Population (Facility Level) • Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up • Influenza Vaccination Coverage Among Healthcare Personnel • Influenza Immunization Received for Current Flu Season • Pneumococcal Polysaccharide Vaccine (PPV) Ever Received • High Risk for Pneumococcal Disease - Pneumococcal Vaccination • Male Smokers or Family History of Abdominal Aortic Aneurysm (AAA) - Consider Screening for AAA	• Percent of Nursing Home Residents Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short-Stay) • Percent of Residents Assessed and Appropriately Given the Seasonal Influenza Vaccine (Long-Stay) • Percent of Residents Assessed and Appropriately Given the Pneumococcal Vaccine (Short-Stay) • Percent of Residents Assessed and Appropriately Given the Pneumococcal Vaccine (Long-Stay) • Developmental screening using a parent completed screening tool (Parent report, Children 0-5) • Developmental Screening by 2 Years of Age • Immunizations by 13 years of age • Developmental Screening in the First Three Years of Life • Pneumococcal Immunization (PPV 23) • Human Papillomavirus Vaccine for Female Adolescents • Children Who Receive Preventive Medical Visits
Healthy and Safe Community Environments	• Children Who Live in Communities Perceived as Safe • Children Who Attend Schools Perceived as Safe • Children Who Are Exposed To Secondhand Smoke Inside Home	

Improving Measurement: *The Population Health Community Action Guide*

While the NQS and NPS prioritize community efforts and interventions to improve health by addressing social, economic, and environmental factors, quality improvement and measurement activities overwhelmingly have been focused on the clinical delivery system. Existing, evidence-based programs and policies that improve wellness and healthy behaviors across populations are estimated to result in healthcare savings of $19 billion over 10 years;[26] it has never been more important to understand how communities can work with the public health and clinical care systems to collaboratively improve population health.

Recognizing the need for shared definitions and a common conceptual framework to ensure better coordination and advance community partnerships, NQF has developed a *Community Action Guide*

through work funded by the U.S. Department of Health and Human Services. This new resource is designed to help communities initiate or improve population health programs. The Guide will allow NQF, through a multistakeholder, collaborative process, to develop a common framework for communities that will offer practical guidance on several issues including how measures can be used to assess, analyze, and address community health needs.

The Guide introduces 10 key elements that are important to successful approaches to improving population health, including the selection and use of the measures and performance targets. The Guide encourages communities to identify available data sources for each of the measures so that they can be used to periodically assess the progress toward improving health and meeting the performance targets.

Health and Well Being Measure Evaluation: Refining the Evaluation Process

Recently, the NQF made a change to the Consensus Development Process (CDP)—transitioning to Standing Steering Committees has been incorporated into the ongoing maintenance activities for the Health and Well-being portfolio. This change and the "Support" or "Not Support" initiative that is being piloted in the Health and Well Being project are described below.

Standing Steering Committee

In an effort to remain responsive to its stakeholders' needs, NQF continuously works to improve the CDP. Volunteer, multi-stakeholder Steering Committees are the central component of the endorsement process, and the success of CDP projects is due in large part to the voluntary participation of Steering Committee members. In the past, NQF initiated the Steering Committee nominations process and seated new project-specific Committees only when funding for a particular project had been secured. Seating new Committees with each project not only lengthened the project timeline, but also resulted in a loss of continuity and consistency because Committee membership changed—often quite substantially—over time.

To address these issues in the CDP, NQF is transitioning to the use of Standing Steering Committees for various topic areas. These Standing Committees will oversee the NQF's measure portfolios; this oversight function will include evaluating both newly-submitted and previously-endorsed measures against NQF's measure evaluation criteria, identifying gaps in the measurement portfolio, providing feedback on how the portfolio should evolve, and serving on any ad hoc or expedited projects in their designated topic areas.

The Health and Well-Being Standing Committee currently includes 24 members (see Appendix D). Each member has been randomly appointed to serve an initial two- or three- year term, after which he/she may serve a subsequent 3-year term if desired.

Indicating Support/Not Support for a Measure

NQF has had requests from various stakeholders for the opportunity to indicate support for, or opposition to, endorsement of a measure earlier in the CDP process, as well as part of the standard commenting process. Additionally, in order to better understand whether there is consensus on

endorsement of a measure among NQF Members and the public, Committees have asked for better clarity on whether a commenting stakeholder is in favor of a measure as the Committee reviews comments.

In response to these inputs from our stakeholders and, as a result of its CDP improvement efforts, NQF is piloting the option for a commenter to select whether he or she supports or does not support a measure for endorsement in the Health and Well-being project. The option to select "Support" or "Not Support" was available during the Pre-Meeting Member and Public Comment Period. The option to select "Support" or "Not Support" also will be available during the NQF 30-day Member and Public Comment Period as an input to inform the Committee's final endorsement recommendation.

NQF Portfolio of Performance Measures for Health and Well-Being

Due to the cross-cutting nature of population health and health and well-being, NQF's portfolio of Health and Well Being measures encompasses a broad variety of topic areas. For cataloging purposes, NQF groups the measures into five domains: health-related behaviors, community-level indicators of health and disease, primary prevention and/or screening, modifiable social, economic, and environmental determinants of health, and oral health. Currently, NQF's portfolio of Health and Well Being measures includes 63 measures (see Appendix B), eight of which were evaluated by the Health and Well-Being Committee in this project. Due to the high volume of measures in the portfolio, as well as NQF's cyclical measure review process (based on a harmonization analysis and most recent endorsement date), the remaining 55 measures will be evaluated at a later date along with any newly-submitted measures.

Table 2: NQF Health and Well-Being Portfolio of Measures

	Process	Outcome	Structural	Composite
Health-Related Behaviors and Practices to Promote Healthy Living	3	2	0	0
Community-Level Indicators of Health and Disease	0	10	1	1
Primary Prevention and Screening	25	0	0	0
Modifiable Social, Economic & Environmental Determinants of Health	6	11	0	0
Oral Health	0	4	0	0
Total	**34**	**27**	**1**	**1**

Largely for technical expertise, but also for purposes of portfolio size-management, NQF has assigned some measures related to Health and Well Being to other projects. Examples of these include measures that assess osteoporosis screening, which were reviewed in the Endocrine project, and measures for HIV/AIDS screening, such as Measure 408: HIV/AIDS: Tuberculosis (TB) Screening , which were reviewed in the Infectious Disease project.

Use of Measures in the Portfolio

Endorsement of measures by NQF is valued not only because the evaluation process itself is both rigorous and transparent, but also because evaluations are conducted by multistakeholder committees comprised of clinicians and other experts from the full range of healthcare providers, patients, employers, health plans, public agencies, community coalitions, and purchasers—many of whom use measures on a daily basis to ensure better care. Moreover, NQF-endorsed measures undergo routine "maintenance" (i.e., re-evaluation) to ensure that they are still the best-available measures and reflect the current science. Importantly, federal law requires that preference be given to NQF-endorsed measures for use in federal public reporting and performance-based payment programs. NQF-endorsed ® measures are also used by a variety of stakeholders in the private sector, including hospitals, health plans, and communities.

Many of the health and well-being measures in the portfolio are among NQF's most long-standing measures, several of which have been endorsed since 2006. A few are in use in at least one federal program.[27] (See Appendix C for details of federal program use for the measures in the portfolio that are currently under review). In addition, several of the measures have been included in the Population Health Family of Measures by the NQF-convened Measure Applications Partnership (MAP).

Improving NQF's Health and Well Being Portfolio

Significant foundational work helped to inform the assignment of measures in the Health and Well Being topic area and related domains, including the NQS three-part aim and long-term goals focused on working with communities through the provision of clinical preventative services; promoting healthy living and well-being; promoting interventions that result in improvements of social, economic, and environmental factors; and promoting the adoption of healthy lifestyle behaviors across the lifespan. As with the NQS goals, the Jacobson and Teutsch commissioned paper recommended NQF adopt a measurement framework that integrates metrics that assess the social, environmental, and economic determinants of health, in addition to total population health and health improvement activities. While several gap areas remain, particularly those related to the social, environmental and economic determinants of health, the approach to building a measurement framework around health and well-being is reflective of the evidence-based, consensus processes of previous related work.

Committee Input on Gaps in the Portfolio

During its discussions, the Committee identified areas where additional measure development is needed. There was significant alignment between measurement gap areas identified by this Committee and the current MAP Population Health Task Force that recommended areas for future measure development to CMS for possible use in federal programs. The recommended areas are measures that assess:

- Social, economic, and environmental determinants of health;
- Physical environment (e.g., built environments);
- Policy (e.g., smoke-free zones);
- Specific sub-populations (e.g., people with disabilities, elderly);

- Patient and population outcomes linked to improvement in functional status;
- Counseling for physical activity and nutrition in younger and middle-aged adults (18 to 65 years); and
- Composites that assess population experience.

Health and Well Being Measure Evaluation

On April 29-30, 2014, the Health and Well Being Standing Committee evaluated seven new measures and eight measures undergoing endorsement review against NQF's measure evaluation criteria. To facilitate the evaluation, the Committee and candidate standards were divided into three workgroups for preliminary review of the measures prior to evaluation by the entire Standing Committee. The Committee's discussion and ratings of the criteria are summarized in the evaluation tables beginning on page 25.

Table 3: Health and Well Being Summary

	Maintenance	New	Total
Measures under consideration	8	7	15
Measures recommended	7	6	13
Measures not recommended		1	1
Measures deferred	1 • Measure 0280: Dehydration Admission Rate (PQI 10)	0	1

Comments Received Prior to Committee Evaluation

NQF solicits comments on endorsed measures on an ongoing basis through the Quality Positioning System (QPS). In addition, NQF has begun soliciting comments prior to the evaluation of the measures via an online tool located on the project webpage. For this evaluation cycle, the pre-evaluation comment period was open from March 13, 2014 through April 2, 2014 for the 15 measures under review. A total of 19 pre-evaluation comments were received. (See Appendix F.)

All submitted comments were provided to the Committee prior to its initial deliberations during the workgroup calls and/or in-person meeting.

Overarching Issues

During the Standing Committee's discussion of the measures, two overarching issues emerged that were factored into the Committee's ratings and recommendations for multiple measures and are not repeated in detail with each individual measure. This section summarizes these issues, which focus on the oral health measures, as well as the broad area of population health measurement.

Evaluation of Performance Measures for Oral Health

The Dental Quality Alliance (DQA) submitted six new measures for NQF endorsement consideration; the DQA has been developing measures for pediatric dental care since 2011. Two overarching issues arose during Committee evaluation.

Dental and Oral Outcome Measures

The Committee questioned why the DQA did not submit any outcome measures. The DQA explained that its measure development efforts are focused on process measures at the programmatic or plan level, for which the data are easily accessible. The DQA further explained that the data for these measures are derived from dental claims, which do not include the diagnostic information needed to assess dental health outcomes.

Dental versus Oral Health Services

During the Committee's deliberations, general confusion arose about the distinction between dental and oral health services. The DQA reiterated its approach to measurement, which is based on the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program reporting requirements that defines "dental services" as those provided by, or under the supervision of a dentist.[28] In 2010, CMS changed its EPSDT reporting requirements and added additional measures that assessed oral health services provided by a non-dentist provider, typically from a community based practice (i.e., a pediatrician, nurse practitioner, family physician, or independently practicing dental hygienist).

In an effort to harmonize with the revised EPSDT requirements, the DQA measures are specified to include services provided under a system or arrangement where the dentist is the responsible entity for supervising or authorizing the care; therefore, services provided by other types of providers including dental therapists, advanced practice therapists, and dental hygienists could be included in the measure.

The lack of congruence that all measures address all providers was not new to this project or the ADA measures. The current NQF portfolio of measures includes measures specified for visits with a dental practitioner, (Measure #1388: Annual Dental Visit) and children who receive preventative dental services from a primary care provider (Measure #1419: Primary Caries Prevention Intervention as Part of Well/Ill Child Care as Offered by Primary Care Medical Providers).

Accountability in Population Health Measurement

The Committee engaged in significant discussion about the utility of measures that assess quality at the community-level versus provider-level of analysis—a topic that also was discussed in detail during the 2011 Population Health Endorsement Maintenance project[29,30]. This Committee debated what the locus of accountability ideally should be and the incentive to drive quality improvement at the national level if measures cannot be drilled down to lower levels of aggregation. While Committee members acknowledged NQF's desire to endorse more community- and population-level measures, they noted the inherit challenging of identifying "the accountable entity" at the community or integrated health system in the absence of an accountability program. Committee members understood that the goal of the project, in part, is to explore accountability beyond the individual provider for a comprehensive view of health and well-being and related determinants.

The Committee's discussion emphasized the importance of communities that currently are often disparate—e.g., the public health and clinical care systems—working collaboratively to improve population health. Additionally, there was specific, detailed discussion about the AHRQ PQI and PDI measures that are specified at the community level, but conflicting language in the measure submissions raised concerns about whether providers or the community are the accountability entity. AHRQ agreed to change the language on its submissions where needed to clarify the confusion.

Summary of Measure Evaluation

The following brief summaries of the measures and evaluations highlight the major issues that were considered by the Committee. Details of the Committee's discussion and ratings of the criteria for each measure are in Appendix A.

Previously Endorsed Measures

0272: Diabetes Short-Term Complications Admission Rate (PQI 01) (Agency for Healthcare Research Quality)— Recommended

Description: *Admissions for a principal diagnosis of diabetes with short-term complications (ketoacidosis, hyperosmolarity, or coma) per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions****; Measure Type:*** *Outcome;* ***Level of Analysis:*** *Population: Counties or cities, National, State;* ***Setting of Care:*** *Hospital/Acute Care Facility;* ***Data Source:*** *Administrative claims*

This measure has been NQF-endorsed® since 2007 and is part of the AHRQ Preventative Quality Indicators. In its discussions, the Committee noted that the measure, as specified, does not account for the relationship of ketoacidosis to the development of Type-2 diabetes. The Committee also noted that the increase in hospitalizations (110,000-150,000 from year to year) suggests that outpatient management may need to be assessed more thoroughly; the developer noted that while these data need to be addressed, there are more recent data from 2012 that may reflect a change. The Committee also indicated that the performance rates are decreasing significantly and suggested that the developer update the measure specifications accordingly. The measure developer noted that decreasing rates are associated with the accelerated use of the measure and "up-coding," rather than its construction and types of information captured. The Committee suggested this measure be combined into a composite with measures 0274: Diabetes Long-Term Complications Admission Rate (PQI 03), 0285: Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16), and 0638: Uncontrolled Diabetes Admission Rate (PQI 14) in a future iteration. The developers indicated a willingness to modify their measures at a future date. Ultimately the Committee agreed to recommend this measure for endorsement.

0274: Diabetes Long-Term Complications Admission Rate (PQI 03) (Agency for Healthcare Research Quality)-Recommended

Description: *Admissions for a principal diagnosis of diabetes with long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified) per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions****; Measure Type:*** *Outcome;* ***Level of Analysis:*** *Population: Counties or cities, National, State;* ***Setting of Care:*** *Hospital/Acute Care Facility;* ***Data Source:*** *Administrative claims*

This measure has been NQF-endorsed® since 2007 and is part of the AHRQ Preventative Quality Indicators. In its review, the Committee was concerned that the measure may not capture discharged diabetic patients with non-diabetes primary diagnoses (e.g., cardiovascular complication). The developer acknowledged that the measure does not account for all diabetes-related hospitalizations, and reiterated that the discharge must be coded as a complication of diabetes to be counted in the measure. The Committee questioned why rates for ethnic and minority populations were not included in the performance gap section, but noted that the developers cited many studies highlighting existing ethnic and racial minority disparities. The Committee suggested that adding race/ethnicity data and other socio-demographic variables would improve the measure. The Committee suggested this measure be combined into a composite with measures 0272: Diabetes Short-Term Complications Admission Rate (PQI 01), 0285: Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16), and 0638: Uncontrolled Diabetes Admission Rate (PQI 14) in a future iteration. The developer indicated a willingness to modify their measures at a future date. Ultimately the Committee agreed to recommend this measure for endorsement.

0281: Urinary Tract Infection Admission Rate (PQI 12) (Agency for Healthcare Research Quality)—Recommended

Description: *Admissions with a principal diagnosis of urinary tract infection per 100,000 population, ages 18 years and older. Excludes kidney or urinary tract disorder admissions, other indications of immunocompromised state admissions, obstetric admissions, and transfers from other institutions****;*** ***Measure Type:*** *Outcome;* ***Level of Analysis:*** *Population: Counties or cities, Regional, National, State;* ***Setting of Care:*** *Hospital/Acute Care Facility;* ***Data Source:*** *Administrative claims*

This measure has been NQF-endorsed® since 2007 and is part of the AHRQ Preventative Quality Indicators. Additionally, this measure has been publicly reported in the DHHS Health Indicators Warehouse (HIW) and via AHRQ's My Own Network (MONARHQ) tool. Several state programs, including the Arizona Hospital Compare, the Texas Health Care Information Collection (THCIC), and the State of Connecticut, Office of Health Care Access also use this measure. While Committee members raised some concerns about the strength of the body of evidence that demonstrates that high-quality outpatient care processes leads to reductions in hospitalizations for UTI and the reported variance of UTI prevalence across age groups and regions, they recommended this measure for continued endorsement.

0285: Lower Extremity Amputations among Patients with Diabetes (PQI 16) (Agency for Healthcare Research Quality)—Recommended

Description: *Admissions for any-listed diagnosis of diabetes and any-listed procedure of lower-extremity amputation per 100,000 population, ages 18 years and older. Excludes any-listed diagnosis of traumatic lower-extremity amputation admissions, toe amputation admission (likely to be traumatic), obstetric admissions, and transfers from other institutions****;*** ***Measure Type:*** *Outcome;* ***Level of Analysis:*** *Population: Counties or cities, Regional, National, State;* ***Setting of Care:*** *Hospital/Acute Care Facility;* ***Data Source:*** *Administrative claims*

This measure has been NQF-endorsed® since 2007 and is part of the AHRQ Preventative Quality Indicators. Several state programs, including the Arizona Hospital Compare, Kentucky Health Care

Information Center, and the State of Connecticut, Office of Health Care Access use this measure. In discussing the measure, Committee members raised concerns about the measure specifications, particularly the inclusion of toe amputations, the exclusion of people in long-term care facilities, and hospital transfers. The developer explained that the specifications do not include toe amputation. Additionally, while the developer agreed to reevaluate the exclusion of transfers, the developer emphasized that transfers from long-term care facilities typically receive ambulatory care through different healthcare entities than those within the general community. The Committee suggested that this measure be combined into a composite with measures 0272: Diabetes Short-Term Complications Admission Rate (PQI 01), 0274: Diabetes Long-Term Complications Admission Rate (PQI 03), and 0638: Uncontrolled Diabetes Admission Rate (PQI 14) in a future iteration. The developers indicated a willingness to modify their measures at a future date. The Committee recommended this measure for continued endorsement.

0638: Uncontrolled Diabetes Admission Rate (PQI 14) (Agency for Healthcare Research Quality)—Recommended

Description: *Admissions for a principal diagnosis of diabetes without mention of short-term (ketoacidosis, hyperosmolarity, or coma) or long-term (renal, eye, neurological, circulatory, or other unspecified) complications per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions****; Measure Type:*** *Outcome;* ***Level of Analysis:*** *Population: Counties or cities, Regional, National, State;* ***Setting of Care:*** *Hospital/Acute Care Facility;* ***Data Source:*** *Administrative claims*

This measure has been NQF-endorsed® since 2007 and is part of the AHRQ Preventative Quality Indicators. In addition this measure has been publicly reported in the DHHS HIW and MONARHQ in at least two state programs, Arizona Hospital Compare and the Kentucky Health Care Information Center, use this measure. The Committee questioned the validity of the measure, pointing out concerns that some admissions should be coded as an admission for a principal diagnosis of diabetes with a short-term complication and not a long-term complication, which is included in this measure's denominator. The Committee suggested that this measure be combined into a composite with measures 0272: Diabetes Short-Term Complications Admission Rate (PQI 01), 0274: Diabetes Long-Term Complications Admission Rate (PQI 03), and 0285: Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16) in a future iteration. The developers indicated a willingness to modify their measure at a future date. Ultimately the Committee agreed to recommend this measure for endorsement.

0727: Gastroenteritis Admission Rate (PDI 16) (Agency for Healthcare Research Quality)—Recommended

Description: *Admissions for a principal diagnosis of gastroenteritis, or for a principal diagnosis of dehydration with a secondary diagnosis of gastroenteritis, per 100,000 population, ages 3 months to 17 years. Excludes cases transferred from another facility, cases with gastrointestinal abnormalities or bacterial gastroenteritis, and obstetric admissions****; Measure Type:*** *Outcome;* ***Level of Analysis:*** *Population: Counties or cities, Regional, National, State;* ***Setting of Care:*** *Hospital/Acute Care Facility;* ***Data Source:*** *Administrative claims*

This measure has been NQF-endorsed® since 2011 and is part of the AHRQ Pediatric Quality Indicators. Additionally, the AHRQ Healthcare Cost and Utilization Project (HCUP), the California Office of Statewide Health Planning and Development, and the State of Connecticut, Office of Health Care Access publicly report the measure. During its review, the Committee debated the degree to which the variation in admission rates is attributed to the health system broadly or to socioeconomic differences. The Committee also suggested that the declining performance rate may be a byproduct of changes in care delivery and new vaccines, rather than socioeconomic differences or actual performance improvement. Nevertheless, the Committee recommended this measure for continued endorsement.

0728: Asthma Admission Rate (PDI 14) (Agency for Healthcare Research Quality)— Recommended

Description: *Admissions with a principal diagnosis of asthma per 100,000 population, ages 2 through 17 years. Excludes cases with a diagnosis code for cystic fibrosis and anomalies of the respiratory system, obstetric admissions, and transfers from other institutions****; Measure Type:*** *Outcome;* ***Level of Analysis:*** *Population: Counties or cities, Regional, National, State;* ***Setting of Care:*** *Hospital/Acute Care Facility;* ***Data Source:*** *Administrative claims*

This measure has been NQF-endorsed® since 2011 and is part of the AHRQ Pediatric Quality Indicators. In its consideration of this measure, the Committee noted that several confounding factors, including environmental and geographic differences, may affect the measure. The Committee suggested that the developer revise the language in its submission to reflect the impact of these confounding factors. The developer agreed to change its submission as recommended. The Committee also noted a performance gap that is age, and geographic-sensitive—the youngest children are most affected and the highest performance is in the western region of the country. While the developer was unable to explain the geographic trend, Committee members attributed national variation to environmental factors. Ultimately, the Committee agreed to recommend this measure for continued endorsement.

New Submissions

2372: Breast Cancer Screening (National Committee for Quality Assurance)— Recommended

Description: *The percentage of women 50-74 years of age who had a mammogram to screen for breast cancer****; Measure Type:*** *Process;* ***Level of Analysis:*** *Health Plan, Integrated Delivery System;* ***Setting of Care:*** *Ambulatory Care-Clinician Office;* ***Data Source:*** *Electronic clinical data, Administrative claims*

This measure was previously endorsed by NQF as Measure 0031: Breast Cancer Screening, but lost endorsement in 2012 because it no longer aligned with USPSTF guidelines for biennial mammograms. During discussion for this revised measure, the Committee agreed an opportunity to improve the performance gap exists—specifically for communities where there are known disparities in care (e.g., among lower income, Black and Hispanic women). As well, there was discussion about the quality of the evidence for the USPSTF guideline, which was rated "moderate" (Grade B: The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial). Several Committee members acknowledged that, with few exceptions, all cancer screening tests have been assigned USPSTF evidence of Grade B. Additionally, while the Committee noted that the measure was well-specified and reliable, they questioned why the developer did not include patient refusal as an exclusion. The developer explained that, from a health plan perspective, such data are difficult to collect; the developer estimates that patient refusals occur less than five percent of the time. Finally, the Committee cautioned that increased unnecessary screening could potentially result in unintended consequences. Following the discussion, the Committee agreed to recommend the measure for endorsement.

2508: Prevention Dental Sealants for 6-9 Year Old Children at Elevated Caries Risk—Recommended

Description: *Percentage of enrolled children in the age category of 6-9 years at "elevated" risk (i.e., "moderate" or "high") who received a sealant on a permanent first molar tooth within the reporting year****; Measure Type:*** *Process;* ***Level of Analysis:*** Health Plan, Integrated Delivery System*;* ***Setting of Care:*** *Ambulatory Care: Clinician Office/Clinic* ***Data Source:*** *Administrative claims*

This measure is part of a suite of newly-submitted oral health measures developed by the Dental Quality Alliance on behalf of the American Dental Association. The Texas Health and Human Services Commission has adopted this measure as part of the Texas CHIP and Medicaid Dental Services Performance Indicator Dashboard for Quality Measures. A clinical practice guideline from the ADA and a Cochrane review were presented as evidence to support the measure focus. In its review, Committee members expressed some concern that the ADA guideline did not provide an age (yet the measure does) or a specific molar for sealant placement, but rather stated "sealants should be placed on pits and fissures of children's and adolescents' permanent teeth when it is determined that the tooth, or the patient, is at risk for developing caries." The developer explained that age range in the measure specifications was chosen based on typical eruption patterns of the first molars. This measure is complementary to Measure 2509: Prevention Dental Sealants for 10-14 Year Old Children at Elevated Caries Risk, with the exception of the age range. In an effort to reduce measurement burden, the Committee suggested the developer combine this measure with Measure 2509 and stratify by the two specified age ranges. The developer will consider the recommendation for a future iteration. Ultimately, the Committee recommended this measure for endorsement.

2509: Prevention: Dental Sealants for 10-14 Year-Old Children at Elevated Caries Risk—Recommended

Description: *Percentage of enrolled children in the age category of 10-14 years at "elevated" risk (i.e., "moderate" or "high") who received a sealant on a permanent second molar tooth within the reporting year;* ***Measure Type:*** *Process;* ***Level of Analysis:*** Health Plan, Integrated Delivery System*;* ***Setting of Care:*** *Ambulatory Care: Clinician Office/Clinic* ***Data Source:*** *Administrative claims*

This measure is part of a suite of newly-submitted oral health measures developed by the Dental Quality Alliance on behalf of the American Dental Association. The Texas Health and Human Services Commission has adopted this measure as part of the Texas CHIP and Medicaid Dental Services Performance Indicator Dashboard for Quality Measures. This measure is complementary to Measure 2508: Prevention Dental Sealants for 6-9 Year Old Children at Elevated Caries Risk, with the exception of the age range. In an effort to reduce measurement burden, the Committee suggested the developer combine this measure with Measure 2508 and stratify by the two specified age ranges. The developer will consider the recommendation for a future iteration. The Committee recommended this measure for endorsement.

2511: Utilization of Services, Dental Services—Recommended

Description: *Percentage of enrolled children under age 21 years who received at least one dental service within the reporting year;* ***Measure Type:*** *Process;* ***Level of Analysis:*** Health Plan, Integrated Delivery System*;* ***Setting of Care:*** *Ambulatory Care: Clinician Office/Clinic* ***Data Source:*** *Administrative claims*

This measure is part of a suite of newly-submitted oral health developed by the Dental Quality Alliance on behalf of the American Dental Association. The Texas Health and Human Services Commission has adopted this measure as part of the Texas CHIP and Medicaid Dental Services Performance Indicator Dashboard for Quality Measures. During the discussion about this measure, the Committee noted it is a gateway to assessing other health services related to dental care. Committee members also acknowledged that the reliability testing was sufficient and that there are no apparent barriers to utilization. The Committee recommended this measure for endorsement.

2517: Oral Evaluation, Dental Services—Consensus Not Reached

Description: Percentage of enrolled children under age 21 years who received a comprehensive or periodic oral evaluation within the reporting year; **M*easure Type:*** *Process;* ***Level of Analysis:*** Health Plan, Integrated Delivery System*;* ***Setting of Care:*** *Ambulatory Care: Clinician Office/Clinic* ***Data Source:*** *Administrative claims*

This measure is part of a suite of newly-submitted oral health measures developed by the Dental Quality Alliance on behalf of the American Dental Association. The Texas Health and Human Services Commission has adopted this measure as part of the Texas CHIP and Medicaid Dental Services Performance Indicator Dashboard for Quality Measures. In its deliberations, the Committee noted that an oral evaluation is a procedure used as a marker to indicate whether children have access to dental care. The Committee questioned why this measure was submitted as an individual measure and not in combination with Measure 2511, which assesses utilization of dental services. Ultimately, the Committee failed to reach consensus on Evidence under the Importance criterion and unanimously

agreed not to vote on Overall Suitability for Endorsement until after the 30-day Member and Public Comment.

2518: Care Continuity, Dental Services—Consensus Not Reached

Description: *Percentage of enrolled children aged 2-21 years enrolled in two consecutive years who received a comprehensive or periodic oral evaluation in both years;* ***Measure Type:*** *Process;* ***Level of Analysis:*** Health Plan, Integrated Delivery System*;* ***Setting of Care:*** *Ambulatory Care: Clinician Office/Clinic* ***Data Source:*** *Administrative claims*

This measure is part of a suite of newly-submitted oral health measures developed by the Dental Quality Alliance on behalf of the American Dental Association. The Texas Health and Human Services Commission currently uses this measure for quality improvement in its CHIP and Medicaid Uniform Managed Care Manuals and the Dental Services Performance Indicator Dashboards for Quality Measures. During its review, the Committee questioned whether the measure is truly an assessment of continuity of care without evidence that clearly substantiates the link. In response, the developer presented two clinical practice guidelines, one from the United Kingdom's National Institute for Health and Care Excellence and one from the American Academy of Pediatric Dentistry, as evidence to support the measure; these guidelines suggest that increased visitation increases the chance for better outcomes. The developer also reiterated that this measure assesses the continuity of care not services received. Ultimately the Committee failed to reach consensus on Evidence under the Importance criterion and unanimously agreed not to vote on Overall Suitability for Endorsement until after the 30-day Member and Public Comment. After consideration of the comments received during the adjudication process, the Committee rendered a vote on Overall Suitability for Endorsement of 10-yes, 7-no, and once more failed to reach consensus. Member voting was in favor of this measure, but ultimately the Consensus Standards Approval Committee (CSAC) voted to not recommend this measure for endorsement.

2528: Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services—Recommended

Description: *Percentage of enrolled children aged 1-21 years who are at "elevated" risk (i.e., "moderate" or "high") who received at least 2 topical fluoride applications within the reporting year;* ***Measure Type:*** *Process;* ***Level of Analysis:*** Health Plan, Integrated Delivery System*;* ***Setting of Care:*** *Ambulatory Care: Clinician Office/Clinic* ***Data Source:*** *Administrative claims*

This measure is as part of a suite of newly-submitted oral health measures developed by the Dental Quality Alliance on behalf of the American Dental Association. The measure is currently in use for quality improvement in The Texas Health and Human Services Commission currently uses the measure for quality improvement in its CHIP and Medicaid Uniform Managed Care Manuals, and the Dental Services Performance Indicator Dashboards for Quality Measures. During the discussion about this measure, the Committee acknowledged that risk correlates with socioeconomic status, the presence of caries, prior cavities or potential lesions, and family history. Committee members were concerned about the age group, which ranges from 1 to 21 years, but concluded the measure may have been specified as such because of insurance coverage. The developer explained that the Centers for Medicaid and Medicare Services (CMS) and Medicaid use the 1 to 21 year age range to define a child. The Committee also questioned how accurately CDT codes were able to discern "elevated risk vs. "moderated risk". The

developer noted that, in terms of the risk, the measure uses CDT codes and additional service codes. The Committee ultimately recommended this measure for endorsement.

Comments Received After the Committee Evaluation

The Draft Report was posted for Member and public comment from June 10, 2014, through July 9, 2014. During this commenting period, NQF received 54 comments from five Member organizations. The comments addressed several general topics and measure specific issues.

Socio-Demographic Status

Commenters raised concerns about how factors outside of care delivery, such as social determinants of health, can affect access to continual and comprehensive care. There were specific concerns about the evaluated PQI measures: 0272: Diabetes Short-Term Complications Admission Rate (PQI 01); 0274: Diabetes Long-Term Complications Admission Rate (PQI 03); 0281: Urinary Tract Infection Admission Rate (PQI 12); 0285: Rate of Lower-Extremity Amputation among Patients with Diabetes (PQI 16), and 0638: Uncontrolled Diabetes Admission Rate (PQI 14) related to reliability. A commenter indicated that factors such as social determinants of health make it difficult to know whether measures are truly reflective of the quality of care being provided.

Regarding Measure 0727: *Gastroenteritis Admission Rate (PDI 16)* and Measure 0728: *Asthma Admission Rate (PDI 14)*, a commenter noted that socioeconomic factors that are unrelated to delivery of care have the potential to affect admissions rates.

While assessing *Measure 2528: Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services*, a commenter highlighted that socioeconomic factors can affect access to comprehensive and continuous dental services, both of which are essential for effective and preventative dental care. The commenter went on to explain that effective and preventative dental care is vital, in that it has the potential to prevent unfavorable physical, behavioral and social health outcomes related to oral health conditions.

Level of Analysis

Overall, the comments received were in support of the recommendations for endorsement of the measures. There were, however, comments about individual components, as well as a group of comments with a common theme related to level of analysis for the following PQI indicators:

- 0272: Diabetes Short-Term Complications Admission Rate (PQI 01)
- 0274: Diabetes Long-Term Complications Admission Rate (PQI 03)
- 0281: Urinary Tract Infection Admission Rate (PQI 12)
- 0285: Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16)
- 0638: Uncontrolled Diabetes Admission Rate (PQI 14)

One commenter was concerned about the use for each measure reporting at the clinician or health plan levels, indicating that implementation of the measures may pose problems and thereby affect the reliability of the measures. In addition, the commenter noted that the observed results may vary based on underlying characteristics of the measure population (i.e., social determinants of health) and not adequately reflect the quality of care provided.

Age Range for Pediatric Dental Measures

Comments received for the pediatric dental measures generally supported recommendations for endorsement of the measures. Commenters noted the measures captured important aspects of continuous and comprehensive dental care. For measures 2508: *Prevention: Dental Sealants for 6-9 Year-Old Children at Elevated Caries Risk*, 2509: *Prevention: Dental Sealants for 10-14 Year-Old Children at Elevated Caries Risk*, 2528: *Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services*, 2511: *Utilization of Services, and Dental Services,* and 2518: *Care Continuity, Dental Services,* some commenters suggested that all children be included because "risk" is not clearly defined. Another commenter expressed concerns that by only including children classified as high risk, children in middle class/middle income homes, who do not always have access to dental care, will be excluded. A commenter also noted it is more important and more cost-effective to monitor sealant utilization trends in children who are classified as moderate to high risk.

With regards to measure specific issues, commenters provided strong support *for Measure 2517: Oral Evaluation, Dental Services* and *Measure 2518: Care Continuity, Dental Services*, both of which were measures where consensus was not reached. Additional comments were also received on *Measure 2372: Breast Cancer Screening* with commenters generally in support of this measure, noting that it is in alignment with current United States Preventive Services Task Force (USPSTF) guidelines and addresses a performance gap in known disparities in care. Commenters questioned why patient refusal was not an exclusion, and suggested additional exclusions for both patient refusal and patients with a terminal diagnosis.

One commenter noted recent evidence that suggests that an annual mammography for women 40 to 59 years of age reduces breast cancer deaths, by a small degree. The commenter suggests that a policy of screening women aged 60 to 69 years every two years may provide the best tradeoff between benefits and harm

Comments for each measure have been summarized in the tables in Appendix A. For a more detailed look on the comments that were submitted, as well as the developer and Committee responses please see the comment table posted on the Health and Well Being Project Page.

Measures Withdrawn by the Developer from Further Consideration of Endorsement

Over time, and for various reasons, some previously-endorsed health and well-being measures have been dropped from the full NQF portfolio (see Appendix A). In some cases, the measure steward may not want to continue maintaining the measure for endorsement (e.g., update specifications as new drugs/tests become available or as diagnosis/procedure codes evolve or go through NQF's measure maintenance process). In other cases, measures may lose endorsement upon maintenance review. In short, loss of endorsement can occur for many reasons including—but not limited to—a change in evidence without an associated change in specifications, high performance on a measure signifying no further opportunity for improvement, or endorsement of a superior measure. The following health and well-being measures were withdrawn during the measure evaluation period.

Measure	Measure Steward	Reason for withdrawal
0573: HIV Screening-Members at High Risk of HIV	Health Benchmarks-IMS Health	Measure retired by steward; endorsement removed.
1381: Asthma Emergency Department Visits	Alabama Medicaid Agency	Measure retired by steward; endorsement removed.

Measure Deferred from Further Consideration

The Standing Committee met via webinar on August 6 to discuss comments received on all measures under review, including those measures where consensus was not reached, and to render a vote for the latter. The Committee discussed Measure 0280: Dehydration Admission Rate (PQI 10) (Agency for Healthcare Research Quality) at length. Committee members reaffirmed that there should be a strong link between high quality care and health outcomes and also discussed what can be improved at the community level to affect health outcomes. The Committee also noted that since a rate that reflected high-quality performance on this measure has not been presented, a measure score would be hard to interpret.

During the discussion, the measure developer (AHRQ) requested more time to conduct additional analyses on the substitution/capture issue raised during the in-person meeting and post-comment call (i.e., Is dehydration being captured more in observation services or ED visits than inpatient stays). AHRQ had intended to present these data to the Committee, but encountered unexpected delays during the course of this project. The Standing Committee acknowledged that these data would address the concerns raised earlier and would help to inform their endorsement recommendation. Given the importance of these analyses to the Committee's decision-making process and the unavoidable and unexpected delays experienced by AHRQ, NQF agreed to defer continued review of this measure to a subsequent Health and Well Being project, when the analyses are available for the Committee to review and render an endorsement recommendation.

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2518 Care Continuity, Dental Services 61

Measures withdrawn from consideration

0573: HIV Screening-Members at High Risk of HIV 63
1381: Asthma Emergency Department Visits 63

Measures Recommended

Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable; Y=Yes; N=No

0272 Diabetes Short-Term Complications Admission Rate (PQI 01)

Submission | Specifications

Description: Admissions for a principal diagnosis of diabetes with short-term complications (ketoacidosis, hyperosmolarity, or coma) per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions.

Numerator Statement: Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for diabetes short-term complications (ketoacidosis, hyperosmolarity, or coma).

[NOTE: By definition, discharges with a principal diagnosis of diabetes with short-term complications cannot have an assignment of MDC 14 (pregnancy, childbirth and the puerperium). Thus, obstetric discharges are not considered in the PQI rate.]

See Prevention Quality Indicators technical specifications for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information.

Denominator Statement: Population ages 18 years and older in the metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.

May be combined with uncontrolled diabetes as a single indicator as a simple sum of the rates to form the Healthy People 2010 indicator (note that the AHRQ QI excludes transfers to avoid double-counting cases).

Exclusions: Not applicable

Adjustment/Stratification:

Level of Analysis: Population : County or City, Population : National, Population : State

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Outcome

Data Source: Administrative claims

Measure Steward: Agency for Healthcare Research and Quality

0272 Diabetes Short-Term Complications Admission Rate (PQI 01)

STANDING COMMITTEE MEETING [04/30/2014]

1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **Y-17; N-1;** 1b. Performance Gap: **H-17; M- 2; L- 0; I-0;** 1c. Impact: **H-19; M-0; L-0; I-0**

<u>Rationale</u>:

- The Committee agreed that this was important to measure and report, given the rapid increase of the number of the adult populations with diabetes and pre-diabetes. The Committee also noted that acute diabetes-related complications are the seventh leading cause of death, accounting for 36 percent of all diabetes hospitalizations, and that more than $174 billion annually has been spent on diabetes-related hospitalizations.
- The Committee acknowledged the dramatic increase in diabetes-related hospitalizations and questioned the connection between this increase and outpatient care. While the Committee debated the reasons why ketoacidosis is not part of the measure, Committee members also acknowledged that ketoacidosis is a recognized short-term complication. The Committee also noted hypoglycemia and hypoglycemic seizures account for the majority of diabetes short-term complications admissions. The developer explained that hypoglycemia is captured in Measure 0638: Uncontrolled Diabetes Admission Rate (PQI 14).
- The Committee supported the rationale for this measure, stating that ketoacidosis, hyperosmolarity, and comas are all almost completely preventable if recognized.
- The Committee raised concerns about the increase in short-term complications admission rates and questioned the continued utility of this measure. The developer explained that they cannot confirm why rates are increasing even though the use and uptake of the measure is assessed regularly. While Committee members recognized the impact personal behavior has on Type 2 diabetes, they also acknowledged the significant role that genetics and socio-demographic factors play on the incidence and prevalence of the disease.

0272 Diabetes Short-Term Complications Admission Rate (PQI 01)

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>
(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)
2a. Reliability: **H-14; M-5; L-0; I-0** 2b. Validity: **H-11; M-6; L-1; I-1**
<u>Rationale</u>:

- The Committee agreed that the measure is well specified.
- The developer noted that all of the ICD-9 codes are currently mapped to ICD-10 codes. The Committee cautioned that with implementation of ICD-10, there may be a shift in trends due to the specificity of ICD-10, which offer greater categorization of secondary diabetes versus other diabetes types.
- The developer used construct validity to test this measure, by examining the association between the risk-adjusted rate and characteristics potentially associated with quality of care, including physician density and poverty status. The results concluded that differences in county-level risk-adjusted rates were statistically significant where there was less access to high quality outpatient care (low physician density and increased poverty status). The reliability testing was completed using Healthcare Cost and Utilization Project (HCUP) data, and reliability was tested using the signal to noise method; results were moderate for reliability of the risk-adjusted rate.
- The Committee asked that the developer provide additional information on disparities in care.

3. Feasibility: H-18; M-1; L-0; I-0
(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)
<u>Rationale</u>:

- The Committee raised questions about the measure currently specified with ICD-9 codes, since ICD-10 codes offer more specificity for some diabetes-related complications and greater categorization of secondary diabetes. Committee members noted that these changes have the potential to impact how cases are sorted across the four AHRQ diabetes measures: 0272: Diabetes Short-Term Complications Admission Rate (PQI 01), 0274: Diabetes Long-Term Complications Admission Rate (PQI 03), 0285: Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16), and 0638: Uncontrolled Diabetes Admission Rate (PQI 14).
- The Committee agreed that data collection for this measure is feasible since the data source, discharge and diagnostic claims, is easily available on paper, as well as electronically.

0272 Diabetes Short-Term Complications Admission Rate (PQI 01)
4. Use and Usability: H-13; M-4; L-2; I-0 *(Meaningful, understandable, and useful to the intended audiences for 4a. Public Reporting/Accountability and 4b. Quality Improvement)* Rationale: • While the Committee acknowledged the utility of this measure for quality improvement, public reporting by AHRQ in multiple states, and Medicaid programs by CMS, members questioned how it is being used to address diabetes-related hospitalizations. AHRQ outlined several mechanisms to monitor use, implementation, and net results. • The Committee recommended that the four diabetes measures—0272: Diabetes Short-Term Complications Admission Rate (PQI 01), 0274: Diabetes Long-Term Complications Admission Rate (PQI 03), 0285: Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16), and 0638: Uncontrolled Diabetes Admission Rate (PQI 14) —be presented as a composite measure. The developer indicated a willingness to combine the measures in a future iteration of the measure. .
5. Standing Committee Recommendation for Endorsement: **Y-19**; **N-0**
6. Member and Public Comment [June 10-July 9, 2014] • Generally, comments were in support of using this measure at the population or community level, but not for use at the clinician or health plan levels. • One commenter suggested that PQI 01 – Diabetes Short-Term Complications Admission Rate should remain as a separate measure and not be included as part of a diabetes composite measure, as recommended by the Committee.
7. Consensus Standards Approval Committee (CSAC) Vote: Y-13; N-0; A-0
8. Board of Directors Vote: Y-X; N-X
9. Appeals

0274 Diabetes Long-Term Complications Admission Rate (PQI 03)
Submission | Specifications

0274 Diabetes Long-Term Complications Admission Rate (PQI 03)

Description: Admissions for a principal diagnosis of diabetes with long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified) per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions.
Numerator Statement: Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for diabetes with long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified).
[NOTE: By definition, discharges with a principal diagnosis of diabetes with long-term complications cannot have an assignment of MDC 14 (pregnancy, childbirth and the puerperium). Thus, obstetric discharges are not considered in the PQI rate.]
See Prevention Quality Indicators technical specifications for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information.
Denominator Statement: Population ages 18 years and older in metropolitan area† or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county where the hospital discharge occurred.
Exclusions: Not applicable
Adjustment/Stratification:
Level of Analysis: Population : County or City, Population : National, Population : Regional, Population : State
Setting of Care: Hospital/Acute Care Facility
Type of Measure: Outcome
Data Source: Administrative claims

Measure Steward: Agency for Healthcare Research and Quality

STANDING COMMITTEE MEETING [04/30/2014]

1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **Y-18; N-1**; 1b. Performance Gap: **H-15**; **M-4**; **L-0**; **I-0;** 1c. Impact: **H-18**; **M-1**; **L-0**; **I-0**

<u>Rationale</u>:

- The Committee agreed that the measure is a high priority, given the numbers of adults with diabetes and pre-diabetes. The Committee also noted that acute diabetes-related complications were the seventh leading cause of death and accounted for 36 percent of all diabetes-related hospitalizations.
- The developer presented data from the United Kingdom Prospective Diabetes Study and a number of evidence-based guidelines to demonstrate a strong pathway between diabetes and long-term complications associated with microvascular damage.
- The Committee expressed concerns about the composition of the metropolitan statistical areas, in which specific areas (i.e., cities, towns) within close proximity were “blended”. Members of the Committee were particularly uncomfortable about the variability between areas, including possible differences in socio-demographic factors, disease burden and health outcomes

0274 Diabetes Long-Term Complications Admission Rate (PQI 03)

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>
(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)
2a. Reliability: **H-17**; **M-2**; **L-0**; **I-0** 2b. Validity: **H-4**; **M-10**; **L-4**; **I-1**
<u>Rationale</u>:

- Committee members were concerned that if a patient with diabetes was discharged from the hospital, but the principal diagnosis was not diabetes (e.g., cardiovascular complication), the patient would not be captured in the measure population. The developer acknowledged that this measure does not account for all diabetes-related hospitalizations, and reiterated that the discharge must be coded as a complication of diabetes to be counted in the measure. The Committee cautioned that diabetes is not always captured as the primary etiology behind admissions and that deaths as a result of myocardial infraction related to macrovascular disease, for example, would not be captured as diabetes-related. The Committee's concern was that the measure may not represent a full picture of diabetes-related long-term complication admissions.
- The Committee raised concerns about the use of the measure for quality improvement, since vascular damage progresses over several years.
- The developer applied construct validity to test the measure, examining the association between the risk-adjusted rate and characteristics potentially associated with quality of care, including physician density and poverty status. The results concluded that differences in county-level risk-adjusted rates were statistically significant where there was less access to high-quality outpatient care (low physician density and increased poverty status).
- The Committee questioned why rates for ethnic and minority populations were not provided in the performance gap information, since the developer cited many studies highlighting existing ethnic and racial minority disparities. The Committee suggested that adding race and ethnicity data and other sociodemographic variables would strengthen the measure.

3. Feasibility: H-19; M-0; L-0; I-0
(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)
<u>Rationale</u>:

- The Committee agreed that the measure is feasible at multiple levels, including public health departments, accountable care organizations (ACOs), and managed care organizations.
- All data elements are routinely generated and used during care delivery and can be found in defined fields in electronic claims.

0274 Diabetes Long-Term Complications Admission Rate (PQI 03)
4. Use and Usability: H-10; M-7; L-2; I-0 *(Meaningful, understandable, and useful to the intended audiences for 4a. Public Reporting/Accountability and 4b. Quality Improvement)* Rationale: • This measure is used for quality improvement measure, public reporting by AHRQ in multiple states, and is approved for voluntary use for Medicare FFS Physician Feedback Program. • The Committee recommended that the four diabetes measures—0272: Diabetes Short-Term Complications Admission Rate (PQI 01), 0274: Diabetes Long-Term Complications Admission Rate (PQI 03), 0285: Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16), and 0638: Uncontrolled Diabetes Admission Rate (PQI 14) —be presented as a composite measure. The developer indicated a willingness to combine the measures in a future iteration of the measure.
5. Standing Committee Recommendation for Endorsement: **Y-18**; **N-1**
6. Member and Public Comment [June 10-July 9, 2014] • Comments were generally supportive of the measure for use at the population or community level, but not for use for clinician or health plan levels. • One commenter suggested that PQI 03- Diabetes Long-Term Complications Admission Rate should be part of a comprehensive diabetes composite measure.
7. Consensus Standards Approval Committee (CSAC) Vote: Y-13; N-0; A-0
8. Board of Directors Vote: Y-X; N-X
9. Appeals

0281 Urinary Tract Infection Admission Rate (PQI 12)

Submission | Specifications

Description: Admissions with a principal diagnosis of urinary tract infection per 100,000 population, ages 18 years and older. Excludes kidney or urinary tract disorder admissions, other indications of immunocompromised state admissions, obstetric admissions, and transfers from other institutions.

Numerator Statement: Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for urinary tract infection.

[NOTE: By definition, discharges with a principal diagnosis of urinary tract infection cannot have an assignment of MDC 14 (pregnancy, childbirth and the puerperium). Thus, obstetric discharges are not considered in the PQI rate.]

See Prevention Quality Indicators technical specifications for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information.

Denominator Statement: Population ages 18 years and older in metropolitan area† or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.

Exclusions: Not applicable

Adjustment/Stratification:

Level of Analysis: Population : County or City, Population : National, Population : Regional, Population : State

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Outcome

Data Source: Administrative claims

Measure Steward: Agency for Healthcare Research and Quality

STANDING COMMITTEE MEETING [04/30/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **Y-13; N-7**; 1b. Performance Gap: **H-4**; **M-14**; **L-2**; **I-1;** 1c. Impact: **H-3**; **M-12**; **L-5**; **I-0**

Rationale:

- Committee members debated the merits of the evidence to support the measure's construct, particularly data that suggest a diagnosis of UTI at admission reflects inadequate or delayed outpatient treatment for the condition. The developer cited only one guideline, which the Committee had difficulty interpreting, especially the evidence regarding UTI management for the elderly.
    - During the workgroup discussions, Committee members also discussed whether the performance on this measure would be affected significantly if there were improved access to primary care; however, there was no evidence presented by the developer to indicate how access would affect the rate of hospitalizations.
- Committee members noted the variation in performance; the majority of admissions are in the over 65 year's age range. Committee members suggested that the developer focus on this age group for future iterations of the measure.
- The Committee and developer acknowledged the increasing rates of UTI admissions, but did not have data to explain the increase.

0281 Urinary Tract Infection Admission Rate (PQI 12)
2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u> (2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity) 2a. Reliability: **H-7**; **M-12**; **L-1**; **I-0** 2b. Validity: **H-4**; **M-14**; **L-2**; **I-0** <u>Rationale</u>: • The developer applied construct validity to test the measure, examining the association between the risk-adjusted rate and characteristics potentially associated with quality of care, including physician density and poverty status. The results concluded that differences in county-level risk-adjusted rates were statistically significant where there was less access to high-quality outpatient care (low physician density and increased poverty status). • Committee members noted that counties with large populations were more likely to be identified as 'better' or 'worse' than the reference population because of the small numbers associated with smaller populations and uncertainty in the performance score.
3. Feasibility: H-16; M-4; L-0; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* <u>Rationale</u>: • The data elements are routinely generated and used during care delivery and can be found in defined fields in electronic claims. • The Committee agreed that since the indicator is based on readily available administrative data and U.S. Census data, feasibility is not an issue.
4. Use and Usability: H-8; M-11; L-1; I-0 *(Meaningful, understandable, and useful to the intended audiences for 4a. Public Reporting/Accountability and 4b. Quality Improvement)* <u>Rationale</u>: • This measure is used for quality improvement, public reporting by AHRQ in multiple states, and is approved for voluntary use for Medicare FFS Physician Feedback Program.
5. Standing Committee Recommendation for Endorsement: **Y-15**; **N-5**
6. Member and Public Comment[June 10-July 9, 2014] • Comments were generally supportive of the use of this measure at the population or community level, but not for reporting at the clinician or health plan levels. • One commenter expressed concerns about false positives, particularly in elderly population.
7. Consensus Standards Approval Committee (CSAC) Vote: Y-13; N-0; A-0
8. Board of Directors Vote: Y-X; N-X
9. Appeals

0285 Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16)

Submission | Specifications

Description: Admissions for any-listed diagnosis of diabetes and any-listed procedure of lower-extremity amputation per 100,000 population, ages 18 years and older. Excludes any-listed diagnosis of traumatic lower-extremity amputation admissions, toe amputation admission (likely to be traumatic), obstetric admissions, and transfers from other institutions.

Numerator Statement: Discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for lower-extremity amputation and any-listed ICD-9-CM diagnosis codes for diabetes.

See Prevention Quality Indicators technical specifications for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information.

Denominator Statement: Population ages 18 years and older in metropolitan area† or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.

Exclusions: Not applicable

Adjustment/Stratification:

Level of Analysis: Population : County or City, Population : National, Population : Regional, Population : State

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Outcome

Data Source: Administrative claims

Measure Steward: Agency for Healthcare Research and Quality

STANDING COMMITTEE MEETING [04/30/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **Y-18; N-0**; 1b. Performance Gap: **H-13**; **M-5**; **L-0**; **I-0;** 1c. Impact: **H-15**; **M-2**; **L-1**; **I-0**

Rationale:

- The Committee agreed that the evidence that suggests adequate diabetes management screening will prevent lower extremity amputation linked to diabetes is strong.
- The measure allows for comparison across regions to assess preventive education, outpatient care and management of diabetes, and access to care and where these resources are lacking. (High-quality education, care management and early intervention have been shown to result in lower rates of amputation linked to diabetes.)
- The Committee noted that, during the last 10 years, rates of lower limb amputations have decreased. Committee members also recognized that while prevalence of diabetes has increased, lower limb amputations related to diabetes have decreased as a result of better vascular care maintenance.

0285 Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16)

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria
(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)
2a. Reliability: **H-6**; **M-12**; **L-0**; **I-0** 2b. Validity: **H-5**; **M-11**; **L-2**; **I-0**
Rationale:

- The developer applied construct validity to test the measure, examining the association between the risk-adjusted rate and characteristics potentially associated with quality of care, including physician density and poverty status. The results concluded that differences in county-level risk-adjusted rates were statistically significant where there was less access to high-quality outpatient care (low physician density and increased poverty status).
- The Committee raised concerns about the inclusion of toe amputation in the specifications, since people with multiple toe amputations can potentially skew performance on the measure. The developer recognized the Committee's concerns and agreed that the inclusion of toe amputation in the target population may cause unintended negative consequences for public reporting. (Following the April 30, 2014, in-person meeting, the developer updated the Measure Submission Form and removed toe amputations from the numerator.)
- The Committee raised concerns about the exclusion criteria, specifically transfers from other facilities. The developer explained that transfers were excluded to avoid counting transfers as two hospitalizations. The Committee disagreed and noted that the measure focuses on amputation, not hospitalization, and that a foot amputated at one hospital cannot be counted again if that same person is transferred to another hospital. The Committee further explained that since the measure is assessing amputation, the facility should not be an issue. .
- The Committee also questioned the exclusion of people in skilled nursing facilities. The developer agreed to reevaluate excluding transfers, but noted that patients in long-term care facilities generally are not receiving ambulatory care through the same healthcare facilities as other patients.
- The Committee recommended that the four diabetes measures—0272: Diabetes Short-Term Complications Admission Rate (PQI 01), 0274: Diabetes Long-Term Complications Admission Rate (PQI 03), 0285: Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16), and 0638: Uncontrolled Diabetes Admission Rate (PQI 14) —be presented as a composite measure. The developer indicated a willingness to combine the measures in a future iteration of the measure.

3. Feasibility: H-13; M-5; L-0; I-0
(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)
Rationale:

- The required data elements are routinely generated, used during care delivery and are in defined fields in electronic claims.
- The Committee agreed that since the indicator is based on readily available administrative data and U.S. Census data, feasibility is not an issue.

0285 Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16)
4. Use and Usability: H-14; M-4; L-0; I-0 *(Meaningful, understandable, and useful to the intended audiences for 4a. Public Reporting/Accountability and 4b. Quality Improvement)* **Rationale:** • The measure is used by CMS for the Medicare FFS Physician Feedback Program and Quality and Resource Use Reports (QRUR).
5. Standing Committee Recommendation for Endorsement: **Y-15**; **N-3**
6. Member and Public Comment [June 10-July 9, 2014] • Comments were generally supportive of use of this measure at the population or community level, but not for reporting at the clinician or health plan levels. • One commenter suggested that PQI 16 –Rate of Lower-Extremity Amputation Among Patients With Diabetes—should be part of a comprehensive diabetes composite measure.
7. Consensus Standards Approval Committee (CSAC) Vote: Y-13; N-0; A-0
8. Board of Directors Vote: Y-X; N-X
9. Appeals

0638 Uncontrolled Diabetes Admission Rate (PQI 14)
Submission | Specifications
Description: Admissions for a principal diagnosis of diabetes without mention of short-term (ketoacidosis, hyperosmolarity, or coma) or long-term (renal, eye, neurological, circulatory, or other unspecified) complications per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions. **Numerator Statement**: Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for uncontrolled diabetes without mention of a short-term or long-term complication. [NOTE: By definition, discharges with a principal diagnosis of uncontrolled diabetes without mention of short-term or long-term complications cannot have an assignment of MDC 14 (pregnancy, childbirth and the puerperium). Thus, obstetric discharges are not considered in the PQI rate.] See Prevention Quality Indicators technical specifications for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information. **Denominator Statement**: Population ages 18 years and older in metropolitan area† or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. May be combined with diabetes short-term complications as a single indicator as a simple sum of the rates to form the Health People 2010 indicator (note that the AHRQ QI excludes transfers to avoid double counting cases). **Exclusions**: Not Applicable **Adjustment/Stratification**: **Level of Analysis:** Population : County or City, Population : National, Population : Regional, Population : State **Setting of Care:** Hospital/Acute Care Facility **Type of Measure**: Outcome **Data Source**: Administrative claims **Measure Steward**: Agency for Healthcare Research and Quality

0638 Uncontrolled Diabetes Admission Rate (PQI 14)

STANDING COMMITTEE MEETING [04/30/2014]

1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **Y-19; N-0**; 1b. Performance Gap: **H-18**; **M-2**; **L-0**; **I-0;** 1c. Impact: **H-18**; **M-1**; **L-1**; **I-0**

<u>Rationale</u>:

- The Committee agreed that the measure is a high priority and is well-specified.
- The Committee agreed that uncontrolled diabetes is more likely to occur in the elderly and patients with other co-morbidities (e.g., physiologic causes, cessation of treatment, lack of access to quality care, medication costs, and or other adherence related issues).
- During the workgroup's discussions, workgroup members suggested pairing this measure with the 0272: Diabetes Short-Term Complications Admission Rate (PQI 01) in a future iteration of this measure.

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-9**; **M-11**; **L-X**; **I-X** 2b. Validity: **H-4**; **M-15**; **L-1**; **I-0**

<u>Rationale</u>:

- For reliability testing, the developer used Healthcare Cost and Utilization Project (HCUP) data and a signal to noise analysis; testing results were moderate for the risk-adjusted rate.
- The developer used construct validity to test the measure, examining the association between the risk-adjusted rate and characteristics potentially associated with quality of care, including physician density and poverty status. The results concluded that differences in county-level risk-adjusted rates were statistically significant where there was less access to high-quality outpatient care (low physician density and increased poverty status).
- Committee members also questioned whether some admissions that should have been coded as a principal diagnosis of diabetes with a short-term complication will instead end up being counted in this measure. While the developer acknowledged that miscoding can occur and undermine the validity of the short-term complications measure, the developer said it felt having this measure for "uncontrolled" diabetes admissions provides a more complete picture. Over time, gaming or coding drift could occur with only the short-term complications measure, which would provide a false picture that admissions for short-term diabetes-related complications were declining. Tracking this measure, however, can illuminate whether there is a real decline or whether coding drift/gaming is occurring. Committee members also questioned other aspects of the validity of the measure, pointing out concerns that some admissions.
- The Committee recommended that the four diabetes measures—0272: Diabetes Short-Term Complications Admission Rate (PQI 01), 0274: Diabetes Long-Term Complications Admission Rate (PQI 03), Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16), and 0638 Uncontrolled Diabetes Admission Rate (PQI 14)— be presented as a composite measure. The developer indicated a willingness to combine the measures in a future iteration of the measure.

0638 Uncontrolled Diabetes Admission Rate (PQI 14)
3. Feasibility: H-19; M-1; L-0; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* Rationale: • The required data elements are routinely generated, used during care delivery, and are in defined fields in electronic claims. • The Committee agreed that since the indicator is based on readily available administrative data and U.S. Census data, feasibility is not an issue.
4. Use and Usability: H-13; M-6; L-1; I-0 *(Meaningful, understandable, and useful to the intended audiences for 4a. Public Reporting/Accountability and 4b. Quality Improvement)* Rationale: • While the Committee suggested that this measure be utilized as part of a family of measures since it helps capture misclassification across categories and helps address coding drifting overtime, Committee members agreed that as a standalone measure, it captures admissions that might not otherwise be captured. • The Committee also suggested that the developer assess reliability over time in small communities. • Some Committee members suggested combing this measure with the 0272: Diabetes Short-Term Complications Admission Rate (PQI 01) measure. • This measure is used for quality improvement, public reporting by AHRQ in multiple states, and is approved for voluntary use for CMS' Medicare FFS Physician Feedback Program.
5. Standing Committee Recommendation for Endorsement: **Y-19**; **N-1**
6. Member and Public Comment [June 10-July 9, 2014] • Comments were generally supportive of use of this measure at the population or community level, but not for use in reporting at the clinician or health plan levels. • One Commenter suggested that PQI 14 –Uncontrolled Diabetes Admissions Rate should be part of a comprehensive diabetes composite measure.
7. Consensus Standards Approval Committee (CSAC) Vote: Y-13; N-0; A-0
8. Board of Directors Vote: Y-X; N-X
9. Appeals

0727 Gastroenteritis Admission Rate (PDI 16)
Submission | Specifications

0727 Gastroenteritis Admission Rate (PDI 16)

Description: Admissions for a principal diagnosis of gastroenteritis, or for a principal diagnosis of dehydration with a secondary diagnosis of gastroenteritis per 100,000 population, ages 3 months to 17 years. Excludes cases transferred from another facility, cases with gastrointestinal abnormalities or bacterial gastroenteritis, and obstetric admissions.

Numerator Statement: Discharges ages 3 months to 17 years with ICD-9-CM principal diagnosis code of gastroenteritis, OR with secondary diagnosis code of gastroenteritis and a principal diagnosis code of dehydration.

Exclude cases:

- MDC 14 (pregnancy, childbirth, and puerperium)
- transfer from other institution
- age less than or equal to 90 days (or neonates if age in days is missing)
- with any diagnosis code of gastrointestinal abnormalities or bacterial gastroenteritis

Denominator Statement: Population ages 3 months through 17 years in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.

Exclusions: Not applicable.

Adjustment/Stratification:

Level of Analysis: Population : County or City, Population : National, Population : Regional, Population : State

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Outcome

Data Source: Administrative claims

Measure Steward: Agency for Healthcare Research and Quality

STANDING COMMITTEE MEETING [04/29/2014]

1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **Y-21; N-1**; 1b. Performance Gap: **H-13**; **M-8**; **L-1**; **I-0;** 1c. Impact: **H-15**; **M-7**; **L-0**; **I-0**

<u>Rationale</u>:

- The Committee agreed this measure assesses a high priority area because 1 in 50 people have some type of an acute admission related to GI complications.
- The Committee noted that disparities by income and geographic region are narrowing.

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-17**; **M-5**; **L-0**; **I-0** 2b. Validity: **H-13**; **M-8**; **L-1**; **I-0**

<u>Rationale</u>:

- Committee members were concerned about the validity of the measure and how changes in treatment through the administration of a vaccine are affecting admission rates. Specifically, Committee members questioned how to distinguish decreased admissions due to efficacy and delivery of the rotavirus vaccination from decreased rates due to increased primary care access, versus administration of oral rehydration solution.
    - The developer noted that despite community variation of vaccine delivery and variation among the people accepting the vaccine, the validity of the measure remains strong.
- Committee members noted that short-stay units within hospitals are increasing and could be a confounding factor; while many insurers do not consider patients who stay less than 24 hours as admissions, some insurers do count these stays as admissions.

0727 Gastroenteritis Admission Rate (PDI 16)
3. Feasibility: H-20; M-2; L-0; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* Rationale: • The required data elements are routinely generated, used during care delivery, and are in defined fields in electronic claims. • The Committee agreed that since the indicator is based on readily available administrative data and U.S. Census data, feasibility is not an issue.
4. Use and Usability: H-17; M-5; L-0; I-0 *(Meaningful, understandable, and useful to the intended audiences for 4a. Public Reporting/Accountability and 4b. Quality Improvement)* Rationale: • Committee members noted that the measure has the potential to reveal higher resource use in hospital settings versus outpatient care. • The Committee acknowledged that demonstration of significant improvement over time is highlighted in the data collected in the three states where the measure is currently in use (Connecticut, California, and New York).
5. Standing Committee Recommendation for Endorsement: **Y-22**; **N-0**
6. Member and Public Comment [June 10-July 9, 2014] • Comments were generally supportive of this measure and recommend that the measure developer examine whether admission rates for this measure vary based on socio-demographic factors unrelated to the delivery of healthcare. • One commenter requested more information on the effects of immunization practices on this measure.
7. Consensus Standards Approval Committee (CSAC) Vote: Y-13; N-0; A-0
8. Board of Directors Vote: Y-X; N-X
9. Appeals

0728 Asthma Admission Rate (PDI 14)
Submission | Specifications

0728 Asthma Admission Rate (PDI 14)

Description: Admissions with a principal diagnosis of asthma per 100,000 population, ages 2 through 17 years. Excludes cases with a diagnosis code for cystic fibrosis and anomalies of the respiratory system, obstetric admissions, and transfers from other institutions.

Numerator Statement: Discharges, for patients ages 2 through 17 years, with a principal ICD-9-CM diagnosis code for asthma.

Denominator Statement: Population ages 2 through 17 years in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.

Exclusions: Not applicable

Adjustment/Stratification:

Level of Analysis: Population : County or City, Population : National, Population : Regional, Population : State

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Outcome

Data Source: Administrative claims

Measure Steward: Agency for Healthcare Research and Quality

STANDING COMMITTEE MEETING [04/29/2014]

1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **Y-20-; N-0**; 1b. Performance Gap: **H-17**; **M-3**; **L-0**; **I-0;** 1c. Impact: **H-20**; **M-0**; **L-0**; **I-0**

<u>Rationale</u>:

- The Committee acknowledged that this measure is a high priority; the admission rates for low-income and minority children highlight significant disparities.
- Committee members noted a strong link between socio-demographic factors, improvement activities, outcomes, asthma admissions, and the care processes. The Committee noted a significant opportunity to improve asthma care and prevention because admissions rates have not declined. Committee members also noted an age-sensitive performance gap , where the highest prevalence of asthma is among young children. High performance also was noted in the western region of the country. While the developer did not present data to explain the differences between regions, the Committee debated whether these differences were due to environmental factors.
- The Committee reiterated that the PQIs are specified at the community level only and that it is appropriate to consider social determinants of health, as well as health system and clinical factors in these measures. The Committee suggested that each community can use the measure for improvement purposes as it sees fit.

0728 Asthma Admission Rate (PDI 14)

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>
(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)
2a. Reliability: **H-18**; **M-2**; **L-0**; **I-0** 2b. Validity: **H-10**; **M-10**; **L-0**; **I-0**
<u>Rationale</u>:

- The Committee agreed that the measure is well-defined and precisely specified using ICD-9 asthma diagnosis codes for inclusions and exclusions.
- The Committee agreed that the data elements are repeatable and produce the same results a high proportion of the time.
- The Committee questioned how the measure accounts for compliance—or failure of compliance by parents, in particular—to administer inhaled corticosteroids and other preventative measures. During the workgroup discussions, workgroup members noted other confounders like exposure to second-hand smoke and poor living conditions. The developer agreed that second-hand smoke and other factors could be confounders, however, since individual providers are not assessed on their performance, those confounding factors are of less concern.
- The Committee noted that observed differences in the measure may be due to factors other than improvements in control and management of asthma (e.g., differences in underlying burden of disease).
- The measure used construct validity to demonstrate the relationship of asthma admission to primary care resources available in the community.

3. Feasibility: H-19; M-1; L-0; I-0
(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)
<u>Rationale</u>:

- The required data elements are routinely generated, used during care delivery, and are in defined fields in electronic claims.

4. Use and Usability: H-12; M-7; L-1; I-0
(Meaningful, understandable, and useful to the intended audiences for 4a. Public Reporting/Accountability and 4b. Quality Improvement)
<u>Rationale</u>:

- The Committee acknowledge the measure is currently used for public reporting by the AHRQ Healthcare Cost and Utilization Project, AHRQ National Healthcare Quality & Disparities Reports, as well as state level reports (e.g., California, Connecticut, New York)
- The Committee identified underlying disease burden as a potential confounder that could lead to an unintended consequence of this measure.

5. Standing Committee Recommendation for Endorsement: **Y-19**; **N-1**

6. Member and Public Comment [June 10-July 9, 2014]

- Commenters suggested that the measure developer examine whether admission rates for this measure vary based on socio-demographic factors unrelated to the delivery of healthcare.

7. Consensus Standards Approval Committee (CSAC) Vote: Y-13; N-0; A-0

8. Board of Directors Vote: Y-X; N-X

9. Appeals

2372 Breast Cancer Screening

Submission | Specifications

Description: The percentage of women 50-74 years of age who had a mammogram to screen for breast cancer.

Numerator Statement: Women who received a mammogram to screen for breast cancer.

Denominator Statement: Women 52-74 years as of December 31 of the measurement year

Note: this denominator statement captures women age 50-74 years; it is structured to account for the look-back period for mammograms.

Exclusions: Bilateral mastectomy any time during the member's history through December 31 of the measurement year. Any of the following meet criteria for bilateral mastectomy: 1) Bilateral mastectomy 2) Unilateral mastectomy with a bilateral modifier 3) Two unilateral mastectomies on different dates of service and 4) Both of the following (on the same date of service): Unilateral mastectomy with a right-side modifier and unilateral mastectomy with a left-side modifier.

Adjustment/Stratification:

Level of Analysis: Health Plan, Integrated Delivery System

Setting of Care: Ambulatory Care : Clinician Office/Clinic

Type of Measure: Process

Data Source: Administrative claims, Electronic Clinical Data

Measure Steward: National Committee for Quality Assurance

STANDING COMMITTEE MEETING [04/30/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-5**; **M-12**; **L-2**; **I-1**; 1b. Performance Gap: **H-13**; **M-7**; **L-0**; **I-0;** 1c. Impact: **H-9**; **M-9**; **L-2**; **I-0**

Rationale:

- The Committee acknowledged that the measure is aligned with the updated United States Preventive Services Task Force (USPSTF) guidelines that recommend biennial mammogram screening for women aged 50-74 years.
- The Committee noted that the quality of the evidence for the USPSTF guideline was rated "moderate" (Grade B: The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial) and remarked that, with few exceptions, most cancer screening tests have been assigned USPSTF evidence of Grade B.
- Committee members noted the USPSTF guidelines are currently under review and questioned whether providers would be penalized if they did not perform screenings per the current guidelines. The developer clarified that the measure does not penalize physicians when a screening is not performed.
    - During the workgroup discussion, the workgroup members agreed that the measure is a high priority—specifically for communities where there is an opportunity to improve outcomes, i.e., in communities where there are disparities among populations, particularly among lower income or Black or Hispanic women.

2372 Breast Cancer Screening

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>
(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)
2a. Reliability: **H-12**; **M-8**; **L-0**; **I-0** 2b. Validity: **H-9**; **M-10**; **L-1**; **I-0**
<u>Rationale</u>:

- The Committee acknowledged that the measure is aligned with the updated United States Preventive Services Task Force (USPSTF) guidelines that recommend biennial mammogram screening for women aged 50-74 years.
- The Committee noted that the quality of the evidence for the USPSTF guideline was rated "moderate" (Grade B: The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial) and remarked that, with few exceptions, most cancer screening tests have been assigned USPSTF evidence of Grade B.
- Committee members noted the USPSTF guidelines are currently under review and questioned whether providers would be penalized if they did not perform screenings per the current guidelines. The developer clarified that the measure does not penalize physicians when a screening is not performed.
    - During the workgroup discussion, the workgroup members agreed that the measure is a high priority—specifically for communities where there is an opportunity to improve outcomes, i.e., in communities where there are disparities among populations, particularly among lower income or Black or Hispanic women.

3. Feasibility: H-19; M-1; L-0; I-0
(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)
<u>Rationale</u>:

- The required data elements are routinely generated, used during care delivery, are in defined fields in electronic claims.

4. Use and Usability: H-14; M-5; L-1; I-0
(Meaningful, understandable, and useful to the intended audiences for 4a. Public Reporting/Accountability and 4b. Quality Improvement)
<u>Rationale</u>:

- The developer noted that while the specifications are clearly defined for HEDIS measures, data collection and calculation methods may vary and other errors may taint the results, diminishing the usefulness of HEDIS data for managed care organization (MCO) comparisons. For HEDIS to reach its full potential, the developer conducts an independent audit of all HEDIS data collection and reporting processes, as well a data audit, in order to verify that HEDIS specifications are met.
- The measure is currently in use in a number of programs, including: Health Plan Rankings/Report Cards, Annual State of Health Care Report, Medicaid Adult Core Set, NCQA Health Plan Accreditation, and NCQA'S Quality Compass.
- The Committee cautioned screening overuse (i.e., increased frequency) as a potential unintended consequence of the measure.

5. Standing Committee Recommendation for Endorsement: **Y-18**; **N-2**

2372 Breast Cancer Screening
6. Member and Public Comment [June 10-July 9, 2014] • Commenters were generally supportive of this measure, noting that it is in alignment with current USPSTF guidelines and addresses a performance gap in known disparities in care. • Commenters questioned why patient refusal was not listed as an exclusion and suggested exclusions for both patient refusal and patients with a terminal diagnosis. • One commenter noted recent evidence that suggests that an annual mammography for women 40 to 59 years of age reduces breast cancer deaths, by a small degree. The commenter suggested that a policy of screening women aged 60 to 69 years every two years may provide the best tradeoff between benefits and harm
7. Consensus Standards Approval Committee (CSAC) Vote: Y-13; N-0; A-0
8. Board of Directors Vote: Y-X; N-X
9. Appeals

2508 Prevention: Dental Sealants for 6-9 Year-Old Children at Elevated Caries Risk
Submission | Specifications
Description: Percentage of enrolled children in the age category of 6-9 years at "elevated" risk (i.e., "moderate" or "high") who received a sealant on a permanent first molar tooth within the reporting year. **Numerator Statement**: Unduplicated number of enrolled children age 6-9 years at "elevated" risk (i.e., "moderate" or "high") who received a sealant on a permanent first molar tooth as a dental service. **Denominator Statement**: Unduplicated number of enrolled children age 6-9 years who are at "elevated" risk (i.e., "moderate" or "high") **Exclusions**: Medicaid/ CHIP programs should apply the following overall exclusions before determining the denominator: - Undocumented aliens who are eligible only for emergency Medicaid services; - Other groups of individuals under age 21 who are eligible only for limited services as part of their Medicaid eligibility (e.g., pregnancy-related services) and would not be eligible for routine dental care Programs should report the exclusion criteria along with the number and percentage of members excluded. There are no other exclusions. **Adjustment/Stratification**: **Level of Analysis:** Health Plan, Integrated Delivery System **Setting of Care:** Ambulatory Care : Clinician Office/Clinic **Type of Measure**: Process **Data Source**: Administrative claims **Measure Steward**: American Dental Association on behalf of the Dental Quality Alliance

2508 Prevention: Dental Sealants for 6-9 Year-Old Children at Elevated Caries Risk

STANDING COMMITTEE MEETING [04/29/2014]

1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-15**; **M-5**; **L-1**; **I-0;** 1b. Performance Gap: **H-12**; **M-8**; **L-1**; **I-0;** 1c. Impact: **H-21**; **M-0**; **L-0**; **I-0**

<u>Rationale</u>:

- Committee agreed that the measure was important to report as part of comprehensive oral healthcare, an area that is often overlooked.
- There are known disparities in dental care and sealant placement, and the Committee believed there is room for improvement in this area. The developer provided data indicating that higher disease rates exist in certain populations, including minority and low income populations, and that dental caries (cavities) are the most common chronic disease for children.
- The Committee acknowledged the connection between the process and the health outcome; timely placement of dental sealants on permanent first molars have demonstrated effectiveness in reducing caries among children, thereby improving oral health, overall health, and overall well-being.
    - A clinical practice guideline from the American Dental Association (ADA) and a Cochrane review was presented as evidence to support the measure. The Committee noted that the ADA guideline did not give an age or a specific molar for sealant placement, but stated "sealants should be placed on pits and fissures of children's and adolescents' permanent teeth when it is determined that the tooth, or the patient, is at risk for developing caries." The developer provided clarification that this age range was chosen based on typical eruption patterns of the first molars.

2508 Prevention: Dental Sealants for 6-9 Year-Old Children at Elevated Caries Risk

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>
(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)
2a. Reliability: **H-3**; **M-12**; **L-1**; **I-5** 2b. Validity: **H-1**; **M-14**; **L-4**; **I-2**
<u>Rationale</u>:

- The Committee noted that it was not clear how the risk status of the patient was captured by the measure, as the measure uses a large number of CDT codes (Current Dental Terminology Dental Code Set) to determine risk. Committee members were also unsure what the CDT codes represented, which made it difficult for them to assess whether they were accurate and usable for quality improvement. The developer noted that, with respect to risk, the measure uses CDT codes and additional service codes. The measure logic, uses an 'or' clause, meaning CDT codes are reported from the providers. If CDT codes are not available, past history can be examined. The developer explained that risk is assessed using data from three years. The three-year time span is based on evidence and all the risk assessment tools also use that same time span with respect to asking the provider to determine whether, in the past three years, the child was treated for caries.
    - The developer provided more clarity on the three CDT codes for low, medium, and high caries risk. The designation of caries risk is made by the clinician—i.e., there is a descriptor for "risk assessment performed and finding of low/moderate/or high risk."
- The developer acknowledged that, currently, no validation data exist on the consistency of coding among providers. The developer suggests this is because the codes are new to the field and so these data are not currently available.
- The measure is specified to capture services provided by a dental hygienist, as long as it was under the direct or remote supervision of a dentist. Services provided by an independent hygienist would not be captured.
- The Committee expressed concern about the requirement for continuous enrollment for 180 days. The Committee inquired about the size of the population that falls into the risk category, but may not be captured because of fluctuating Medicaid or insurance coverage. The developer stated that 180 days was the balance needed to ensure enough children were captured in the measure.
- The developer provided data element validity testing focused on assessing the accuracy of the dental procedure codes reported in the claims data against the clinical record; separate reliability testing is not required when this method of validity testing is used.
- The Committee was unclear about how many first permanent molars are sealed and whether the measure was capturing a child at risk or a tooth being at risk.

3. Feasibility: H-14; M-6; L-1; I-0
(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)
<u>Rationale</u>:

- The required data elements are routinely generated, used during care, and can be easily retrieved because they are routinely generated for billing and reporting purposes.
- Initial feasibility assessments were conducted using the RAND-UCLA modified Delphi process to rate the measure feasibility. No questions were raised regarding feasibility of collecting the data elements, and the measure was rated, on a scale of 1-9, as 8, or "definitely feasible" by the expert panel.

2508 Prevention: Dental Sealants for 6-9 Year-Old Children at Elevated Caries Risk
4. Use and Usability: H-9; M-11; L-0; I-1 *(Meaningful, understandable, and useful to the intended audiences for 4a. Public Reporting/Accountability and 4b. Quality Improvement)* Rationale: • This measure has been adopted by the Texas Health and Human Services Commission as part of the Texas CHIP and Medicaid Dental Services Performance Indicator Dashboard for Quality Measures. • No negative or unintended consequences have been identified.
5. Standing Committee Recommendation for Endorsement: **Y-18**; **N-3**
6. Member and Public Comment [June 10-July 9, 2014] • Commenters were generally supportive of this measure. • One commenter suggested the developer provide a clearer definition of "risk".
7. Consensus Standards Approval Committee (CSAC) Vote: Y-13; N-0; A-0
8. Board of Directors Vote: Y-X; N-X
9. Appeals

2509 Prevention: Dental Sealants for 10-14 Year-Old Children at Elevated Caries Risk

Submission | Specifications

Description: Percentage of enrolled children in the age category of 10-14 years at "elevated" risk (i.e., "moderate" or "high") who received a sealant on a permanent second molar tooth within the reporting year.
Numerator Statement: Unduplicated number of enrolled children age 10-14 years at "elevated" risk (i.e., "moderate" or "high") who received a sealant on a permanent second molar tooth as a dental service.
Denominator Statement: Unduplicated number of enrolled children age 10-14 years who are at "elevated" risk (i.e., "moderate" or "high")
Exclusions: Medicaid/ CHIP programs should apply the following overall exclusions before determining the denominator:
- Undocumented aliens who are eligible only for emergency Medicaid services;
- Other groups of individuals under age 21 who are eligible only for limited services as part of their Medicaid eligibility (e.g., pregnancy-related services) and would not be eligible for routine dental care
Programs should report the exclusion criteria along with the number and percentage of members excluded. There are no other exclusions.
Adjustment/Stratification:
Level of Analysis: Health Plan, Integrated Delivery System
Setting of Care: Ambulatory Care : Clinician Office/Clinic
Type of Measure: Process
Data Source: Administrative claims
Measure Steward: American Dental Association on behalf of the Dental Quality Alliance

STANDING COMMITTEE MEETING [04/29/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-7**; **M-14**; **L-0**; **I-0;** 1b. Performance Gap: **H-13**; **M-8**; **L-0**; **I-0;** 1c. Impact: **H-16**; **M-4**; **L-1**; **I-0**

Rationale:

- The Committee agreed that the measure was important to report as part of comprehensive oral healthcare, an area that is often overlooked.
- There are known disparities in dental care and sealant placement, and the Committee believed there was room for improvement in this area, especially with minorities and low income patients.
- The Committee acknowledged the connection between the process and the health outcome; timely placement of dental sealants on permanent first molars have demonstrated effectiveness in reducing caries among children, thereby improving oral health, overall health, and overall well-being.
- A clinical practice guideline from the ADA and a Cochrane review were presented as evidence to support the measure.
    - The Committee noted that ADA guideline did not give an age or a specific molar for sealant placement, but stated "sealants should be placed on pits and fissures of children's and adolescents' permanent teeth when it is determined that the tooth or the patient is at risk for developing caries." The developer provided clarification that this age range was chosen based on typical eruption patterns.

2509 Prevention: Dental Sealants for 10-14 Year-Old Children at Elevated Caries Risk

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria
(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)
2a. Reliability: **H-5**; **M-15**; **L-0**; **I-1** 2b. Validity: **H-4**; **M-16**; **L-1**; **I-0**
Rationale:

- The Committee raised similar concerns with this measure as with Measure 2508. These include:
  - The developer noted that, with respect to risk, the measure uses CDT codes and additional service codes. The measure logic uses an 'or' clause, meaning CDT codes are reported from the providers. If CDT codes are not available, past history can be examined. Past history of caries is the most important and valid predictor for future caries risk. All the other codes in the measure are markers for caries (e.g., treated caries from the past).
  - Risk is assessed using data from three years. The three-year time span is based on evidence and all the risk assessment tools also use that same time span with respect to asking the provider to determine whether, in the past three years, the child was treated for caries.
  - The developer also noted that the risk codes are relatively new (two years) and are not broadly used among this provider population, which is why the measure allows risk to be captured in multiple ways.
- The developer reiterated that the purpose of these measures is to measure performance for the health plans and Medicaid programs, not to assess individual providers.

3. Feasibility: H-13; M-8; L-0; I-0
(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)
Rationale:

- The required data elements are routinely generated, used during care, and can be easily retrieved because they are routinely generated for billing and reporting purposes.
- Initial feasibility assessments were conducted using RAND-UCLA modified Delphi Process to rate the measure feasibility. No questions were raised regarding feasibility of collecting the data elements, and the measure was rated, on a scale of 1-9, as 8, or "definitely feasible" by the expert panel.

4. Use and Usability: H-10; M-9; L-1; I-1
(Meaningful, understandable, and useful to the intended audiences for 4a. Public Reporting/Accountability and 4b. Quality Improvement)
Rationale:

- This measure has been adopted by the Texas Health and Human Services Commission as part of the Texas CHIP and Medicaid Dental Services Performance Indicator Dashboard for Quality Measures.
- No negative or unintended consequences have been identified.

5. Standing Committee Recommendation for Endorsement: **Y-18**; **N-3**

6. Member and Public Comment [June 10-July 9, 2014]

- Commenters were generally supportive of this measure; one commenter suggested the developer provide a clearer definition of "risk".

7. Consensus Standards Approval Committee (CSAC) Vote: Y-13; N-0; A-0

8. Board of Directors Vote: Y-X; N-X

9. Appeals

2511 Utilization of Services, Dental Services

Submission | Specifications

Description: Percentage of enrolled children under age 21 years who received at least one dental service within the reporting year.
Numerator Statement: Unduplicated number of children under age 21 years who received at least one dental service
Denominator Statement: Unduplicated number of enrolled children under age 21 years
Exclusions: Medicaid/ CHIP programs should apply the following overall exclusions before determining the denominator:
- Undocumented aliens who are eligible only for emergency Medicaid services;
- Other groups of individuals under age 21 who are eligible only for limited services as part of their Medicaid eligibility (e.g., pregnancy-related services) and would not be eligible for routine dental care
Programs should report the exclusion criteria along with the number and percentage of members excluded. There are no other exclusions.
Adjustment/Stratification:
Level of Analysis: Health Plan, Integrated Delivery System
Setting of Care: Ambulatory Care : Clinician Office/Clinic
Type of Measure: Process
Data Source: Administrative claims

Measure Steward: American Dental Association on behalf of the Dental Quality Alliance

STANDING COMMITTEE MEETING [04/29/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-9**; **M-9**; **L-1**; **I-1**; 1b. Performance Gap: **H-18**; **M-2**; **L-0**; **I-0;** 1c. Impact: **H-16**; **M-4**; **L-0**; **I-0**

Rationale:

- The Committee indicated agreement with evidence provided by the developer, noting that the measure is a gateway to assessing the quality of care and understanding whether children receive services and program performance.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-12**; **M-7**; **L-1**; **I-1** 2b. Validity: **H-6**; **M-12**; **L-2**; **I-0**

Rationale:

- The Committee raised concerns about the focus of the measure's exclusions on individual characteristics of the individual receiving the service, rather than inclusion into a particular plan.
    - A question was raised about the splitting off of use of oral health or dental services, which focused on who the provider was rather than whether the child or children in the program received services.
- The Committee also noted that, in the future, the measure should include preventative services data.

2511 Utilization of Services, Dental Services
3. Feasibility: H-16; M-4; L-0; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* Rationale: • The required data elements are routinely generated, used during care, and can be easily retrieved because they are routinely generated for billing and reporting purposes. • Initial feasibility assessments were conducted using RAND-UCLA modified Delphi process to rate the measure feasibility. No questions were raised regarding feasibility of collecting the data elements, and the measure was rated, on a scale of 1-9, as 8, or "definitely feasible" by the expert panel.
4. Use and Usability: H-14; M-6; L-1; I-1 *(Meaningful, understandable, and useful to the intended audiences for 4a. Public Reporting/Accountability and 4b. Quality Improvement)* Rationale: • This measure has been adopted by the Texas Health and Human Services Commission as part of the Texas CHIP and Medicaid Dental Services Performance Indicator Dashboard for Quality Measures. • No negative or unintended consequences have been identified.
5. Standing Committee Recommendation for Endorsement: **Y-19**; **N-1**
6. Member and Public Comment [June 10-July 9, 2014] • Commenters generally were supportive of this measure. In response to Committee Members who suggested expanding the age range to adults, one commenter suggested that the measure remain specified for children because dental health is an important indicator of dietary and nutritional health for children, both of which have far greater impact on overall medical health.
7. Consensus Standards Approval Committee (CSAC) Vote: Y-13; N-0; A-0
8. Board of Directors Vote: Y-X; N-X
9. Appeals

2517 Oral Evaluation, Dental Services
Submission | Specifications

2517 Oral Evaluation, Dental Services

Description: Percentage of enrolled children under age 21 years who received a comprehensive or periodic oral evaluation within the reporting year.

Numerator Statement: Unduplicated number of enrolled children under age 21 years who received a comprehensive or periodic oral evaluation as a dental service

Denominator Statement: Unduplicated number of enrolled children under age 21 years

Exclusions: Medicaid/ CHIP programs should apply the following overall exclusions before determining the denominator:

- Undocumented aliens who are eligible only for emergency Medicaid services;
- Other groups of individuals under age 21 who are eligible only for limited services as part of their Medicaid eligibility (e.g., pregnancy-related services) and would not be eligible for routine dental care

Programs should report the exclusion criteria along with the number and percentage of members excluded. There are no other exclusions.

Adjustment/Stratification:

Level of Analysis: Health Plan, Integrated Delivery System

Setting of Care: Ambulatory Care : Clinician Office/Clinic

Type of Measure: Process

Data Source: Administrative claims

Measure Steward: American Dental Association on behalf of the Dental Quality Alliance

STANDING COMMITTEE MEETING [04/29/2014]

1. Importance to Measure and Report: <u>The measure failed to reach consensus on the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-0**; **M-10**; **L-6**; **I-4; IE-1**; 1b. Performance Gap: **H-8**; **M-10**; **L-1**; **I-2;** 1c. Impact: **H-5**; **M-11**; **L-4**; **I-1**

<u>Rationale</u>:

- The Committee noted that the measure's evidence is based more on expert opinion rather than empirical research, but due to the limited data on annual dental visits, the evidence presented was sufficient.
    - The measure developer acknowledged the limitations of the data, which are based on currently available oral evaluations data and what the dental community deems acceptable to establish a Dental Home.
- The Committee noted that the measure assesses both a comprehensive and a periodic oral examination and, as such, should be reflected in the measure title.
- The Committee debated the value of the measure as a stand-alone measure, since oral evaluation is also addressed in Measure 2511.

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-6**; **M-12**; **L-3**; **I-0** 2b. Validity: **H-1**; **M-12**; **L-8**; **I-0**

<u>Rationale</u>:

- The Committee noted that this measure should ensure that all of the components of a standard oral evaluation are assessed as it relates to the children who receive services.
- Regarding validity, the Committee raised concerns about whether this measure should be viewed as a component of Measure 2511 and the value of this measure as a standalone measure.

2517 Oral Evaluation, Dental Services
3. Feasibility: H-17; M-4; L-0; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* Rationale: • The required data elements are routinely generated, used during care, and can be easily retrieved because they are routinely generated for billing and reporting purposes.
4. Use and Usability: H-7; M-8; L-5; I-1 *(Meaningful, understandable, and useful to the intended audiences for 4a. Public Reporting/Accountability and 4b. Quality Improvement)* Rationale: • The Committee noted that the measure is in use in the Texas Health and Human Services CHIP and the Medicaid Dental Services Performance Indicator Dashboard for Quality Measures. The measure is reported publicly. Additionally, this measure can be used at a plan and programmatic level to show improvement over time.
5. Standing Committee Recommendation for Endorsement: **Y-11; N-6** • The Committee discussed this measure at length during the Post-Comment Call on August 6 and raised earlier concerns about the evidence being based mostly on expert opinion and not empirical studies. After significant discussion the Committee agreed that this was an important measure that assessed best practice in dental care. • The Committee acknowledged that while there was disagreement on the quality of the evidence, the measure was important for community and public health.
6. Member and Public Comment [June 10-July 9, 2014] • NQF received seven post-evaluation comments in strong support of this measure for NQF-endorsement consideration. The commenters indicated the fundamental importance of an oral evaluation for thorough, quality care, citing it as the building block to a plan of care for children's oral health. • Other comments highlighted the necessity for this measure to help promote early detection and prevention and the enhancement of the doctor-patient relationship, thereby resulting in better outcomes for not only children, but populations of all ages. • Two post-evaluation comments cautioned against combining this measure with Measure 2511: Utilization of Services, Dental Services. • The majority of commenters acknowledged that Measure 2511 is a better assessment of overall access to dental care, but cautioned that many individuals access care only episodically, when they are in pain or have some other dental problem. They noted that measure 2517 provides a more accurate assessment of access to care because it reflects access to more comprehensive care.
7. Consensus Standards Approval Committee (CSAC) Vote: Y-13; N-0; A-0
8. Board of Directors Vote: Y-X; N-X
9. Appeals

2528 Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services
Submission | Specifications

2528 Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services

Description: Percentage of enrolled children aged 1-21 years who are at "elevated" risk (i.e., "moderate" or "high") who received at least 2 topical fluoride applications within the reporting year.

Numerator Statement: Unduplicated number of enrolled children aged 1-21 years who are at "elevated" risk (i.e., "moderate" or "high") who received at least 2 topical fluoride applications as a dental service.

Denominator Statement: Unduplicated number of enrolled children aged 1-21 years who are at "elevated" risk (i.e., "moderate" or "high")

Exclusions: Medicaid/ CHIP programs should apply the following overall exclusions before determining the denominator:

- Undocumented aliens who are eligible only for emergency Medicaid services;

- Other groups of individuals under age 21 who are eligible only for limited services as part of their Medicaid eligibility (e.g., pregnancy-related services) and would not be eligible for routine dental care

Programs should report the exclusion criteria along with the number and percentage of members excluded. There are no other exclusions.

Adjustment/Stratification:

Level of Analysis: Health Plan, Integrated Delivery System

Setting of Care: Ambulatory Care : Clinician Office/Clinic

Type of Measure: Process

Data Source: Administrative claims

Measure Steward: American Dental Association on behalf of the Dental Quality Alliance

STANDING COMMITTEE MEETING [04/29/2014]

1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-2**; **M-15**; **L-1**; **I-1**; **IE-1** 1b. Performance Gap: **H-6**; **M-14**; **L-0**; **I-0;** 1c. Impact: **H-13**; **M-7**; **L-0**; **I-0**

<u>Rationale</u>:

- The Committee agreed that this measure was well supported by Cochrane Reviews and evidence-based guidelines, noting that evidence shows that at least two topical fluoride applications are needed.
- The Committee noted that while the evidence to support this measure has been known for over a decade, it still sees a performance gap.

2528 Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>
(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)
2a. Reliability: **H-15**; **M-13**; **L-3**; **I-1** 2b. Validity: **H-1**; **M-11**; **L-7**; **I-1**
<u>Rationale</u>:

- The measure is focused on a specific age group, risk status, and tooth. The Committee noted that the guidelines provided by the developer recommend that sealants should be placed on pits and fissures of children's and adolescents' permanent teeth when it's determined that the tooth or the patient is at risk for developing caries. The Committee also noted that risk correlates with socio-demographic factors, the presence of caries, prior cavities or potential lesions, and family history; these risk factors are taken into account to determine risk by the healthcare provider and dentist. The Committee noted that moderate risk and high risk should be treated the same because the same protocol is applicable to both risk levels.
- The Committee questioned accuracy of CDT codes in discerning elevated risk vs. moderate risk. The developer noted that, in terms of the risk, the measure uses CDT codes and additional service codes. The measure logic, uses an 'or' clause, meaning if the CDT codes are reported from the providers, those can be used. If the CDT codes are not present, then past history can be used; past history of caries is the best/most important and, most valid predictor for future caries risk. All the other codes in the measure are markers for caries – treated caries from the past.
- The Committee questioned the rationale for the age group (ages 1 to 21) and argued that this might be influenced by insurance coverage. The developer explained that the age range is used by CMS and the Medicaid Program to define a "child". The Committee reiterated that it was more important to identify high-risk, rather than creating separate measures for more specific age groups.

3. Feasibility: H-14; M-6; L-1; I-0
(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)
<u>Rationale</u>:

- The required data elements are routinely generated used during care, and can be easily retrieved because they are routinely generated for billing and reporting purposes.
- Initial feasibility assessments were conducted using RAND-UCLA modified Delphi process to rate the measure feasibility. No questions were raised regarding feasibility of collecting the data elements, and the measure was rated, on a scale of 1-9, as 8, or "definitely feasible" by the expert panel.

4. Use and Usability: H-9; M-11; L-0; I-1
(Meaningful, understandable, and useful to the intended audiences for 4a. Public Reporting/Accountability and 4b. Quality Improvement)
<u>Rationale</u>:

- This measure has been adopted by the Texas Health and Human Services Commission as part of the Texas CHIP and Medicaid Dental Services Performance Indicator Dashboard for Quality Measures.
- No negative or unintended consequences have been identified.

5. Standing Committee Recommendation for Endorsement: **Y-18**; **N-3**

6. Member and Public Comment [June 10-July 9, 2014]

- Commenters were generally supportive of this measure; one commenter did not agree that only children with elevated risk should be included in the measure.

2528 Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services
7. Consensus Standards Approval Committee (CSAC) Vote: Y-13; N-0; A-0
8. Board of Directors Vote: Y-X; N-X
9. Appeals

Measures Not Recommended

2518 Care Continuity, Dental Services

Submission | Specifications

Description: Percentage of enrolled children aged 2-21 years enrolled in two consecutive years who received a comprehensive or periodic oral evaluation in both years.

Numerator Statement: Unduplicated number of children who received a comprehensive or periodic oral evaluation as a dental service in both years

Denominator Statement: Unduplicated number of children aged 2-21 years enrolled in two consecutive years

Exclusions: Medicaid/ CHIP programs should apply the following overall exclusions before determining the denominator:

- Undocumented aliens who are eligible only for emergency Medicaid services;
- Other groups of individuals under age 21 who are eligible only for limited services as part of their Medicaid eligibility (e.g., pregnancy-related services) and would not be eligible for routine dental care

Programs should report the exclusion criteria along with the number and percentage of members excluded. There are no other exclusions.

Adjustment/Stratification:

Level of Analysis: Health Plan, Integrated Delivery System

Setting of Care: Ambulatory Care : Clinician Office/Clinic

Type of Measure: Process

Data Source: Administrative claims

Measure Steward: American Dental Association on behalf of the Dental Quality Alliance

STANDING COMMITTEE MEETING [04/29/2014]

1. Importance to Measure and Report: The measure failed to reach consensus on the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-0**; **M-11**; **L-5**; **I-4; IE-2**; 1b. Performance Gap: **H-4**; **M-13**; **L-3**; **I-2;** 1c. Impact: **H-7**; **M-10**; **L-3**; **I-2**

Rationale:

- Committee members inquired about the evidence supporting two oral evaluations two years in a row representing continuity of care. Two clinical practice guidelines, one from the United Kingdom's National Institute for Health and Care Excellence and one from the American Academy of Pediatric Dentistry, were presented by the developers as evidence to support the measure; these guidelines note that increased visitation increase the chance for better outcomes.
- The Committee rated this measure lower on the criterion of supporting evidence and questioned whether the evidence was strong enough to support that the process being measured contributes to a health outcome.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-4**; **M-16**; **L-2**; **I-0** 2b. Validity: **H-0**; **M-16**; **L-5**; **I-1**

Rationale:

- The Committee questioned whether the measure addressed? the concept of continuity of care because it did not require the same provider for both visits. The developer explained that there is no evidence that demonstrates that visiting the same provider improves health outcomes in dentistry.
- The developer explained that this measure only looks at the continuity aspect, as opposed to the usual source of services.

2518 Care Continuity, Dental Services
3. Feasibility: H-11; M-10; L-1; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* Rationale: • The Committee had no questions or comments on the feasibility of this measure. • The measure relies on standard data elements in administrative claims data (e.g., patient ID, patient birthdate, enrollment information, CDT codes, date of service, and provider taxonomy), which is readily available and can be easily retrieved because they are routinely used for billing and reporting purposes.
4. Use and Usability: H-4; M-13; L-3; I-2 *(Meaningful, understandable, and useful to the intended audiences for 4a. Public Reporting/Accountability and 4b. Quality Improvement)* Rationale: • The Committee noted that this measure is currently used in Texas for their Medicaid and CHIP programs and is also being suggested for use in Connecticut.
5. Standing Committee Recommendation for Endorsement: **Y-10; N-7** • The Committee discussed this measure during the Post-Comment Call on August 6 and the earlier concerns about evidence based mostly on expert opinion and not empirical studies were raised, and only two year look-back period (with potentially different providers) were raised. The Committee agreed that care continuity would be hard to track if the provider is not consistent. • The Committee rendered a vote on this measure. The results were as follows: On overall suitability for endorsement, Yes-10, No-7. • The measure will go out for Member voting as Consensus not Reached.
6. Member and Public Comment [June 10-July 9, 2014] • Although in support of this measure, some commenters requested that developer provide more evidence that the measure assessed continuous care. • One commenter noted that patients should not go two consecutive years without a follow-up evaluation because undetected oral health conditions could lead to negative health outcomes. • Another commenter suggested that the measure be renamed "Two-Year Retention In Care," and went on to explain that retention of patients in care over the span of a two-year period facilitates preventative care, which should result in improved health outcomes and lower treatment costs.
7. Consensus Standards Approval Committee (CSAC) Vote: Y-0; N-13; A-0 • The CSAC considered the explanation provided by the Committee around the evidence submitted for this measure being based on expert opinion rather than empirical data. • The CSAC also took into account a summary of the comments received and the Membership voting results, but ultimately determined that this measure not be recommended for endorsement.
8. Board of Directors Vote: Y-X; N-X
9. Appeals

Measures Withdrawn from consideration

Two measures previously endorsed by NQF have not been re-submitted or withdrawn from maintenance of endorsement. The following measures are being retired from endorsement:

Measure	Reason for retirement
0573: HIV Screening-Members at High Risk of HIV	The measure's steward indicated that it does not have the resources to continue with the endorsement process.
1381: Asthma Emergency Department Visits	The measure's steward indicated that it no longer has the resources or expertise to support this measure.

Appendix B: NQF Health and Well Being Portfolio

Health-Related Behaviors and Practices to Promote Health Living

Measure Number	Measure Title
0024	Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents
0029	Counseling on physical activity in older adults - a. Discussing Physical Activity, b. Advising Physical Activity
1348	Children Age 6-17 Years who Engage in Weekly Physical Activity
1349	Child Overweight or Obesity Status Based on Parental Report of Body-Mass-Index (BMI)
1397	Sudden Infant Death Syndrome Counseling

Community-Level Indicators of Health and Disease

Measure Number	Measure Title
0272	Diabetes, short-term complications (PQI 1)
0274	Diabetes, long-term complications (PQI 3)
0277	Congestive Heart Failure Admission Rate (PQI 8)
0280	Dehydration (PQI 10)
0281	Urinary infections (PQI 12)
0285	Lower extremity amputations among patients with diabetes (PQI 16)
0638	Uncontrolled Diabetes Admission Rate (PQI 14)
0724	Measure of Medical Home for Children and Adolescents
0727	Gastroenteritis Admission Rate (pediatric)
0728	Asthma Admission Rate (pediatric)
1999	Late HIV diagnosis
2020	Adult Current Smoking Prevalence

Modifiable Social, Economic, and Environmental Determinants of Health

Measure Number	Measure Title
0717	Number of School Days Children Miss Due to Illness
0718	Children Who Had Problems Obtaining Referrals When Needed
0719	Children Who Receive Effective Care Coordination of Healthcare Services When Needed
0720	Children Who Live in Communities Perceived as Safe
0721	Children Who Attend Schools Perceived as Safe
0723	Children Who Have Inadequate Insurance Coverage For Optimal Health
1330	Children With a Usual Source for Care When Sick
1332	Children Who Receive Preventive Medical Visits
1333	Children Who Receive Family-Centered Care

Measure Number	Measure Title
1337	Children With Inconsistent Health Insurance Coverage in the Past 12 Months
1340	Children with Special Health Care Needs (CSHCN) who Receive Services Needed for Transition to Adult Health Care
1346	Children Who Are Exposed To Secondhand Smoke Inside Home
1392	Well-Child Visits in the First 15 Months of Life
1396	Healthy Physical Development by 6 years of age
1512	Healthy Physical Development by 13 years of age
1514	Healthy Physical Development by 18 years of age
1516	Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life

Primary Prevention and/or Screening

Measure Number	Measure Title
0032	Cervical Cancer Screening
0034	Colorectal Cancer Screening
0038	Childhood Immunization Status
0039	Flu Shots for Adults Ages 50 and Over
0041	Influenza Immunization
0043	Pneumonia vaccination status for older adults
0226	Influenza Immunization in the ESRD Population (Facility Level)
0227	Influenza Immunization
0421	Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up
0431	Influenza Vaccination Coverage Among Healthcare Personnel
0522	Influenza Immunization Received for Current Flu Season
0525	Pneumococcal Polysaccharide Vaccine (PPV) Ever Received
0617	High Risk for Pneumococcal Disease - Pneumococcal Vaccination
0629	Male Smokers or Family History of Abdominal Aortic Aneurysm (AAA) - Consider Screening for AAA
0680	Percent of Nursing Home Residents Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short-Stay)
0681	Percent of Residents Assessed and Appropriately Given the Seasonal Influenza Vaccine (Long-Stay)
0682	Percent of Residents Assessed and Appropriately Given the Pneumococcal Vaccine (Short-Stay)
0683	Percent of Residents Assessed and Appropriately Given the Pneumococcal Vaccine (Long-Stay)
1385	Developmental screening using a parent completed screening tool (Parent report, Children 0-5)
1399	Developmental Screening by 2 Years of Age
1407	Immunizations by 13 years of age
1448	Developmental Screening in the First Three Years of Life

Measure Number	Measure Title
1653	Pneumococcal Immunization (PPV 23)
1659	Influenza Immunization
1959	Human Papillomavirus Vaccine for Female Adolescents

Oral Health

Measure Number	Measure Title
1334	Children Who Received Preventive Dental Care
1335	Children Who Have Dental Decay or Cavities
1388	Annual Dental Visit
1419	Primary Caries Prevention Intervention as Part of Well/Ill Child Care as Offered by Primary Care Medical Providers

Appendix C: Health and Well Being Portfolio—Use In Federal Programs

NQF #	Title	Federal Programs: Finalized as of April 24, 2014
0272	Diabetes Short-Term Complications Admission Rate (PQI 1)	Initial Core Set of Health Care Quality Measures for Medicaid-Eligible Adults
0280	Dehydration Admission Rate (PQI 10)	Medicare FFS Physician Feedback Program/Value-Based Payment Modifier
0281	Urinary Tract Infection Admission Rate (PQI 12)	Medicare FFS Physician Feedback Program/Value-Based Payment Modifier

Appendix D: Project Standing Committee and NQF Staff

STANDING COMMITTEE

Thomas McInerny, MD (Co-Chair)
American Academy of Pediatrics
Honeoye Falls, New York

Amir Qaseem, MD, PhD, MHA (Co-Chair)
American College of Physicians
Philadelphia, Pennsylvania

Chisara Asomugha, MD, MSPH, FAAP
Center for Medicare and Medicaid Services
Baltimore, MD

John Auerbach, MBA
Northeastern University
Boston, Massachusetts

Michael Baer, MD
AmeriHealth Caritas Family of Companies
Philadelphia, Pennsylvania

Ron Bialek, MPP, CQIA
Public Health Foundation, Washington
Washington, District of Columbia

Juan Emilio Carrillo, MD, MPH
Weill Cornell Medical College, New York Presbyterian
New York, New York

Jane Chiang, MD
American Diabetes Association
Alexandria, Virginia

Eric France, MD, MSPH
Kaiser Permanente
Denver, Colorado

Reneé Frazier, MHSA, FACHE
Healthy Memphis Common Table
Memphis, Tennessee

Catherine Hill, DNP, APRN
Texas Health Resources
Euless, Texas

Ronald Inge, DDS
Delta Dental of Washington
Seattle, Washington

David Krol, MD, MPH, FAAP
Robert Wood Johnson Foundation
Princeton, New Jersey

Margaret Luck, SD
Mary's Center for Maternal & Child Care Inc.
Washington, District of Columbia

Patricia McKane, DVM, MPH
Michigan Department of Community Health
Lansing, Michigan

Amy Minnich, RN, MHSA
Geisinger Health System
Danville, Pennsylvania

Jacqueline Moline, MD, MSc
North Shore LIJ Health System
Great Neck, New York

Caroline Rosenthal Gelman, PhD, MSW, LCSW
Hunter College, City University of New York
New York, New York

Marcel Salive, MD, MPH
National Institute on Aging
Bethesda, Maryland

Sarah Sampsel, MPH
IMPAQ International
Rio Rancho, New Mexico
**Please note, as of June 2014, Ms. Sampsel will no longer be serving on the Health and Well-Being Standing Committee.

Katie Sellers, DrPH, CPH
Association of State and Territorial Health Officials
Arlington, Virginia

Jason Spangler, MD, MPH, FACPM
Amgen, Inc.
Washington, District of Columbia

Michael Stoto, PhD
Georgetown University
Washington, District of Columbia

Robert Otto Valdez, PhD
RWJF Center for Health Policy
Albuquerque, New Mexico

Arjun Venkatesh, MD, MBA
Yale University School of Medicine
New Haven, Connecticut

NQF STAFF

Helen Burstin, MD, MPH
Chief Scientific Officer, Senior Vice President
Quality Measurement

Robyn Y. Nishimi, PhD
Project Consultant

Elisa Munthali, MPH
Senior Managing Director
Quality Measurement

Adeela Khan, MPH
Project Manager
Quality Measurement

Ashley Morsell, MPH
Project Manager
Quality Measurement

Kaitlynn Robinson-Ector, MPH
Project Analyst
Quality Measurement

Appendix E: Pre Meeting Comments

Comments received from March 11-31, 2014

Topic	Commenter	Comment
0272: Diabetes Short-Term Complications Admission Rate (PQI 01)	Submitted by Ms. Stephanie Singleton	How do you define what a "good" or "bad" rate is? I see some age and gender adjustments listed, but how do you adjust for co-morbidities and disease type? That would be quite different for a UTI vs. Diabetes, for instance. There are also concerns with volume for some of these conditions and our whether there would be meaningful numbers for our practices versus a roll-up ambulatory sensitive conditions rate.
0272: Diabetes Short-Term Complications Admission Rate (PQI 01)	Submitted by Vipra Ghimire	This comment is from the Johns Hopkins Medicine Armstrong Institute for Patient Safety and Quality: 1) The numerator is appropriate and easy to capture by discharge ICD codes 2) Denominator definition: Ideally the denominator would be the number of individuals with diabetes who are at risk for DKA or hyperosmolar state. The entire population in the county where the patient resides is not at risk for the outcome since the majority do not have diabetes. I assume that including the individuals in the numerator in the denominator adjust to the population in their county of residence is a way to estimate this figure. 3) This is a relevant and usual measure to assess quality of outpatient diabetes care for healthcare organizations.

Topic	Commenter	Comment
0274: Diabetes Long-Term Complications Admission Rate (PQI 03)	Submitted by Vipra Ghimire	This comment is from the Johns Hopkins Medicine Armstrong Institute for Patient Safety and Quality: 1) Numerator definition: In addition to capturing individuals with complications and uncontrolled diabetes, it might also be important to include those complications who have controlled diabetes. Some individuals who are controlled on the current admission for a diabetes-related complication may have been previously had hyperglycemia that contributed to the current state. In addition, as patients are approaching the need for dialysis, it is not uncommon for the glucose control to improve because of impaired renal clearance of insulin and impaired renal gluconeogenesis. 2) Numerator is easy to capture by discharge ICD codes. 3) Denominator definition: As above, I assume that including the individuals in the numerator in the denominator adjust to the population in their county of residence is a way to estimate the individuals with diabetes at risk for these outcomes. Ideally, as they point out in the "Notes" section of the denominator description, it would be best to use a diabetes-specific population in the denominator. 4) This is a relevant and usual measure to assess quality of outpatient diabetes care for healthcare organizations.
0274: Diabetes Long-Term Complications Admission Rate (PQI 03)	Submitted by Ms. Stephanie Singleton	How do you define what a "good" or "bad" rate is? I see some age and gender adjustments listed, but how do you adjust for co-morbidities and disease type? That would be quite different for a UTI vs. Diabetes, for instance. There are also concerns with volume for some of these conditions and our whether there would be meaningful numbers for our practices versus a roll-up ambulatory sensitive conditions rate.
0280: Dehydration Admission Rate (PQI 10)	Submitted by Ms. Stephanie Singleton	How do you define what a "good" or "bad" rate is? I see some age and gender adjustments listed, but how do you adjust for co-morbidities and disease type? That would be quite different for a UTI vs. Diabetes, for instance. There are also concerns with volume for some of these conditions and our whether there would be meaningful numbers for our practices versus a roll-up ambulatory sensitive conditions rate.

Topic	Commenter	Comment
0281: Urinary Tract Infection Admission Rate (PQI 12)	Submitted by Ms. Stephanie Singleton	How do you define what a "good" or "bad" rate is? I see some age and gender adjustments listed, but how do you adjust for co-morbidities and disease type? That would be quite different for a UTI vs. Diabetes, for instance. There are also concerns with volume for some of these conditions and our whether there would be meaningful numbers for our practices versus a roll-up ambulatory sensitive conditions rate.
0285: Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16)	Submitted by Vipra Ghimire	This comment is from the Armstrong Institute for Patient Safety and Quality: 1) We question whether this is the correct denominator (see section on usability of measure and possible unintended consequences) 2) both the numerator and denominator are easy to collect 3) A more meaningful measure may be the rate of diabetes-related lower extremity amputations per patients with diabetes, not per all discharges. This is a more clinically important measure for two reasons: 1) the rate of lower extremity amputations per 100,000 people may be a biased if there are simply more people with diabetes in a given area and 2) the proportion of people with diabetes who ultimately require amputations is an indicator of the level of care that they have received historically since poor glycemic control leads to the microvascular and macrovascular complications ultimately leading to lower extremity amputations. 4) This rate may not truly capture the quality of care provided to patients with diabetes who are at risk of developing ulceration. For example, assume that 7percent of the population in area #1 has diabetes and 10percent of the population in area #2 has diabetes. The population size of both areas is 100,000 patients. If 1,750 people from area #1 and 2,000 people from area #2 are admitted with lower extremity amputation, the rate of amputations will appear to be lower in area #1 than area #2. However, the proportion of patients with diabetes who ultimately develop foot ulcer is greater in area #1 (25percent) than area #2 (20percent). Therefore, there may be a misinterpration of quality of care received given current denominator.
0638: Uncontrolled Diabetes Admission Rate (PQI 14)	Submitted by Ms. Stephanie Singleton	How do you define what a "good" or "bad" rate is? I see some age and gender adjustments listed, but how do you adjust for co-morbidities and disease type? That would be quite different for a UTI vs. Diabetes, for instance. There are also concerns with volume for some of these conditions and our whether there would be meaningful numbers for our practices versus a roll-up ambulatory sensitive conditions rate.

Topic	Commenter	Comment
0638: Uncontrolled Diabetes Admission Rate (PQI 14)	Submitted by Vipra Ghimire	This comment is from the Johns Hopkins Medicine Armstrong Institute for Patient Safety and Quality: 1) Again, we question whether this is the correct denominator for the same reasons as in measure #0285. 2) Both the numerator and denominator are easy to collect 3) The rate of admissions for uncontrolled diabetes may be directly proportional to the prevalence of diabetes in the general population. Therefore, areas with lower diabetes prevalence may have lower rates of admissions for uncontrolled hyperglycemia, but not necessarily better quality of care, since we do not know what the rate of admissions for uncontrolled hyperglycemia is among those at risk for this (i.e. all patients with diabetes) 4) Possible unintended consequences: Same rationale as above (#0285).
0727: Gastroenteritis Admission Rate (PDI 16)	Submitted by Ms. Stephanie Singleton	How do you define what a "good" or "bad" rate is? I see some age and gender adjustments listed, but how do you adjust for co-morbidities and disease type? That would be quite different for a UTI vs. Diabetes, for instance. There are also concerns with volume for some of these conditions and our whether there would be meaningful numbers for our practices versus a roll-up ambulatory sensitive conditions rate.
0727: Gastroenteritis Admission Rate (PDI 16)	Submitted by Vipra Ghimire	From JHM Armstrong Institute for Patient Safety and Quality: Numerator and denominator have very clear operational definitions, easily calculated using AHRQ SAS or Windows based software. Inclusion and exclusion criteria are appropriate. Very feasible. All data elements are found in administrative / discharge data sets and are standardized across the country. Measure is important for evaluating service needs and use within and across populations and geographic areas. Measures used by state and federal agencies to evaluate community needs and disparities. Measures also assist providers in evaluating needs and effectiveness of strategies related to the Triple Aim goals - improving quality of care for individuals, better health for populations, and reducing per-capital costs. A few cautions to interpretation and generalization of findings based on the typical inpatient administrative discharge datasets: Concur with the observation that regions with hospitals whose practice patterns include observation stays and ED holds will have lower rates on these measures as most hospital administrative data sets are limited to inpatients and do not include these visits. But, per-capital costs would be reduced if patients were managed in the ED or on an observation / short

Topic	Commenter	Comment
		stay unit rather than admitted as an inpatient; but the ultimate goal of these measures is to identify opportunities to improve community primary care infrastructures rather than rely on any resources associated with acute care. Caution should also be used when evaluating. Utilization in regions where services cross state borders. Typically the administrative data sets are within individual states, e.g., residents in Georgia who regularly receive care in Jacksonville, FL will not be reflected in evaluations of PDIs (or PQIs) of Georgia counties. They will be in the population denominator but have no opportunity to be in the numerator unless the analyst has access to hospitalizations from both Georgia and Florida. Underlying prevalence of a disease condition in a community population is not included. This is a greater consideration when looking at other conditions such as hospitalizations for diabetes or heart failure where there may be considerable differences across communities. It is not as significant an issue with the asthma and gastroenteritis admissions. Due to the stratification of data and calculation processes, data sets of poorer quality, e.g., missing patient-level data elements such as gender, age, discharge quarter or year, principal diagnosis or county of residence are excluded. If state agencies and/or vendors do not enforce data quality standards, differences in communities may be reflective of poor hospital coding and associated records being excluded from analyses. It's helpful to evaluate reports of data quality (e.g., percent of records missing gender, age, zipcode/county and other key elements) by hospital.
0728: Asthma Admission Rate (PDI 14)	Submitted by Vipra Ghimire	From JHM Armstrong Institute for Patient Safety and Quality: Numerator and denominator have very clear operational definitions, easily calculated using AHRQ SAS or Windows based software. Inclusion and exclusion criteria are appropriate. Very feasible. All data elements are found in administrative / discharge data sets and are standardized across the country. Measure is important for evaluating service needs and use within and across populations and geographic areas. Measures used by state and federal agencies to evaluate community needs and disparities. Measures also assist providers in evaluating needs and effectiveness of strategies related to the Triple Aim goals - improving quality of care for individuals, better health for populations, and reducing per-capital costs. A few cautions to interpretation and generalization of findings

Topic	Commenter	Comment
		based on the typical inpatient administrative discharge datasets: Concur with the observation that regions with hospitals whose practice patterns include observation stays and ED holds will have lower rates on these measures as most hospital administrative data sets are limited to inpatients and do not include these visits. But, per-capital costs would be reduced if patients were managed in the ED or on an observation / short stay unit rather than admitted as an inpatient; but the ultimate goal of these measures is to identify opportunities to improve community primary care infrastructures rather than rely on any resources associated with acute care. Caution should also be used when evaluating. Utilization in regions where services cross state borders. Typically the administrative data sets are within individual states, e.g., residents in Georgia who regularly receive care in Jacksonville, FL will not be reflected in evaluations of PDIs (or PQIs) of Georgia counties. They will be in the population denominator but have no opportunity to be in the numerator unless the analyst has access to hospitalizations from both Georgia and Florida. Underlying prevalence of a disease condition in a community population is not included. This is a greater consideration when looking at other conditions such as hospitalizations for diabetes or heart failure where there may be considerable differences across communities. It is not as significant an issue with the asthma and gastroenteritis admissions. Due to the stratification of data and calculation processes, data sets of poorer quality, e.g., missing patient-level data elements such as gender, age, discharge quarter or year, principal diagnosis or county of residence are excluded. If state agencies and/or vendors do not enforce data quality standards, differences in communities may be reflective of poor hospital coding and associated records being excluded from analyses. It's helpful to evaluate reports of data quality (e.g., percent of records missing gender, age, zipcode/county and other key elements) by hospital.

Topic	Commenter	Comment
0728: Asthma Admission Rate (PDI 14)	Submitted by Ms. Stephanie Singleton	How do you define what a “good” or “bad” rate is? I see some age and gender adjustments listed, but how do you adjust for co-morbidities and disease type? That would be quite different for a UTI vs. Diabetes, for instance. There are also concerns with volume for some of these conditions and our whether there would be meaningful numbers for our practices versus a roll-up ambulatory sensitive conditions rate.
2372: Breast Cancer Screening	Submitted by Ms. Stephanie Singleton	We already employ the NCQA Breast Cancer Screening measure
2508: Prevention: Dental Sealants for 6-9 Year-Old Children at Elevated Caries Risk	Submitted by Ms. Stephanie Singleton	Concern here is going to be the capability of having this data available given dental carve outs. If a member has a dental carve out, then we are faced with issues of combining EMRs or at the very least integration of third party data. If the consideration is purely for dental quality, they seem reasonable.
2509: Prevention: Dental Sealants for 10-14 Year-Old Children at Elevated Caries Risk	Submitted by Ms. Stephanie Singleton	Concern here is going to be the capability of having this data available given dental carve outs. If a member has a dental carve out, then we are faced with issues of combining EMRs or at the very least integration of third party data. If the consideration is purely for dental quality, they seem reasonable.
2511: Utilization of Services, Dental Services	Submitted by Ms. Diane Stollenwerk, MPP	The name of the measure is not clear. It should specify that it is utilization of dental services for children.
2517: Oral Evaluation, Dental Services	Submitted by Ms. Diane Stollenwerk, MPP	The name of the measure is not clear. It should specify that it is oral evaluation / dental services for children.
2518: Care Continuity, Dental Services	Submitted by Ms. Diane Stollenwerk, MPP	The name of the measure is not clear. It should specify that it is care continuity of dental services for children.

Appendix F: Measure Specifications

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	0272 Diabetes Short-Term Complications Admission Rate (PQI 01)
Status	Submitted
Steward	Agency for Healthcare Research and Quality
Description	Admissions for a principal diagnosis of diabetes with short-term complications (ketoacidosis, hyperosmolarity, or coma) per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions.
Type	Outcome
Data Source	Administrative claims All analyses were completed using data from the Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID), 2007-2011.HCUP is a family of health care databases and related software tools and products developed through a Federal-State-Industry partnership and sponsored by the Agency for Healthcare Research and Quality (AHRQ). HCUP databases bring together the data collection efforts of State data organizations, hospital associations, private data organizations, and the Federal government to create a national information resource of encounter-level health care data. The HCUP SID contain the universe of the inpatient discharge abstracts in participating States, translated into a uniform format to facilitate multi-State comparisons and analyses. Together, the SID encompass about 97 percent of all U.S. community hospital discharges (in 2011, 46 states participated for a total of more than 38.5 million hospital discharges). As defined by the American Hospital Association, community hospitals are all non-Federal, short-term, general or other specialty hospitals, excluding hospital units of institutions. Veterans hospitals and other Federal facilities are excluded. Taken from the Uniform Bill-04 (UB-04), the SID data elements include ICD-9-CM coded principal and secondary diagnoses and procedures, additional detailed clinical and service information based on revenue codes, admission and discharge status, patient demographics, expected payment source (Medicare, Medicaid, private insurance as well as the uninsured), total charges and length of stay (www.hcup-us.ahrq.gov). HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). 2007-2011. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/sidoverview.jsp. (AHRQ QI Software Version 4.5) Available at measure-specific web page URL identified in S.1 Attachment Diabetes_Short-Term_Complications_Admission_Rate__PQI_1-635289998812098317.xlsx
Level	Population : County or City, Population : National, Population : State
Setting	Hospital/Acute Care Facility
Time Window	The time period is one year. Note that the reference population rates and signal variance parameters assume a one-year time period.
Numerator Statement	Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for diabetes short-term complications (ketoacidosis, hyperosmolarity, or coma). [NOTE: By definition, discharges with a principal diagnosis of diabetes with short-term complications cannot have an assignment of MDC 14 (pregnancy, childbirth and the puerperium). Thus, obstetric discharges are not considered in the PQI rate.] See Prevention Quality Indicators technical specifications for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information.

	0272 Diabetes Short-Term Complications Admission Rate (PQI 01)
Numerator Details	ICD-9-CM Diabetes short-term complications diagnosis codes: 25010 DMII KETO NT ST UNCNTRLD 25011 DMI KETO NT ST UNCNTRLD 25012 DMII KETOACD UNCONTROLD 25013 DMI KETOACD UNCONTROLD 25020 DMII HPRSM NT ST UNCNTRL 25021 DMI HPRSM NT ST UNCNTRLD 25022 DMII HPROSMLR UNCONTROLD 25023 DMI HPROSMLR UNCONTROLD 25030 DMII O CM NT ST UNCNTRLD 25031 DMI O CM NT ST UNCNTRLD 25032 DMII OTH COMA UNCONTROLD 25033 DMI OTH COMA UNCONTROLD The PQI reference population includes discharges with MDC 14 and age less than 18 years; however, the DRG and MS-DRG grouper logic precludes assignment of MDC 14 for discharge records with a PQI defining principal diagnosis. Exclude cases: • transfer from a hospital (different facility) • transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) • transfer from another health care facility • with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), principal diagnosis (DX1=missing), or county (PSTCO=missing) Rationale for exclusions: PQIs, and the Ambulatory Care Sensitive Conditions (ACSCs) and Avoidable Hospital Conditions (AHCs) upon which they were based, have always focused on the non-institutionalized, community-dwelling population. Including transfers from other acute care hospitals would clearly be inappropriate, because that would lead to double-counting the same inpatient episode if the patient's condition required transfer from one hospital to another. Including transfers from long-term care facilities could be considered, but PQIs re-specified in this way would require re-validation. Conceptually, these measures were designed to assess population-level access to timely, high-quality outpatient services, for the purpose of managing a chronic disease, preventing complications of a chronic disease, or diagnosing acute illnesses before they progress to require inpatient treatment. Residents of skilled nursing facilities do not lack for access to care, because they are surrounded by care providers. If their hospitalization rates are high (after risk-adjustment), it is presumably due to problems in care coordination or care within those specific facilities, not problems in ambulatory care. See Prevention Quality Indicators Appendices: • Appendix A – Admission Codes for Transfers See Prevention Quality Indicators technical specifications and appendices for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information.

	0272 Diabetes Short-Term Complications Admission Rate (PQI 01)
Denominator Statement	Population ages 18 years and older in the metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. May be combined with uncontrolled diabetes as a single indicator as a simple sum of the rates to form the Healthy People 2010 indicator (note that the AHRQ QI excludes transfers to avoid double-counting cases).
Denominator Details	Population ages 18 years and older in the metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. May be combined with uncontrolled diabetes as a single indicator as a simple sum of the rates to form the Healthy People 2010 indicator (note that the AHRQ QITM excludes transfers to avoid double-counting cases).
Exclusions	Not applicable
Exclusion details	Not applicable

	0272 Diabetes Short-Term Complications Admission Rate (PQI 01)
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with area random effect) and covariates for gender and age (in 5-year age groups). The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the year 2010 (combined), a database consisting of 46 states and approximately 38 million adult discharges, and the U.S. Census data by county. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., area). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Additional information on methodology can be found in the Empirical Methods document on the AHRQ Quality Indicator website (www.qualityindicators.ahrq.gov) and in the supplemental information. The specific covariates for this measure are as follow: SEX Female 18 - 24 Males 25 - 29 Males 30 - 34 Males 35 - 39 Males 40 - 44 Males 45 - 49 Males 50 - 54 Males 55 - 59 Males 60 - 64 Males 65 - 69 Males 70 - 74 Males 75 - 79 Males 80 - 84 Males 18 - 24 Females 25 - 29 Females 30 - 34 Females 35 - 39 Females 40 - 44 Females 45 - 49 Females 50 - 54 Females 55 - 59 Females 60 - 64 Females 65 - 69 Females 70 - 74 Females 75 - 79 Females 80 - 84 Females The risk adjustment coefficient table can be found in the supplemental materials and at the following link: http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V45/Parameter_Estimates_PQI_45.pdf Available in attached Excel or csv file at S.2b

	0272 Diabetes Short-Term Complications Admission Rate (PQI 01)
Stratification	Not applicable
Type Score	Rate/proportion better quality = lower score
Algorithm	The observed rate is the number of discharges flagged with the outcome of interest divided by the number of persons in the population at risk. The predicted rate is estimated for each person based on a logistic regression model. The expected rate is the average predicted rate for the unit of interest (i.e. the county of residence). The risk-adjusted rate is calculated using the indirect method as observed rate divided by expected rate multiplied by the reference population rate. The performance score is a weighted average of the risk-adjusted rate and the reference population rate, where the weight is the signal-to-noise ratio. For additional information, please see supporing information in the Quality Indicator Empirical Methods. Information is also available on the AHRQ Quality Indicator website: www.qualityindicators.ahrq.gov No diagram provided

	0274 Diabetes Long-Term Complications Admission Rate (PQI 03)
Status	Submitted
Steward	Agency for Healthcare Research and Quality
Description	Admissions for a principal diagnosis of diabetes with long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified) per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions.
Type	Outcome
Data Source	Administrative claims All analyses were completed using data from the Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID), 2007-2011.HCUP is a family of health care databases and related software tools and products developed through a Federal-State-Industry partnership and sponsored by the Agency for Healthcare Research and Quality (AHRQ). HCUP databases bring together the data collection efforts of State data organizations, hospital associations, private data organizations, and the Federal government to create a national information resource of encounter-level health care data. The HCUP SID contain the universe of the inpatient discharge abstracts in participating States, translated into a uniform format to facilitate multi-State comparisons and analyses. Together, the SID encompass about 97 percent of all U.S. community hospital discharges (in 2011, 46 states participated for a total of more than 38.5 million hospital discharges). As defined by the American Hospital Association, community hospitals are all non-Federal, short-term, general or other specialty hospitals, excluding hospital units of institutions. Veterans hospitals and other Federal facilities are excluded. Taken from the Uniform Bill-04 (UB-04), the SID data elements include ICD-9-CM coded principal and secondary diagnoses and procedures, additional detailed clinical and service information based on revenue codes, admission and discharge status, patient demographics, expected payment source (Medicare, Medicaid, private insurance as well as the uninsured), total charges and length of stay (www.hcup-us.ahrq.gov). HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). 2007-2011. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/sidoverview.jsp. (AHRQ QI Software Version 4.5) Available at measure-specific web page URL identified in S.1 Attachment Diabetes_Long-Term_Complications_Admission_Rate__PQI_3.xlsx
Level	Population : County or City, Population : National, Population : Regional, Population : State
Setting	Hospital/Acute Care Facility
Time Window	The time period is one year. Note that the reference population rates and signal variance parameters assume a one-year time period.
Numerator Statement	Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for diabetes with long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified). [NOTE: By definition, discharges with a principal diagnosis of diabetes with long-term complications cannot have an assignment of MDC 14 (pregnancy, childbirth and the puerperium). Thus, obstetric discharges are not considered in the PQI rate.] See Prevention Quality Indicators technical specifications for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information.
Numerator Details	ICD-9-CM Diabetes with long-term complications diagnosis codes: 25040 DMII RENL NT ST UNCNTRLD 25041 DMI RENL NT ST UNCNTRLD 25042 DMII RENAL UNCNTRLD

	0274 Diabetes Long-Term Complications Admission Rate (PQI 03)
	25043 DMI RENAL UNCNTRLD 25050 DMII OPHTH NT ST UNCNTRL 25051 DMI OPHTH NT ST UNCNTRLD 25052 DMII OPHTH UNCNTRLD 25053 DMI OPHTH UNCNTRLD 25060 DMII NEURO NT ST UNCNTRL 25061 DMI NEURO NT ST UNCNTRLD 25062 DMII NEURO UNCNTRLD 25063 DMI NEURO UNCNTRLD 25070 DMII CIRC NT ST UNCNTRLD 25071 DMI CIRC NT ST UNCNTRLD 25072 DMII CIRC UNCNTRLD 25073 DMI CIRC UNCNTRLD 25080 DMII OTH NT ST UNCNTRLD 25081 DMI OTH NT ST UNCNTRLD 25082 DMII OTH UNCNTRLD 25083 DMI OTH UNCNTRLD 25090 DMII UNSPF NT ST UNCNTRL 25091 DMI UNSPF NT ST UNCNTRLD 25092 DMII UNSPF UNCNTRLD 25093 DMI UNSPF UNCNTRLD The PQI reference population includes discharges with MDC 14 and age less than 18 years; however, the DRG and MS-DRG grouper logic precludes assignment of MDC 14 for discharge records with a PQI defining principal diagnosis. Exclude cases: • transfer from a hospital (different facility) • transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) • transfer from another health care facility • with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), principal diagnosis (DX1=missing), or county (PSTCO=missing) Rationale for exclusions: PQIs, and the Ambulatory Care Sensitive Conditions (ACSCs) and Avoidable Hospital Conditions (AHCs) upon which they were based, have always focused on the non-institutionalized, community-dwelling population. Including transfers from other acute care hospitals would clearly be inappropriate, because that would lead to double-counting the same inpatient episode if the patient's condition required transfer from one hospital to another. Including transfers from long-term care facilities could be considered, but PQIs re-specified in this way would require re-validation. Conceptually, these measures were designed to assess population-level access to timely, high-quality outpatient services, for the purpose of managing a chronic disease, preventing complications of a chronic disease, or diagnosing acute illnesses before they progress to require inpatient treatment. Residents of skilled nursing facilities do not lack for access to care, because they are surrounded by care providers. If their hospitalization rates are high (after risk-adjustment), it is presumably due to problems in care coordination or care within those specific facilities, not problems in ambulatory care. See Prevention Quality Indicators Appendices: • Appendix A – Admission Codes for Transfers See Prevention Quality Indicators technical specifications and appendices for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information.

	0274 Diabetes Long-Term Complications Admission Rate (PQI 03)
Denominator Statement	Population ages 18 years and older in metropolitan area† or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county where the hospital discharge occurred.
Denominator Details	The term "metropolitan area" (MA) was adopted by the U.S. Census in 1990 and referred collectively to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). In addition, "area" could refer to either 1) FIPS county, 2) modified FIPS county, 3) 1999 OMB Metropolitan Statistical Area, or 4) 2003 OMB Metropolitan Statistical Area. Micropolitan Statistical Areas are not used in the QI software. See AHRQ QI website or supplemental information for 2013 Population File Denominator report for calculation of population estimates embedded within AHRQ QI software programs. http://www.qualityindicators.ahrq.gov/Downloads/Software/SAS/V45/AHRQ20QI%20Population%20File%20V4.5.pdf NOTE: The denominator can be specified with the diabetic population only. The AHRQ QI SAS program has diabetes-specific denominators at the state-level. Payers have also specified annual diabetes-specific population denominators based on all-claims data for beneficiaries, restricting the denominator to those beneficiaries who have an indication of diabetes in a previous outpatient or inpatient visit. Annual diabetes-specific population denominators would need to be weighted by months of beneficiary enrollment. Reliability testing currently underway for application of the measure to other populations, such as patients in physician practices.
Exclusions	Not applicable
Exclusion details	Not applicable
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with area random effect) and covariates for gender and age (in 5-year age groups). The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the year 2010 (combined), a database consisting of 46 states and approximately 38 million adult discharges, and the U.S. Census data by county. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., area). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Additional information on methodology can be found in the Empirical Methods document on the AHRQ Quality Indicator website (www.qualityindicators.ahrq.gov) and in the supplemental information. The specific covariates for this measure are as follow: SEX Female 18 - 24 Males 25 - 29 Males 30 - 34 Males 35 - 39 Males 40 - 44 Males 45 - 49 Males 50 - 54 Males 55 - 59 Males 60 - 64 Males

	0274 Diabetes Long-Term Complications Admission Rate (PQI 03)
	65 - 69 Males 70 - 74 Males 75 - 79 Males 80 - 84 Males 18 - 24 Females 25 - 29 Females 30 - 34 Females 35 - 39 Females 40 - 44 Females 45 - 49 Females 50 - 54 Females 55 - 59 Females 60 - 64 Females 65 - 69 Females 70 - 74 Females 75 - 79 Females 80 - 84 Females The risk adjustment coefficient table can be found in the supplemental materials and at the following link: http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V45/Parameter_Estimates_PQI_45.pdf Available in attached Excel or csv file at S.2b
Stratification	Not applicable
Type Score	Rate/proportion better quality = lower score
Algorithm	The observed rate is the number of discharges flagged with the outcome of interest divided by the number of persons in the population at risk. The predicted rate is estimated for each person based on a logistic regression model. The expected rate is the average predicted rate for the unit of interest (i.e. the county of residence). The risk-adjusted rate is calculated using the indirect method as observed rate divided by expected rate multiplied by the reference population rate. The performance score is a weighted average of the risk-adjusted rate and the reference population rate, where the weight is the signal-to-noise ratio. For additional information, please see supporing information in the Quality Indicator Empirical Methods. Information is also available on the AHRQ Quality Indicator website: www.qualityindicators.ahrq.gov No diagram provided

	0280 Dehydration Admission Rate (PQI 10)
Status	Submitted
Steward	Agency for Healthcare Research and Quality
Description	Admissions with a principal diagnosis of dehydration per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions.
Type	Outcome
Data Source	Administrative claims All analyses were completed using data from the Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID), 2007-2011.HCUP is a family of health care databases and related software tools and products developed through a Federal-State-Industry partnership and sponsored by the Agency for Healthcare Research and Quality (AHRQ). HCUP databases bring together the data collection efforts of State data organizations, hospital associations, private data organizations, and the Federal government to create a national information resource of encounter-level health care data. The HCUP SID contain the universe of the inpatient discharge abstracts in participating States, translated into a uniform format to facilitate multi-State comparisons and analyses. Together, the SID encompass about 97 percent of all U.S. community hospital discharges (in 2011, 46 states participated for a total of more than 38.5 million hospital discharges). As defined by the American Hospital Association, community hospitals are all non-Federal, short-term, general or other specialty hospitals, excluding hospital units of institutions. Veterans hospitals and other Federal facilities are excluded. Taken from the Uniform Bill-04 (UB-04), the SID data elements include ICD-9-CM coded principal and secondary diagnoses and procedures, additional detailed clinical and service information based on revenue codes, admission and discharge status, patient demographics, expected payment source (Medicare, Medicaid, private insurance as well as the uninsured), total charges and length of stay (www.hcup-us.ahrq.gov). HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). 2007-2011. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/sidoverview.jsp. (AHRQ QI Software Version 4.5) Available at measure-specific web page URL identified in S.1 Attachment Dehydration_Admission_Rate_PQI_10.xlsx
Level	Population : County or City, Population : National, Population : Regional, Population : State
Setting	Hospital/Acute Care Facility
Time Window	The time period is one year. Note that the reference population rates and signal variance parameters assume a one-year time period.
Numerator Statement	Discharges, for patients ages 18 years and older, with either a principal ICD-9-CM diagnosis code for dehydration; or any secondary ICD-9-CM diagnosis codes for dehydration and a principal ICD-9-CM diagnosis code for hyperosmolality and/or hypernatremia, gastroenteritis, or acute kidney injury. [NOTE: By definition, discharges with a principal diagnosis of dehydration, hyperosmolality and/or hypernatremia, gastroenteritis, or acute kidney injury cannot have an assignment of MDC 14 (pregnancy, childbirth and the puerperium). Thus, obstetric discharges are not considered in the PQI rate.] See Prevention Quality Indicators technical specifications for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information.
Numerator Details	ICD-9-CM Dehydration diagnosis codes: 2765 HYPOVOLEMIA (not active in FY 2013) 27650 VOLUME DEPLETION NOS 27651 DEHYDRATION

	0280 Dehydration Admission Rate (PQI 10)
	27652 HYPOVOLEMIA ICD-9-CM Hyperosmolality and/or hypernatremia diagnosis codes: 2760 HYPEROSMOLALITY ICD-9-CM Gastroenteritis diagnosis codes: 00861 INTES INFEC ROTAVIRUS 00862 INTES INFEC ADENOVIRUS 00863 INT INF NORWALK VIRUS 00864 INT INF OTH SML RND VRUS 00865 ENTERITIS D/T CALICIVIRS 00866 INTES INFEC ASTROVIRUS 00867 INT INF ENTEROVIRUS NEC 00869 OTHER VIRAL INTES INFEC 0088 VIRAL ENTERITIS NOS 0090 INFECTIOUS ENTERITIS NOS 0091 ENTERITIS OF INFECT ORIG 0092 INFECTIOUS DIARRHEA NOS 0093 DIARRHEA OF INFECT ORIG 5589 NONINF GASTROENTERIT NEC ICD-9-CM Acute kidney injury diagnosis codes: 5845 AC KIDNY FAIL, TUBR NECR 5846 AC KIDNY FAIL, CORT NECR 5847 AC KIDNY FAIL, MEDU NECR 5848 ACUTE KIDNEY FAILURE NEC 5849 ACUTE KIDNEY FAILURE, NOS 586 RENAL FAILURE NOS 9975 SURG COMPL-URINARY TRACT The PQI reference population includes discharges with MDC 14 and age less than 18 years; however, the DRG and MS-DRG grouper logic precludes assignment of MDC 14 for discharge records with a PQI defining principal diagnosis. Exclude cases: • transfer from a hospital (different facility) • transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) • transfer from another health care facility • with any-listed ICD-9-CM diagnosis codes for chronic renal failure • with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), principal diagnosis (DX1=missing), or county (PSTCO=missing) Rationale for exclusions: PQIs, and the Ambulatory Care Sensitive Conditions (ACSCs) and Avoidable Hospital Conditions (AHCs) upon which they were based, have always focused on the non-institutionalized, community-dwelling population. Including transfers from other acute care hospitals would clearly be inappropriate, because that would lead to double-counting the same inpatient episode if the patient's condition required transfer from one hospital to another. Including transfers from long-term care facilities could be considered, but PQIs re-specified in this way would require re-validation. Conceptually, these measures were designed to assess population-level access to timely, high-quality outpatient services, for the purpose of managing a chronic disease, preventing complications of a chronic disease, or

	0280 Dehydration Admission Rate (PQI 10)
	diagnosing acute illnesses before they progress to require inpatient treatment. Residents of skilled nursing facilities do not lack for access to care, because they are surrounded by care providers. If their hospitalization rates are high (after risk-adjustment), it is presumably due to problems in care coordination or care within those specific facilities, not problems in ambulatory care. See Prevention Quality Indicators Appendices:Appendix A – Admission Codes for Transfers ICD-9-CM Chronic renal failure diagnosis codes1: 40300 MAL HY KID W CR KID I-IV 40301 MAL HYP KID W CR KID V 40310 BEN HY KID W CR KID I-IV 40311 BEN HYP KID W CR KID V 40390 HY KID NOS W CR KID I-IV 40391 HYP KID NOS W CR KID V 40400 MAL HY HT/KD I-IV W/O HF 40401 MAL HYP HT/KD I-IV W HF 40402 MAL HY HT/KD ST V W/O HF 40403 MAL HYP HT/KD STG V W HF 40410 BEN HY HT/KD I-IV W/O HF 40411 BEN HYP HT/KD I-IV W HF 40412 BEN HY HT/KD ST V W/O HF 40413 BEN HYP HT/KD STG V W HF 40490 HY HT/KD NOS I-IV W/O HF 40491 HYP HT/KD NOS I-IV W HF 40492 HY HT/KD NOS ST V W/O HF 40493 HYP HT/KD NOS ST V W HF 585 CHRONIC RENAL FAILURE (not active in FY 2013) 5855 CHRON KIDNEY DIS STAGE V 5856 END STAGE RENAL DISEASE See Prevention Quality Indicators technical specifications and appendices for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information.
Denominator Statement	Population ages 18 years and older in metropolitan area† or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.
Denominator Details	The term “metropolitan area” (MA) was adopted by the U.S. Census in 1990 and referred collectively to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). In addition, “area” could refer to either 1) FIPS county, 2) modified FIPS county, 3) 1999 OMB Metropolitan Statistical Area, or 4) 2003 OMB Metropolitan Statistical Area. Micropolitan Statistical Areas are not used in the QI software. See AHRQ QI website or supplemental information for 2013 Population File Denominator report for calculation of population estimates embedded within AHRQ QI software programs. http://www.qualityindicators.ahrq.gov/Downloads/Software/SAS/V45/AHRQ%20QI%20Population%20File%20V4.5.pdf
Exclusions	Not applicable

	0280 Dehydration Admission Rate (PQI 10)
Exclusion details	Not applicable
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with area random effect) and covariates for gender and age (in 5-year age groups). The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the year 2010 (combined), a database consisting of 46 states and approximately 38 million adult discharges, and the U.S. Census data by county. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., area). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Additional information on methodology can be found in the Empirical Methods document on the AHRQ Quality Indicator website (www.qualityindicators.ahrq.gov) and in the supplemental information. The specific covariates for this measure are as follow: SEX Female 18 - 24 Males 25 - 29 Males 30 - 34 Males 35 - 39 Males 40 - 44 Males 45 - 49 Males 50 - 54 Males 55 - 59 Males 60 - 64 Males 65 - 69 Males 70 - 74 Males 75 - 79 Males 80 - 84 Males 18 - 24 Females 25 - 29 Females 30 - 34 Females 35 - 39 Females 40 - 44 Females 45 - 49 Females 50 - 54 Females 55 - 59 Females 60 - 64 Females 65 - 69 Females 70 - 74 Females 75 - 79 Females 80 - 84 Females The risk adjustment coefficient table can be found in the supplemental materials and at the following link: http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V45/Parameter_Estimates_

	0280 Dehydration Admission Rate (PQI 10)
	PQI_45.pdf Available in attached Excel or csv file at S.2b
Stratification	Not applicable
Type Score	Rate/proportion better quality = lower score
Algorithm	The observed rate is the number of discharges flagged with the outcome of interest divided by the number of persons in the population at risk. The predicted rate is estimated for each person based on a logistic regression model. The expected rate is the average predicted rate for the unit of interest (i.e. the county of residence). The risk-adjusted rate is calculated using the indirect method as observed rate divided by expected rate multiplied by the reference population rate. The performance score is a weighted average of the risk-adjusted rate and the reference population rate, where the weight is the signal-to-noise ratio. For additional information, please see supporing information in the Quality Indicator Empirical Methods. Information is also available on the AHRQ Quality Indicator website: www.qualityindicators.ahrq.gov No diagram provided

	0281 Urinary Tract Infection Admission Rate (PQI 12)
Status	Submitted
Steward	Agency for Healthcare Research and Quality
Description	Admissions with a principal diagnosis of urinary tract infection per 100,000 population, ages 18 years and older. Excludes kidney or urinary tract disorder admissions, other indications of immunocompromised state admissions, obstetric admissions, and transfers from other institutions.
Type	Outcome
Data Source	Administrative claims All analyses were completed using data from the Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID), 2007-2011.HCUP is a family of health care databases and related software tools and products developed through a Federal-State-Industry partnership and sponsored by the Agency for Healthcare Research and Quality (AHRQ). HCUP databases bring together the data collection efforts of State data organizations, hospital associations, private data organizations, and the Federal government to create a national information resource of encounter-level health care data. The HCUP SID contain the universe of the inpatient discharge abstracts in participating States, translated into a uniform format to facilitate multi-State comparisons and analyses. Together, the SID encompass about 97 percent of all U.S. community hospital discharges (in 2011, 46 states participated for a total of more than 38.5 million hospital discharges). As defined by the American Hospital Association, community hospitals are all non-Federal, short-term, general or other specialty hospitals, excluding hospital units of institutions. Veterans hospitals and other Federal facilities are excluded. Taken from the Uniform Bill-04 (UB-04), the SID data elements include ICD-9-CM coded principal and secondary diagnoses and procedures, additional detailed clinical and service information based on revenue codes, admission and discharge status, patient demographics, expected payment source (Medicare, Medicaid, private insurance as well as the uninsured), total charges and length of stay (www.hcup-us.ahrq.gov). HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). 2007-2011. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/sidoverview.jsp. (AHRQ QI Software Version 4.5) Available at measure-specific web page URL identified in S.1 Attachment Urinary_Tract_Infection_Admission_Rate_PQI_12.xlsx
Level	Population : County or City, Population : National, Population : Regional, Population : State
Setting	Hospital/Acute Care Facility
Time Window	The time period is one year. Note that the reference population rates and signal variance parameters assume a one-year time period.
Numerator Statement	Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for urinary tract infection. [NOTE: By definition, discharges with a principal diagnosis of urinary tract infection cannot have an assignment of MDC 14 (pregnancy, childbirth and the puerperium). Thus, obstetric discharges are not considered in the PQI rate.] See Prevention Quality Indicators technical specifications for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information.
Numerator Details	ICD-9-CM Urinary Tract Infection Codes: 59010 AC PYELONEPHRITIS NOS 59011 AC PYELONEPHR W MED NECR 5902 RENAL/PERIRENAL ABSCESS

	0281 Urinary Tract Infection Admission Rate (PQI 12)
	5903 PYELOURETERITIS CYSTICA 59080 PYELONEPHRITIS NOS 59081 PYELONEPHRIT IN OTH DIS 5909 INFECTION OF KIDNEY NOS 5950 ACUTE CYSTITIS 5959 CYSTITIS NOS 5990 URIN TRACT INFECTION NOS The PQI reference population includes discharges with MDC 14 and age less than 18 years; however, the DRG and MS-DRG grouper logic precludes assignment of MDC 14 for discharge records with a PQI defining principal diagnosis. Exclude cases: • transfer from a hospital (different facility) • transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) • transfer from another health care facility • with any-listed ICD-9-CM diagnosis codes for kidney/urinary tract disorder • with any-listed ICD-9-CM diagnosis codes or any-listed ICD-9-CM procedure codes for immunocompromised state with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), principal diagnosis (DX1=missing), or county (PSTCO=missing) Rationale for exclusions: PQIs, and the Ambulatory Care Sensitive Conditions (ACSCs) and Avoidable Hospital Conditions (AHCs) upon which they were based, have always focused on the non-institutionalized, community-dwelling population. Including transfers from other acute care hospitals would clearly be inappropriate, because that would lead to double-counting the same inpatient episode if the patient's condition required transfer from one hospital to another. Including transfers from long-term care facilities could be considered, but PQIs re-specified in this way would require re-validation. Conceptually, these measures were designed to assess population-level access to timely, high-quality outpatient services, for the purpose of managing a chronic disease, preventing complications of a chronic disease, or diagnosing acute illnesses before they progress to require inpatient treatment. Residents of skilled nursing facilities do not lack for access to care, because they are surrounded by care providers. If their hospitalization rates are high (after risk-adjustment), it is presumably due to problems in care coordination or care within those specific facilities, not problems in ambulatory care. See Prevention Quality Indicators Appendices: • Appendix A – Admission Codes for Transfers • Appendix C – Immunocompromised State Diagnosis and Procedure Codes ICD-9-CM Kidney/urinary tract disorder diagnosis codes: 59000 CHR PYELONEPHRITIS NOS 59001 CHR PYELONEPH W MED NECR 59370 VESCOURETRL RFLUX UNSPCF 59371 VSCURT RFLX NPHT UNILTRL 59372 VSCOURTL RFLX NPHT BLTRL 59373 VSCOURTL RFLX W NPHT NOS 7530 RENAL AGENESIS 75310 CYSTIC KIDNEY DISEAS NOS 75311 CONGENITAL RENAL CYST

	0281 Urinary Tract Infection Admission Rate (PQI 12)
	75312 POLYCYSTIC KIDNEY NOS 75313 POLYCYST KID-AUTOSOM DOM 75314 POLYCYST KID-AUTOSOM REC 75315 RENAL DYSPLASIA 75316 MEDULLARY CYSTIC KIDNEY 75317 MEDULLARY SPONGE KIDNEY 75319 CYSTIC KIDNEY DISEAS NEC 75320 OBS DFCT REN PLV&URT NOS 75321 CONGEN OBST URTROPLV JNC 75322 CONG OBST URETEROVES JNC 75323 CONGENITAL URETEROCELE 75329 OBST DEF REN PLV&URT NEC 7533 KIDNEY ANOMALY NEC 7534 URETERAL ANOMALY NEC 7535 BLADDER EXSTROPHY 7536 CONGEN URETHRAL STENOSIS 7538 CYSTOURETHRAL ANOM NEC 7539 URINARY ANOMALY NOS See Prevention Quality Indicators technical specifications and appendices for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information.
Denominator Statement	Population ages 18 years and older in metropolitan area† or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.
Denominator Details	The term “metropolitan area” (MA) was adopted by the U.S. Census in 1990 and referred collectively to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). In addition, “area” could refer to either 1) FIPS county, 2) modified FIPS county, 3) 1999 OMB Metropolitan Statistical Area, or 4) 2003 OMB Metropolitan Statistical Area. Micropolitan Statistical Areas are not used in the QI software. See AHRQ QI website or supplemental information for 2013 Population File Denominator report for calculation of population estimates embedded within AHRQ QI software programs. http://www.qualityindicators.ahrq.gov/Downloads/Software/SAS/V45/AHRQ%20QI%20Population%20File%20V4.5.pdf
Exclusions	Not applicable
Exclusion details	Not applicable

	0281 Urinary Tract Infection Admission Rate (PQI 12)
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with area random effect) and covariates for gender and age (in 5-year age groups). The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the year 2010 (combined), a database consisting of 46 states and approximately 38 million adult discharges, and the U.S. Census data by county. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., area). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Additional information on methodology can be found in the Empirical Methods document on the AHRQ Quality Indicator website (www.qualityindicators.ahrq.gov) and in the supplemental information. The specific covariates for this measure are as follow: SEX Female 18 - 24 Males 25 - 29 Males 30 - 34 Males 35 - 39 Males 40 - 44 Males 45 - 49 Males 50 - 54 Males 55 - 59 Males 60 - 64 Males 65 - 69 Males 70 - 74 Males 75 - 79 Males 80 - 84 Males 18 - 24 Females 25 - 29 Females 30 - 34 Females 35 - 39 Females 40 - 44 Females 45 - 49 Females 50 - 54 Females 55 - 59 Females 60 - 64 Females 65 - 69 Females 70 - 74 Females 75 - 79 Females 80 - 84 Females The risk adjustment coefficient table can be found in the supplemental materials and at the following link: http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V45/Parameter_Estimates_PQI_45.pdf Available in attached Excel or csv file at S.2b

	0281 Urinary Tract Infection Admission Rate (PQI 12)
Stratification	Not applicable
Type Score	Rate/proportion better quality = lower score
Algorithm	The observed rate is the number of discharges flagged with the outcome of interest divided by the number of persons in the population at risk. The predicted rate is estimated for each person based on a logistic regression model. The expected rate is the average predicted rate for the unit of interest (i.e. the county of residence). The risk-adjusted rate is calculated using the indirect method as observed rate divided by expected rate multiplied by the reference population rate. The performance score is a weighted average of the risk-adjusted rate and the reference population rate, where the weight is the signal-to-noise ratio. For additional information, please see supporing information in the Quality Indicator Empirical Methods. Information is also available on the AHRQ Quality Indicator website: www.qualityindicators.ahrq.gov No diagram provided

	0285 Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16)
Status	Submitted
Steward	Agency for Healthcare Research and Quality
Description	Admissions for any-listed diagnosis of diabetes and any-listed procedure of lower-extremity amputation per 100,000 population, ages 18 years and older. Excludes any-listed diagnosis of traumatic lower-extremity amputation admissions, toe amputation admission (likely to be traumatic), obstetric admissions, and transfers from other institutions.
Type	Outcome
Data Source	Administrative claims All analyses were completed using data from the Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID), 2007-2011.HCUP is a family of health care databases and related software tools and products developed through a Federal-State-Industry partnership and sponsored by the Agency for Healthcare Research and Quality (AHRQ). HCUP databases bring together the data collection efforts of State data organizations, hospital associations, private data organizations, and the Federal government to create a national information resource of encounter-level health care data. The HCUP SID contain the universe of the inpatient discharge abstracts in participating States, translated into a uniform format to facilitate multi-State comparisons and analyses. Together, the SID encompass about 97 percent of all U.S. community hospital discharges (in 2011, 46 states participated for a total of more than 38.5 million hospital discharges). As defined by the American Hospital Association, community hospitals are all non-Federal, short-term, general or other specialty hospitals, excluding hospital units of institutions. Veterans hospitals and other Federal facilities are excluded. Taken from the Uniform Bill-04 (UB-04), the SID data elements include ICD-9-CM coded principal and secondary diagnoses and procedures, additional detailed clinical and service information based on revenue codes, admission and discharge status, patient demographics, expected payment source (Medicare, Medicaid, private insurance as well as the uninsured), total charges and length of stay (www.hcup-us.ahrq.gov). HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). 2007-2011. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/sidoverview.jsp. (AHRQ QI Software Version 4.5) Available at measure-specific web page URL identified in S.1 Attachment Lower_Extremity_Amputation_among_Pts_with_Diabetes_Rate_PQI_16.xlsx
Level	Population : County or City, Population : National, Population : Regional, Population : State
Setting	Hospital/Acute Care Facility
Time Window	The time period is one year. Note that the reference population rates and signal variance parameters assume a one-year time period.
Numerator Statement	Discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for lower-extremity amputation and any-listed ICD-9-CM diagnosis codes for diabetes. See Prevention Quality Indicators technical specifications for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information.
Numerator Details	ICD-9-CM Lower-extremity amputation procedure codes: 8410 LOWER LIMB AMPUTAT NOS 8411 TOE AMPUTATION 8412 AMPUTATION THROUGH FOOT 8413 DISARTICULATION OF ANKLE 8414 AMPUTAT THROUGH MALLEOLI 8415 BELOW KNEE AMPUTAT NEC

	0285 Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16)
	8416 DISARTICULATION OF KNEE 8417 ABOVE KNEE AMPUTATION 8418 DISARTICULATION OF HIP 8419 HINDQUARTER AMPUTATION ICD-9-CM Diabetes diagnosis codes: 25000 DMII WO CMP NT ST UNCNTR 25001 DMI WO CMP NT ST UNCNTRL 25002 DMII WO CMP UNCNTRLD 25003 DMI WO CMP UNCNTRLD 25010 DMII KETO NT ST UNCNTRLD 25011 DMI KETO NT ST UNCNTRLD 25012 DMII KETOACD UNCONTROLD 25013 DMI KETOACD UNCONTROLD 25020 DMII HPRSM NT ST UNCNTRL 25021 DMI HPRSM NT ST UNCNTRLD 25022 DMII HPROSMLR UNCONTROLD 25023 DMI HPROSMLR UNCONTROLD 25030 DMII O CM NT ST UNCNTRLD 25031 DMI O CM NT ST UNCNTRL 25032 DMII OTH COMA UNCONTROLD 25033 DMI OTH COMA UNCONTROLD 25040 DMII RENL NT ST UNCNTRLD 25041 DMI RENL NT ST UNCNTRLD 25042 DMII RENAL UNCNTRLD 25043 DMI RENAL UNCNTRLD 25050 DMII OPHTH NT ST UNCNTRL 25051 DMI OPHTH NT ST UNCNTRLD 25052 DMII OPHTH UNCNTRLD 25053 DMI OPHTH UNCNTRLD 25060 DMII NEURO NT ST UNCNTRL 25061 DMI NEURO NT ST UNCNTRLD 25062 DMII NEURO UNCNTRLD 25063 DMI NEURO UNCNTRLD 25070 DMII CIRC NT ST UNCNTRLD 25071 DMI CIRC NT ST UNCNTRLD 25072 DMII CIRC UNCNTRLD 25073 DMI CIRC UNCNTRLD 25080 DMII OTH NT ST UNCNTRLD 25081 DMI OTH NT ST UNCNTRLD 25082 DMII OTH UNCNTRLD 25083 DMI OTH UNCNTRLD 25090 DMII UNSPF NT ST UNCNTRL 25091 DMI UNSPF NT ST UNCNTRLD

	0285 Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16)
	25092 DMII UNSPF UNCNTRLD 25093 DMI UNSPF UNCNTRLD Exclude cases: • with any-listed ICD-9-CM diagnosis codes for traumatic amputation of the lower extremity • with any-listed ICD-9-CM procedure codes for toe amputation • transfer from a hospital (different facility) • transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) • transfer from another health care facility • MDC 14 (pregnancy, childbirth, and puerperium) • with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), principal diagnosis (DX1=missing), or county (PSTCO=missing) Rationale for exclusions: PQIs, and the Ambulatory Care Sensitive Conditions (ACSCs) and Avoidable Hospital Conditions (AHCs) upon which they were based, have always focused on the non-institutionalized, community-dwelling population. Including transfers from other acute care hospitals would clearly be inappropriate, because that would lead to double-counting the same inpatient episode if the patient's condition required transfer from one hospital to another. Including transfers from long-term care facilities could be considered, but PQIs re-specified in this way would require re-validation. Conceptually, these measures were designed to assess population-level access to timely, high-quality outpatient services, for the purpose of managing a chronic disease, preventing complications of a chronic disease, or diagnosing acute illnesses before they progress to require inpatient treatment. Residents of skilled nursing facilities do not lack for access to care, because they are surrounded by care providers. If their hospitalization rates are high (after risk-adjustment), it is presumably due to problems in care coordination or care within those specific facilities, not problems in ambulatory care. ICD-9-CM Traumatic amputation of the lower extremity diagnosis codes: 8950 AMPUTATION TOE 8951 AMPUTATION TOE-COMPLICAT 8960 AMPUTATION FOOT, UNILAT 8961 AMPUT FOOT, UNILAT-COMPL 8962 AMPUTATION FOOT, BILAT 8963 AMPUTAT FOOT, BILAT-COMP 8970 AMPUT BELOW KNEE, UNILAT 8971 AMPUTAT BK, UNILAT-COMPL 8972 AMPUT ABOVE KNEE, UNILAT 8973 AMPUT ABV KN, UNIL-COMPL 8974 AMPUTAT LEG, UNILAT NOS 8975 AMPUT LEG, UNIL NOS-COMP 8976 AMPUTATION LEG, BILAT 8977 AMPUTAT LEG, BILAT-COMPL ICD-9-CM Toe amputation procedure code: 8411 TOE AMPUTATION See Prevention Quality Indicators Appendices provided on AHRQ QI website and in supplemental materials: • Appendix A – Admission Codes for Transfers

	0285 Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16)
Denominator Statement	Population ages 18 years and older in metropolitan area† or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.
Denominator Details	The term "metropolitan area" (MA) was adopted by the U.S. Census in 1990 and referred collectively to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). In addition, "area" could refer to either 1) FIPS county, 2) modified FIPS county, 3) 1999 OMB Metropolitan Statistical Area, or 4) 2003 OMB Metropolitan Statistical Area. Micropolitan Statistical Areas are not used in the QI software. See AHRQ QI website or supplemental information for 2013 Population File Denominator report for calculation of population estimates embedded within AHRQ QI software programs. http://www.qualityindicators.ahrq.gov/Downloads/Software/SAS/V45/AHRQ%20QI%20Population%20File%20V4.5.pdf NOTE: The denominator can be specified with the diabetic population only. The AHRQ QI SAS program has diabetes-specific denominators at the state-level. Payers have also specified annual diabetes-specific population denominators based on all-claims data for beneficiaries, restricting the denominator to those beneficiaries who have an indication of diabetes in a previous outpatient or inpatient visit. Annual diabetes-specific population denominators would need to be weighted by months of beneficiary enrollment. Reliability testing currently underway for application of the measure to other populations, such as patients in physician practices.
Exclusions	Not applicable
Exclusion details	Not applicable

	0285 Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16)
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with area random effect) and covariates for gender and age (in 5-year age groups). The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the year 2010 (combined), a database consisting of 46 states and approximately 38 million adult discharges, and the U.S. Census data by county. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., area). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Additional information on methodology can be found in the Empirical Methods document on the AHRQ Quality Indicator website (www.qualityindicators.ahrq.gov) and in the supplemental information. The specific covariates for this measure are as follow: SEX Female 18 - 24 Males 25 - 29 Males 30 - 34 Males 35 - 39 Males 40 - 44 Males 45 - 49 Males 50 - 54 Males 55 - 59 Males 60 - 64 Males 65 - 69 Males 70 - 74 Males 75 - 79 Males 80 - 84 Males 18 - 24 Females 25 - 29 Females 30 - 34 Females 35 - 39 Females 40 - 44 Females 45 - 49 Females 50 - 54 Females 55 - 59 Females 60 - 64 Females 65 - 69 Females 70 - 74 Females 75 - 79 Females 80 - 84 Females The risk adjustment coefficient table can be found in the supplemental materials and at the following link: http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V45/Parameter_Estimates_PQI_45.pdf Provided in response box S.15a

	0285 Rate of Lower-Extremity Amputation Among Patients With Diabetes (PQI 16)
Stratification	Not applicable
Type Score	Rate/proportion better quality = lower score
Algorithm	The observed rate is the number of discharges flagged with the outcome of interest divided by the number of persons in the population at risk. The predicted rate is estimated for each person based on a logistic regression model. The expected rate is the average predicted rate for the unit of interest (i.e. the county of residence). The risk-adjusted rate is calculated using the indirect method as observed rate divided by expected rate multiplied by the reference population rate. The performance score is a weighted average of the risk-adjusted rate and the reference population rate, where the weight is the signal-to-noise ratio. For additional information, please see supporing information in the Quality Indicator Empirical Methods. Information is also available on the AHRQ Quality Indicator website: www.qualityindicators.ahrq.gov No diagram provided

	0638 Uncontrolled Diabetes Admission Rate (PQI 14)
Status	Submitted
Steward	Agency for Healthcare Research and Quality
Description	Admissions for a principal diagnosis of diabetes without mention of short-term (ketoacidosis, hyperosmolarity, or coma) or long-term (renal, eye, neurological, circulatory, or other unspecified) complications per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions.
Type	Outcome
Data Source	Administrative claims All analyses were completed using data from the Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID), 2007-2011.HCUP is a family of health care databases and related software tools and products developed through a Federal-State-Industry partnership and sponsored by the Agency for Healthcare Research and Quality (AHRQ). HCUP databases bring together the data collection efforts of State data organizations, hospital associations, private data organizations, and the Federal government to create a national information resource of encounter-level health care data. The HCUP SID contain the universe of the inpatient discharge abstracts in participating States, translated into a uniform format to facilitate multi-State comparisons and analyses. Together, the SID encompass about 97 percent of all U.S. community hospital discharges (in 2011, 46 states participated for a total of more than 38.5 million hospital discharges). As defined by the American Hospital Association, community hospitals are all non-Federal, short-term, general or other specialty hospitals, excluding hospital units of institutions. Veterans hospitals and other Federal facilities are excluded. Taken from the Uniform Bill-04 (UB-04), the SID data elements include ICD-9-CM coded principal and secondary diagnoses and procedures, additional detailed clinical and service information based on revenue codes, admission and discharge status, patient demographics, expected payment source (Medicare, Medicaid, private insurance as well as the uninsured), total charges and length of stay (www.hcup-us.ahrq.gov). HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). 2007-2011. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/sidoverview.jsp. (AHRQ QI Software Version 4.5) Available at measure-specific web page URL identified in S.1 Attachment Uncontrolled_Diabetes_Admission_Rate_PQI_14.xlsx
Level	Population : County or City, Population : National, Population : Regional, Population : State
Setting	Hospital/Acute Care Facility
Time Window	The time period is one year. Note that the reference population rates and signal variance parameters assume a one-year time period.
Numerator Statement	Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for uncontrolled diabetes without mention of a short-term or long-term complication. [NOTE: By definition, discharges with a principal diagnosis of uncontrolled diabetes without mention of short-term or long-term complications cannot have an assignment of MDC 14 (pregnancy, childbirth and the puerperium). Thus, obstetric discharges are not considered in the PQI rate.] See Prevention Quality Indicators technical specifications for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information.

	0638 Uncontrolled Diabetes Admission Rate (PQI 14)
Numerator Details	ICD-9-CM Uncontrolled diabetes without mention of a short-term or long-term complication diagnosis codes: 25002 DMII WO CMP UNCNTRLD 25003 DMI WO CMP UNCNTRLD The PQI reference population includes discharges with MDC 14 and age less than 18 years; however, the DRG and MS-DRG grouper logic precludes assignment of MDC 14 for discharge records with a PQI defining principal diagnosis. Exclude cases: • transfer from a hospital (different facility) • transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) • transfer from another health care facility • with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), principal diagnosis (DX1=missing), or county (PSTCO=missing) Rationale for exclusions: PQIs, and the Ambulatory Care Sensitive Conditions (ACSCs) and Avoidable Hospital Conditions (AHCs) upon which they were based, have always focused on the non-institutionalized, community-dwelling population. Including transfers from other acute care hospitals would clearly be inappropriate, because that would lead to double-counting the same inpatient episode if the patient's condition required transfer from one hospital to another. Including transfers from long-term care facilities could be considered, but PQIs re-specified in this way would require re-validation. Conceptually, these measures were designed to assess population-level access to timely, high-quality outpatient services, for the purpose of managing a chronic disease, preventing complications of a chronic disease, or diagnosing acute illnesses before they progress to require inpatient treatment. Residents of skilled nursing facilities do not lack for access to care, because they are surrounded by care providers. If their hospitalization rates are high (after risk-adjustment), it is presumably due to problems in care coordination or care within those specific facilities, not problems in ambulatory care. See Prevention Quality Indicators Appendices: • Appendix A – Admission Codes for Transfers See Prevention Quality Indicators technical specifications and appendices for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx) and in the supporting information. • The PQI reference population includes discharges with MDC 14 and age less than 18 years; however, the DRG and MS-DRG grouper logic precludes assignment of MDC 14 for discharge records with a PQI defining principal diagnosis. Exclude cases: • transfer from a hospital (different facility) • transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) • transfer from another health care facility • with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), principal diagnosis (DX1=missing), or county (PSTCO=missing) See Prevention Quality Indicators Appendices: • Appendix A – Admission Codes for Transfers http://qualityindicators.ahrq.gov/Downloads/Modules/PQI/V44/TechSpecs/PQI%20Appendices.pdf

	0638 Uncontrolled Diabetes Admission Rate (PQI 14)
Denominator Statement	Population ages 18 years and older in metropolitan area† or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. May be combined with diabetes short-term complications as a single indicator as a simple sum of the rates to form the Health People 2010 indicator (note that the AHRQ QI excludes transfers to avoid double counting cases).
Denominator Details	The term "metropolitan area" (MA) was adopted by the U.S. Census in 1990 and referred collectively to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). In addition, "area" could refer to either 1) FIPS county, 2) modified FIPS county, 3) 1999 OMB Metropolitan Statistical Area, or 4) 2003 OMB Metropolitan Statistical Area. Micropolitan Statistical Areas are not used in the QI software. See AHRQ QI website or supplemental information for 2013 Population File Denominator report for calculation of population estimates embedded within AHRQ QI software programs. http://www.qualityindicators.ahrq.gov/Downloads/Software/SAS/V45/AHRQ%20QI%20Population%20File%20V4.5.pdf NOTE: The denominator can be specified with the diabetic population only. The AHRQ QI SAS program has diabetes-specific denominators at the state-level. Payers have also specified annual diabetes-specific population denominators based on all-claims data for beneficiaries, restricting the denominator to those beneficiaries who have an indication of diabetes in a previous outpatient or inpatient visit. Annual diabetes-specific population denominators would need to be weighted by months of beneficiary enrollment. Reliability testing currently underway for application of the measure to other populations, such as patients in physician practices.
Exclusions	Not Applicable
Exclusion details	Not Applicable
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with area random effect) and covariates for gender and age (in 5-year age groups). The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the year 2010 (combined), a database consisting of 46 states and approximately 38 million adult discharges, and the U.S. Census data by county. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., area). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Additional information on methodology can be found in the Empirical Methods document on the AHRQ Quality Indicator website (www.qualityindicators.ahrq.gov) and in the supplemental information. The specific covariates for this measure are as follow: SEX Female 18 - 24 Males 25 - 29 Males 30 - 34 Males 35 - 39 Males

	0638 Uncontrolled Diabetes Admission Rate (PQI 14)
	40 - 44 Males 45 - 49 Males 50 - 54 Males 55 - 59 Males 60 - 64 Males 65 - 69 Males 70 - 74 Males 75 - 79 Males 80 - 84 Males 18 - 24 Females 25 - 29 Females 30 - 34 Females 35 - 39 Females 40 - 44 Females 45 - 49 Females 50 - 54 Females 55 - 59 Females 60 - 64 Females 65 - 69 Females 70 - 74 Females 75 - 79 Females 80 - 84 Females The risk adjustment coefficient table can be found in the supplemental materials and at the following link: http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V45/Parameter_Estimates_PQI_45.pdf Available in attached Excel or csv file at S.2b
Stratification	Not applicable
Type Score	Rate/proportion better quality = lower score
Algorithm	The observed rate is the number of discharges flagged with the outcome of interest divided by the number of persons in the population at risk. The predicted rate is estimated for each person based on a logistic regression model. The expected rate is the average predicted rate for the unit of interest (i.e. the county of residence). The risk-adjusted rate is calculated using the indirect method as observed rate divided by expected rate multiplied by the reference population rate. The performance score is a weighted average of the risk-adjusted rate and the reference population rate, where the weight is the signal-to-noise ratio. For additional information, please see supporting information in the Quality Indicator Empirical Methods. Information is also available on the AHRQ Quality Indicator website: www.qualityindicators.ahrq.gov No diagram provided

	0727 Gastroenteritis Admission Rate (PDI 16)
Status	Submitted
Steward	Agency for Healthcare Research and Quality
Description	Admissions for a principal diagnosis of gastroenteritis, or for a principal diagnosis of dehydration with a secondary diagnosis of gastroenteritis per 100,000 population, ages 3 months to 17 years. Excludes cases transferred from another facility, cases with gastrointestinal abnormalities or bacterial gastroenteritis, and obstetric admissions.
Type	Outcome
Data Source	Administrative claims All analyses were completed using data from the Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID), 2007-2011.HCUP is a family of health care databases and related software tools and products developed through a Federal-State-Industry partnership and sponsored by the Agency for Healthcare Research and Quality (AHRQ). HCUP databases bring together the data collection efforts of State data organizations, hospital associations, private data organizations, and the Federal government to create a national information resource of encounter-level health care data. The HCUP SID contain the universe of the inpatient discharge abstracts in participating States, translated into a uniform format to facilitate multi-State comparisons and analyses. Together, the SID encompass about 97 percent of all U.S. community hospital discharges (in 2011, 46 states participated for a total of more than 38.5 million hospital discharges with approximately 5 million pediatric (including births) hospital discharges). As defined by the American Hospital Association, community hospitals are all non-Federal, short-term, general or other specialty hospitals, excluding hospital units of institutions. Veterans hospitals and other Federal facilities are excluded. General and speciality children's hospitals are included in the hospital universe. Taken from the Uniform Bill-04 (UB-04), the SID data elements include ICD-9-CM coded principal and secondary diagnoses and procedures, additional detailed clinical and service information based on revenue codes, admission and discharge status, patient demographics, expected payment source (Medicare, Medicaid, private insurance as well as the uninsured), total charges and length of stay (www.hcup-us.ahrq.gov) HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). 2007-2011. Agency for Healthcare Research and Quality, Rockville, MD. www.ahrq.gov/sidoverview.jsp (AHRQ QI Software Version 4.5, www.qualityindicators.ahrq.gov) Available at measure-specific web page URL identified in S.1 Attachment Gastroenteritis_Admission_Rate_PDI_16.xlsx
Level	Population : County or City, Population : National, Population : Regional, Population : State
Setting	Hospital/Acute Care Facility
Time Window	Time window can be determined by user, but is generally a calendar year.
Numerator Statement	Discharges ages 3 months to 17 years with ICD-9-CM principal diagnosis code of gastroenteritis, OR with secondary diagnosis code of gastroenteritis and a principal diagnosis code of dehydration. Exclude cases: - MDC 14 (pregnancy, childbirth, and puerperium) - transfer from other institution - age less than or equal to 90 days (or neonates if age in days is missing) - with any diagnosis code of gastrointestinal abnormalities or bacterial gastroenteritis

	0727 Gastroenteritis Admission Rate (PDI 16)
Numerator Details	ICD-9-CM Gastroenteritis diagnosis codes: 00861 INTES INFEC ROTAVIRUS 00862 INTES INFEC ADENOVIRUS 00863 INT INF NORWALK VIRUS 00864 INT INF OTH SML RND VRUS 00865 ENTERITIS D/T CALICIVIRS 00866 INTES INFEC ASTROVIRUS 00867 INT INF ENTEROVIRUS NEC 00869 OTHER VIRAL INTES INFEC 0088 VIRAL ENTERITIS NOS 0090 INFECTIOUS ENTERITIS NOS 0091 ENTERITIS OF INFECT ORIG 0092 INFECTIOUS DIARRHEA NOS 0093 DIARRHEA OF INFECT ORIG 5589 NONINF GASTROENTERIT NEC ICD-9-CM Dehydration diagnosis codes: 2765 HYPOVOLEMIA (not used in FY 2013) 27650 VOLUME DEPLETION NOS 27651 DEHYDRATION 27652 HYPOVOLEMIA Exclude cases: • with any-listed ICD-9-CM diagnosis codes for gastrointestinal abnormalities • with any-listed ICD-9-CM diagnosis codes for bacterial gastroenteritis • transfer from a hospital (different facility) • transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) • transfer from another health care facility • neonates if age in days is missing • MDC 14 (pregnancy, childbirth, and puerperium) • with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), principal diagnosis (DX1=missing), or county (PSTCO=missing) ICD-9-CM Gastrointestinal abnormalities diagnosis codes: 53570 EOSINOPHIL GASTRT WO HEM 53571 EOSINOPHILC GASTRT W HEM 538 GI MUCOSITIS (ULCERATVE) 5550 REG ENTERITIS, SM INTEST 5551 REG ENTERITIS, LG INTEST 5552 REG ENTERIT SM/LG INTEST 5559 REGIONAL ENTERITIS NOS 5560 ULCERATIVE ENTEROCOLITIS 5561 ULCERATIVE ILEOCOLITIS 5562 ULCERATIVE PROCTITIS 5563 ULCERTVE PRCTOSIGMOIDTIS 5564 PSEUDOPOLYPOSIS COLON

	0727 Gastroenteritis Admission Rate (PDI 16)
	5565 LFTSDED ULCERTVE COLITIS 5566 UNIVRSL ULCERTVE COLITIS 5568 OTHER ULCERATIVE COLITIS 5569 ULCERATVE COLITIS UNSPCF 5581 RADIATION GASTROENTERIT 5582 TOXIC GASTROENTERITIS 5583 ALLRGIC GASTRO & COLITIS 55841 EOSINOPHILIC GASTROENT 55842 EOSINOPHILIC COLITIS 5790 CELIAC DISEASE 5791 TROPICAL SPRUE 5792 BLIND LOOP SYNDROME 5793 INTEST POSTOP NONABSORB 5794 PANCREATIC STEATORRHEA 5798 INTEST MALABSORPTION NEC 5799 INTEST MALABSORPTION NOS ICD-9-CM Bacterial gastroenteritis diagnosis codes: 0030 SALMONELLA ENTERITIS 0040 SHIGELLA DYSENTERIAE 0041 SHIGELLA FLEXNERI 0042 SHIGELLA BOYDII 0043 SHIGELLA SONNEI 0048 SHIGELLA INFECTION NEC 0049 SHIGELLOSIS NOS 0050 STAPH FOOD POISONING 0051 BOTULISM FOOD POISONING 0052 FOOD POIS D/T C. PERFRIN 0053 FOOD POIS: CLOSTRID NEC 0054 FOOD POIS: V. PARAHAEM 0058 OTHER BACTERIAL FOOD POISONING (not used in FY 2013) 00581 FOOD POISN D/T V. VULNIF 00589 BACT FOOD POISONING NEC 0059 FOOD POISONING NOS 0060 AC AMEBIASIS W/O ABSCESS 0061 CHR AMEBIASIS W/O ABSCES 0062 AMEBIC NONDYSENT COLITIS 0070 BALANTIDIASIS 0071 GIARDIASIS 0072 COCCIDIOSIS 0073 INTEST TRICHOMONIASIS 0074 CRYPTOSPORIDIOSIS

	0727 Gastroenteritis Admission Rate (PDI 16)
	0075 CYCLOSPORIASIS 0078 PROTOZOAL INTEST DIS NEC 0079 PROTOZOAL INTEST DIS NOS 0080 ESCHERICHIA COLI (not used in FY 2013) 00800 INTEST INFEC E COLI NOS 00801 INT INF E COLI ENTRPATH 00802 INT INF E COLI ENTRTOXGN 00803 INT INF E COLI ENTRNVSV 00804 INT INF E COLI ENTRHMRG 00809 INT INF E COLI SPCF NEC 0081 ARIZONA ENTERITIS 0082 AEROBACTER ENTERITIS 0083 PROTEUS ENTERITIS 0084 OTHER SPECIFIED BACTERIA (not used in FY 2013) 00841 STAPHYLOCOCC ENTERITIS 00842 PSEUDOMONAS ENTERITIS 00843 INT INFEC CAMPYLOBACTER 00844 INT INF YRSNIA ENTRCLTCA 00845 INT INF CLSTRDIUM DFCILE 00846 INTES INFEC OTH ANEROBES 00847 INT INF OTH GRM NEG BCTR 00849 BACTERIAL ENTERITIS NEC 0085 BACTERIAL ENTERITIS NOS 11285 CANDIDAL ENTERITIS See Pediatric Quality Indicators Appendices: Appendix I – Definitions of Neonate, Newborn, Normal Newborn, and Outborn and Appendix J – Admission Codes for Transfers See Pediatric Quality Indicators technical specifications and appendices for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PDI_TechSpec.aspx) and in the supporting information.
Denominator Statement	Population ages 3 months through 17 years in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.
Denominator Details	The term “metropolitan area” (MA) was adopted by the U.S. Census in 1990 and referred collectively to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). In addition, “area” could refer to either 1) FIPS county, 2) modified FIPS county, 3) 1999 OMB Metropolitan Statistical Area, or 4) 2003 OMB Metropolitan Statistical Area. Micropolitan Statistical Areas are not used in the QI software. See AHRQ QI website or supplemental information for 2013 Population File Denominator report for calculation of population estimates embedded within AHRQ QI software programs. http://www.qualityindicators.ahrq.gov/Downloads/Software/SAS/V45/AHRQ%20QI%20Population%20File%20V4.5.pdf
Exclusions	Not applicable.

	0727 Gastroenteritis Admission Rate (PDI 16)
Exclusion details	Not applicable.
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with area random effect) and covariates for gender and age (in age groups). The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the year 2010 (combined), a database consisting of 44 states and approximately 5 million pediatric discharges (, and the U.S. Census data by county. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., area). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Additional information on methodology can be found in the Empirical Methods document on the AHRQ Quality Indicator website (www.qualityindicators.ahrq.gov) and in the supplemental information. The specific covariates for this measure are as follow:age and sex: 0-4 Males 5-9 Males 10-14 Males 15-17 Males 0-4 Females 5-9 Females 10-14 Females 15-17 Females The risk adjustment coefficient table can be found in the supplemental materials and at the following link: http://www.qualityindicators.ahrq.gov/Downloads/Modules/PDI/V45/Parameter_Estimates_PDI_45.pdf Available in attached Excel or csv file at S.2b
Stratification	Not applicable.
Type Score	Rate/proportion better quality = lower score
Algorithm	The observed rate is the number of discharges flagged with the outcome of interest divided by the number of persons in the population at risk. The predicted rate is estimated for each person based on a logistic regression model. The expected rate is the average predicted rate for the unit of interest (i.e. the county of residence). The risk-adjusted rate is calculated using the indirect method as observed rate divided by expected rate multiplied by the reference population rate. The performance score is a weighted average of the risk-adjusted rate and the reference population rate, where the weight is the signal-to-noise ratio. For additional information, please see supporing information in the Quality Indicator Empirical Methods. Information is also available on the AHRQ Quality Indicator website: www.qualityindicators.ahrq. No diagram provided

	0728 Asthma Admission Rate (PDI 14)
Status	Submitted
Steward	Agency for Healthcare Research and Quality
Description	Admissions with a principal diagnosis of asthma per 100,000 population, ages 2 through 17 years. Excludes cases with a diagnosis code for cystic fibrosis and anomalies of the respiratory system, obstetric admissions, and transfers from other institutions.
Type	Outcome
Data Source	Administrative claims All analyses were completed using data from the Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID), 2007-2011.HCUP is a family of health care databases and related software tools and products developed through a Federal-State-Industry partnership and sponsored by the Agency for Healthcare Research and Quality (AHRQ). HCUP databases bring together the data collection efforts of State data organizations, hospital associations, private data organizations, and the Federal government to create a national information resource of encounter-level health care data. The HCUP SID contain the universe of the inpatient discharge abstracts in participating States, translated into a uniform format to facilitate multi-State comparisons and analyses. Together, the SID encompass about 97 percent of all U.S. community hospital discharges (in 2011, 46 states participated for a total of more than 38.5 million hospital discharges with approximately 5 million pediatric (including births) hospital discharges). As defined by the American Hospital Association, community hospitals are all non-Federal, short-term, general or other specialty hospitals, excluding hospital units of institutions. Veterans hospitals and other Federal facilities are excluded. General and speciality children's hospitals are included in the hospital universe. Taken from the Uniform Bill-04 (UB-04), the SID data elements include ICD-9-CM coded principal and secondary diagnoses and procedures, additional detailed clinical and service information based on revenue codes, admission and discharge status, patient demographics, expected payment source (Medicare, Medicaid, private insurance as well as the uninsured), total charges and length of stay (www.hcup-us.ahrq.gov) HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). 2007-2011. Agency for Healthcare Research and Quality, Rockville, MD. www.ahrq.gov/sidoverview.jsp (AHRQ QI Software Version 4.5, www.qualityindicators.ahrq.gov) Available at measure-specific web page URL identified in S.1 Attachment Asthma_Admission_Rate_-_Pediatric_Quality_Indicators_PDI_14-635296211157546484.xlsx
Level	Population : County or City, Population : National, Population : Regional, Population : State
Setting	Hospital/Acute Care Facility
Time Window	Time window can be determined by user, but is generally 1 year.
Numerator Statement	Discharges, for patients ages 2 through 17 years, with a principal ICD-9-CM diagnosis code for asthma.

	0728 Asthma Admission Rate (PDI 14)
Numerator Details	ICD-9-CM Asthma diagnosis codes: 49300 EXTRINSIC ASTHMA NOS 49301 EXT ASTHMA W STATUS ASTH 49302 EXT ASTHMA W(ACUTE) EXAC 49310 INTRINSIC ASTHMA NOS 49311 INT ASTHMA W STATUS ASTH 49312 INT ASTHMA W (AC) EXAC 49320 CHRONIC OBST ASTHMA NOS 49321 CH OB ASTHMA W STAT ASTH 49322 CH OBST ASTH W (AC) EXAC 49381 EXERCSE IND BRONCHOSPASM 49382 COUGH VARIANT ASTHMA 49390 ASTHMA NOS 49391 ASTHMA W STATUS ASTHMAT 49392 ASTHMA NOS W (AC) EXAC Exclude cases: • with any-listed ICD-9-CM diagnosis codes for cystic fibrosis and anomalies of the respiratory system • transfer from a hospital (different facility) • transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) • transfer from another health care facility • MDC 14 (pregnancy, childbirth, and puerperium) • with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), principal diagnosis (DX1=missing), or county (PSTCO=missing) ICD-9-CM Cystic fibrosis and anomalies of the respiratory system diagnosis codes: 27700 CYSTIC FIBROS W/O ILEUS 27701 CYSTIC FIBROSIS W ILEUS 27702 CYSTIC FIBROS W PUL MAN 27703 CYSTIC FIBROSIS W GI MAN 27709 CYSTIC FIBROSIS NEC 51661 NEUROEND CELL HYPRPL INF 51662 PULM INTERSTITL GLYCOGEN 51663 SURFACTANT MUTATION LUNG 51664 ALV CAP DYSP W VN MISALN 51669 OTH INTRST LUNG DIS CHLD 74721 ANOMALIES OF AORTIC ARCH 7483 LARYNGOTRACH ANOMALY NEC 7484 CONGENITAL CYSTIC LUNG 7485 AGENESIS OF LUNG 74860 LUNG ANOMALY NOS 74861 CONGEN BRONCHIECTASIS 74869 LUNG ANOMALY NEC 7488 RESPIRATORY ANOMALY NEC 7489 RESPIRATORY ANOMALY NOS 7503 CONGENESOPH FISTULA/ATRES 7593 SITUS INVERSUS 7707 PERINATAL CHR RESP DIS See Pediatric Quality Indicators Appendices: Appendix J – Admission Codes for Transfers. See Pediatric Quality Indicators technical specifications and appendices for additional details (available at http://www.qualityindicators.ahrq.gov/Modules/PDI_TechSpec.aspx) and in the

	0728 Asthma Admission Rate (PDI 14)
Denominator Statement	Population ages 2 through 17 years in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.
Denominator Details	The term "metropolitan area" (MA) was adopted by the U.S. Census in 1990 and referred collectively to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). In addition, "area" could refer to either 1) FIPS county, 2) modified FIPS county, 3) 1999 OMB Metropolitan Statistical Area, or 4) 2003 OMB Metropolitan Statistical Area. Micropolitan Statistical Areas are not used in the QI software. See AHRQ QI website or supplemental information for 2013 Population File Denominator report for calculation of population estimates embedded within AHRQ QI software programs. http://www.qualityindicators.ahrq.gov/Downloads/Software/SAS/V45/AHRQ%20QI%20Population%20File%20V4.5.pdf NOTE: The denominator can be specified with the asthmatic population only. Payers have also specified annual disease-specific population denominators based on all-claims data for beneficiaries, restricting the denominator to those beneficiaries who have an indication of asthma in a previous outpatient or inpatient visit. Annual asthma-specific population denominators would need to be weighted by months of beneficiary enrollment. Reliability testing currently underway for application of the measure to other populations, such as patients in physician practices.
Exclusions	Not applicable
Exclusion details	Not applicable

	0728 Asthma Admission Rate (PDI 14)
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with area random effect) and covariates for gender and age (in age groups). The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the year 2010 (combined), a database consisting of 44 states and approximately 5 million pediatric discharges (, and the U.S. Census data by county. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., area). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Additional information on methodology can be found in the Empirical Methods document on the AHRQ Quality Indicator website (www.qualityindicators.ahrq.gov) and in the supplemental information. The specific covariates for this measure are as follow:age and sex: 2-4 Males 5-9 Males 10-14 Males 15-17 Males 2-4 Females 5-9 Females 10-14 Females 15-17 Females The risk adjustment coefficient table can be found in the supplemental materials and at the following link: http://www.qualityindicators.ahrq.gov/Downloads/Modules/PDI/V45/Parameter_Estimates_PDI_45.pdf Available in attached Excel or csv file at S.2b
Stratification	Not applicable
Type Score	Rate/proportion better quality = lower score
Algorithm	The observed rate is the number of discharges flagged with the outcome of interest divided by the number of persons in the population at risk. The predicted rate is estimated for each person based on a logistic regression model. The expected rate is the average predicted rate for the unit of interest (i.e. the county of residence). The risk-adjusted rate is calculated using the indirect method as observed rate divided by expected rate multiplied by the reference population rate. The performance score is a weighted average of the risk-adjusted rate and the reference population rate, where the weight is the signal-to-noise ratio. For additional information, please see supporing information in the Quality Indicator Empirical Methods. Information is also available on the AHRQ Quality Indicator website: www.qualityindicators.ahrq.gov No diagram provided

	2372 Breast Cancer Screening
Status	Submitted
Steward	National Committee for Quality Assurance
Description	The percentage of women 50-74 years of age who had a mammogram to screen for breast cancer.
Type	Process
Data Source	Administrative claims, Electronic Clinical Data This measure is based on administrative claims collected in the course of providing care to health plan members. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from Health Management Organizations and Preferred Provider Organizations via NCQA's online data submission system. No data collection instrument provided Attachment 2372_Breast_Cancer_Screening_Value_Sets.xlsx
Level	Health Plan, Integrated Delivery System
Setting	Ambulatory Care : Clinician Office/Clinic
Time Window	27 months.
Numerator Statement	Women who received a mammogram to screen for breast cancer.
Numerator Details	Women who received one or more mammograms any time on or between October 1 two years prior to the measurement year and December 31 of the measurement year. Notes: (1) The purpose of this measure is to evaluate primary screening. Do not count biopsies, breast ultrasounds or MRIs because they are not appropriate methods for primary breast cancer screening. (2) The numerator time frame is 27 months. NCQA allows for a 3-month leeway, a method used for other HEDIS measures (as determined on a per-measure basis), in recognition of the logistics of scheduling and receiving a mammogram and to avoid potential overuse of screening. This time frame was recommended by our expert advisory panels and approved by our Committee on Performance Measurement, which oversees measures used in the HEDIS Health Plan Measures Set. See attached code value sets.
Denominator Statement	Women 52-74 years as of December 31 of the measurement year Note: this denominator statement captures women age 50-74 years; it is structured to account for the look-back period for mammograms.

	2372 Breast Cancer Screening
Denominator Details	Product lines: Commercial, Medicaid, Medicare Ages: Women 52-74 years as of December 31 of the measurement year (Note: this denominator statement captures women age 50-74 years; it is structured to account for the look-back period for mammograms). Continuous Enrollment: October 1 two years prior to the measurement year through December 31 of the measurement year. Allowable gap: No more than one gap of enrollment of up to 45 days during each year of continuous enrollment. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage during each year of continuous enrollment. Anchor date: December 31 of the measurement year. Benefit: Medical. Event/diagnosis: None.
Exclusions	Bilateral mastectomy any time during the member's history through December 31 of the measurement year. Any of the following meet criteria for bilateral mastectomy: 1) Bilateral mastectomy 2) Unilateral mastectomy with a bilateral modifier 3) Two unilateral mastectomies on different dates of service and 4) Both of the following (on the same date of service): Unilateral mastectomy with a right-side modifier and unilateral mastectomy with a left-side modifier.
Exclusion details	See attached code value sets.
Risk Adjustment	No risk adjustment or risk stratification N/A
Stratification	N/A
Type Score	Rate/proportion better quality = higher score
Algorithm	Refer to items S.9 for additional denominator details and attached code value sets for codes. Step 1. Determine the eligible population. To do so, identify women 52-74 years of age by the anchor date who meet the continuous enrollment and benefit requirements (S.9). Step 2. Search administrative systems to identify numerator events for all members in the eligible population. Step 3. For members for whom administrative data do not show a positive numerator event, search administrative data for an exclusion to mammography (S.10). Step 4. Exclude from the eligible population members from step 3 for whom administrative system data identified an exclusion to mammography. Step 5. Calculate the rate. No diagram provided

	2372 Breast Cancer Screening
Copyright / Disclaimer	5.1 Identified measures: 0508 : Inappropriate Use of "Probably Benign" Assessment Category in Mammography Screening 0509 : Reminder System for Mammograms 5a.1 Are specs completely harmonized? No 5a.2 If not completely harmonized, identify difference, rationale, impact: NQF #0509 Reminder System for Mammograms specifies a denominator of "women 40 years and older undergoing a screening mammogram", while our measure denominator has been updated to women 50-74 years in order to align with the current U.S. Preventive Services Task Force guideline for Breast Cancer Screening. 5b.1 If competing, why superior or rationale for additive value: N/A

	2508 Prevention: Dental Sealants for 6-9 Year-Old Children at Elevated Caries Risk
Status	Submitted
Steward	American Dental Association on behalf of the Dental Quality Alliance
Description	Percentage of enrolled children in the age category of 6-9 years at "elevated" risk (i.e., "moderate" or "high") who received a sealant on a permanent first molar tooth within the reporting year.
Type	Process
Data Source	Administrative claims Not applicable. No data collection instrument provided No data dictionary
Level	Health Plan, Integrated Delivery System
Setting	Ambulatory Care : Clinician Office/Clinic
Time Window	Numerator: 12 months Denominator: 12 months for denominator with look-back period of up to three years to identify children at elevated risk; however, children are not required to be enrolled during the prior three years.
Numerator Statement	Unduplicated number of enrolled children age 6-9 years at "elevated" risk (i.e., "moderate" or "high") who received a sealant on a permanent first molar tooth as a dental service.
Numerator Details	Please see section S18
Denominator Statement	Unduplicated number of enrolled children age 6-9 years who are at "elevated" risk (i.e., "moderate" or "high")
Denominator Details	Please see section S18

	2508 Prevention: Dental Sealants for 6-9 Year-Old Children at Elevated Caries Risk
Exclusions	Medicaid/ CHIP programs should apply the following overall exclusions before determining the denominator: - Undocumented aliens who are eligible only for emergency Medicaid services; - Other groups of individuals under age 21 who are eligible only for limited services as part of their Medicaid eligibility (e.g., pregnancy-related services) and would not be eligible for routine dental care Programs should report the exclusion criteria along with the number and percentage of members excluded. There are no other exclusions.
Exclusion details	There are no other exclusions than those described above.
Risk Adjustment	No risk adjustment or risk stratification Not applicable. Provided in response box S.15a
Stratification	There are no stratifications for this measure.
Type Score	Rate/proportion better quality = higher score
Algorithm	Sealants for 6 – 9 year olds - Calculation for Children at Elevated Caries Risk 1. Run records for one reporting year for paid and unpaid claims. 2. Check if the enrollee meets age criteria at the last day of the reporting year a. If child is >= 6 and <= 9, then proceed to next step. b. If age criterion is not met or there are missing or invalid field codes (e.g., date of birth), then STOP processing. This enrollee does not get counted. 3. Check if subject is continuously enrolled for at least 180 days, a. If subject meets continuous enrollment criterion, then proceed to next step. b. If subject does not meet enrollment criterion, then STOP processing. This enrollee does not get counted. YOU NOW HAVE THE COUNT OF THOSE WHO MEET THE AGE AND ENROLLMENT CRITERIA 4. Check if subject is at “elevated risk” a. If subject meets any of the following criteria then include in denominator. i. the subject has a visit with a CDT code = (D0602 or D0603) in the reporting year, OR ii. the subject has a SERVICE Code among those in Table 1 in the reporting year, OR iii. the subject has a SERVICE Code among those in Table 1 in any of the three years prior to the reporting year (NOTE: The subject does not need to be enrolled in any of the prior three years for the denominator enrollment criteria; this is a “look back” for enrollees who do have claims experience in any of the prior three years.) b. If the subject does not meet any of the above criteria for elevated risk, then STOP processing. This enrollee will not be included in the measure denominator. YOU NOW HAVE THE DENOMINATOR (DEN): Enrollees who are at “elevated risk” 5. Check if subject received a sealant as a dental service a. If [SERVICE CODE] = D1351 and; b. If [RENDERING PROVIDER TAXONOMY] code = any of the NUCC maintained Provider Taxonomy Codes in Table 2 below, then proceed to next step. c. If both a AND b are not met, then the service was not a “dental service”; STOP processing. This enrollee is already included in the denominator but will not be included in the numerator. Note: In this step, all claims with missing or invalid SERVICE-CODE, missing or invalid NUCC

	2508 Prevention: Dental Sealants for 6-9 Year-Old Children at Elevated Caries Risk
	maintained Provider Taxonomy Codes, or NUCC maintained Provider Taxonomy Codes that do not appear in Table 2 should not be included in the numerator. 6. Check if sealant was placed on a permanent first molar a. If [TOOTH-NUMBER] = 3, 14, 19 or 30 then include in numerator; STOP processing. b. If not, then service was not provided for the first permanent molar; STOP processing. This enrollee is already included in the denominator but will not be included in the numerator. YOU NOW HAVE NUMERATOR (NUM) COUNT: Enrollees at "elevated risk" who received sealants on a permanent first molar as a dental service 7. Report a. Unduplicated number of enrollees in numerator b. Unduplicated number of enrollees in each denominator c. Measure rate (NUM/DEN) Table 1: CDT Codes to identify "elevated risk" D2140 D2394 D2630 D2720 D2791 D3120 D2150 D2410 D2642 D2721 D2792 D3220 D2160 D2420 D2643 D2722 D2794 D3221 D2161 D2430 D2644 D2740 D2799 D3222 D2330 D2510 D2650 D2750 D2930 D3230 D2331 D2520 D2651 D2751 D2931 D3240 D2332 D2530 D2652 D2752 D2932 D3310 D2335 D2542 D2662 D2780 D2933 D3320 D2390 D2543 D2663 D2781 D2934 D3330 D2391 D2544 D2664 D2782 D2940 D2392 D2610 D2710 D2783 D2950 D2393 D2620 D2712 D2790 D3110 Table 2: NUCC maintained Provider Taxonomy Codes classified as "Dental Service"* 122300000X 1223P0106X 1223X0008X 261QF0400X 1223D0001X 1223P0221X 1223X0400X 261QR1300X 1223D0004X 1223P0300X 124Q00000X+ 1223E0200X 1223P0700X 125J00000X 1223G0001X 1223S0112X 125K00000X *Services provided by County Health Department dental clinics may also be included as "dental" services. +Only dental hygienists who provide services under the supervision of a dentist should be classified as "dental" services. Services provided by independently practicing dental hygienists should be classified as "oral health" services and are not applicable for this measure. Available in attached appendix at A.1

	2509 Prevention: Dental Sealants for 10-14 Year-Old Children at Elevated Caries Risk
Status	Submitted
Steward	American Dental Association on behalf of the Dental Quality Alliance

	2509 Prevention: Dental Sealants for 10-14 Year-Old Children at Elevated Caries Risk
Description	Percentage of enrolled children in the age category of 10-14 years at "elevated" risk (i.e., "moderate" or "high") who received a sealant on a permanent second molar tooth within the reporting year.
Type	Process
Data Source	Administrative claims Not applicable. No data collection instrument provided No data dictionary
Level	Health Plan, Integrated Delivery System
Setting	Ambulatory Care : Clinician Office/Clinic
Time Window	Numerator: 12 months Denominator: 12 months for denominator with look-back period of up to three years to identify children at elevated risk; however, children are not required to be enrolled during the prior three years.
Numerator Statement	Unduplicated number of enrolled children age 10-14 years at "elevated" risk (i.e., "moderate" or "high") who received a sealant on a permanent second molar tooth as a dental service.
Numerator Details	Please see Section S18
Denominator Statement	Unduplicated number of enrolled children age 10-14 years who are at "elevated" risk (i.e., "moderate" or "high")
Denominator Details	Please see Section S18.
Exclusions	Medicaid/ CHIP programs should apply the following overall exclusions before determining the denominator: - Undocumented aliens who are eligible only for emergency Medicaid services; - Other groups of individuals under age 21 who are eligible only for limited services as part of their Medicaid eligibility (e.g., pregnancy-related services) and would not be eligible for routine dental care Programs should report the exclusion criteria along with the number and percentage of members excluded. There are no other exclusions.
Exclusion details	There are no other exclusions than those described above.
Risk Adjustment	No risk adjustment or risk stratification Not applicable. Provided in response box S.15a
Stratification	There are no stratifications for this measure.
Type Score	Rate/proportion better quality = higher score
Algorithm	Sealants for 10-14 year olds - Calculation for Children at Elevated Caries Risk 1. Run records for one reporting year for paid and unpaid claims. 2. Check if the enrollee meets age criteria at the last day of the reporting year a. If child is >= 10 and <= 14, then proceed to next step. b. If age criterion is not met or there are missing or invalid field codes (e.g., date of birth), then STOP processing. This enrollee does not get counted. 3. Check if subject is continuously enrolled for at least 180 days, a. If subject meets continuous enrollment criterion, then proceed to next step. b. If subject does not meet enrollment criterion, then STOP processing. This enrollee

does not get counted.

YOU NOW HAVE THE COUNT OF THOSE WHO MEET THE AGE AND ENROLLMENT CRITERIA

4. Check if subject is at "elevated risk"

a. If subject meets any of the following criteria then include in denominator:

i. the subject has a visit with a CDT code = (D0602 or D0603) in the reporting year, OR

ii. the subject has a SERVICE Code among those in Table 1 in the reporting year, OR

iii. the subject has a SERVICE Code among those in Table 1 in any of the three years prior to the measurement year (NOTE: The subject does not need to be enrolled in any of the prior three years for the denominator enrollment criteria; this is a "look back" for enrollees who do have claims experience in any of the prior three years.)

b. If the subject does not meet any of the above criteria for elevated risk, then STOP processing. This enrollee will not be included in the measure denominator.

YOU NOW HAVE THE DENOMINATOR (DEN): Enrollees who are at "elevated risk"

5. Check if subject received a sealant as a dental service

a. If [SERVICE CODE] = D1351, and;

b. If [RENDERING PROVIDER TAXONOMY] code = any of the NUCC maintained Provider Taxonomy Codes in Table 2 below, then proceed to next step.

c. If both a AND b are not met, then the service was not a "dental service"; STOP processing. This enrollee is already included in the denominator but will not be included in the numerator.

Note: In this step, all claims with missing or invalid SERVICE-CODE, missing or invalid NUCC maintained Provider Taxonomy Codes, or NUCC maintained Provider Taxonomy Codes that do not appear in Table 2 should not be included in the numerator.

6. Check if sealant was placed on a permanent second molar

a. If [TOOTH-NUMBER] = 2, 15, 18, 31 then include in numerator; STOP processing.

b. If not, then service was not provided for the second permanent molar; STOP processing. This enrollee is already included in the denominator but will not be included in the numerator.

YOU NOW HAVE NUMERATOR (NUM) COUNT: Enrollees at "elevated risk" who received sealants on a permanent second molar as a dental service

7. Report

a. Unduplicated number of enrollees in numerator

b. Unduplicated number of enrollees in each denominator

c. Measure rate (NUM/DEN)

Table 1: CDT Codes to identify "elevated risk"

D2140	D2394	D2630	D2720	D2791	D3120
D2150	D2410	D2642	D2721	D2792	D3220
D2160	D2420	D2643	D2722	D2794	D3221
D2161	D2430	D2644	D2740	D2799	D3222
D2330	D2510	D2650	D2750	D2930	D3230
D2331	D2520	D2651	D2751	D2931	D3240
D2332	D2530	D2652	D2752	D2932	D3310
D2335	D2542	D2662	D2780	D2933	D3320
D2390	D2543	D2663	D2781	D2934	D3330
D2391	D2544	D2664	D2782	D2940	

	2509 Prevention: Dental Sealants for 10-14 Year-Old Children at Elevated Caries Risk
	D2392 D2610 D2710 D2783 D2950 D2393 D2620 D2712 D2790 D3110 Table 2: NUCC maintained Provider Taxonomy Codes classified as "Dental Service"* 122300000X 1223P0106X 1223X0008X 261QF0400X 1223D0001X 1223P0221X 1223X0400X 261QR1300X 1223D0004X 1223P0300X 124Q00000X+ 1223E0200X 1223P0700X 125J00000X 1223G0001X 1223S0112X 125K00000X *Services provided by County Health Department dental clinics may also be included as "dental" services. +Only dental hygienists who provide services under the supervision of a dentist should be classified as "dental" services. Services provided by independently practicing dental hygienists should be classified as "oral health" services and are not applicable for this measure. Available in attached appendix at A.1

	2511 Utilization of Services, Dental Services
Status	Submitted
Steward	American Dental Association on behalf of the Dental Quality Alliance
Description	Percentage of enrolled children under age 21 years who received at least one dental service within the reporting year.
Type	Process
Data Source	Administrative claims Not applicable. No data collection instrument provided No data dictionary
Level	Health Plan, Integrated Delivery System
Setting	Ambulatory Care : Clinician Office/Clinic
Time Window	12 months for both numerator and denominator
Numerator Statement	Unduplicated number of children under age 21 years who received at least one dental service
Numerator Details	Please see section S18.
Denominator Statement	Unduplicated number of enrolled children under age 21 years
Denominator Details	Please see Section S18.

	2511 Utilization of Services, Dental Services
Exclusions	Medicaid/ CHIP programs should apply the following overall exclusions before determining the denominator: - Undocumented aliens who are eligible only for emergency Medicaid services; - Other groups of individuals under age 21 who are eligible only for limited services as part of their Medicaid eligibility (e.g., pregnancy-related services) and would not be eligible for routine dental care Programs should report the exclusion criteria along with the number and percentage of members excluded. There are no other exclusions.
Exclusion details	There are no other exclusions than those described above.
Risk Adjustment	No risk adjustment or risk stratification Not applicable.
Stratification	This measure will be stratified by age using the following categories: <1; 1-2; 3-5; 6-7; 8-9; 10-11; 12-14; 15-18; 19-20 No new data are needed for this stratification. Please see attached specifications for complete measure details.
Type Score	Rate/proportion better quality = higher score

	2511 Utilization of Services, Dental Services
Algorithm	Utilization of Services Calculation 1. Run records for one reporting year for paid and unpaid claims. 2. Check if the enrollee meets age criteria at the last day of the reporting year a. If age criterion is met, then proceed to next step. b. If age criterion is not met or there are missing or invalid field codes (e.g., date of birth), then STOP processing. This enrollee does not get counted in the denominator. 3. Check if subject is continuously enrolled for at least 180 days , a. If subject meets continuous enrollment criterion, then include in denominator; proceed to next step. b. If subject does not meet enrollment criterion, then STOP processing. This enrollee does not get counted in the denominator. YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: All enrollees who meet the age and enrollment criteria 4. Check if subject received any dental service a. If [SERVICE-CODE] = D0100 – D9999, and; b. If [RENDERING PROVIDER TAXONOMY] code = any of the NUCC maintained Provider Taxonomy Codes or their equivalent in Table 1 below, then include in numerator; STOP processing c. If both a & b are not met, then service was not provided or not a dental service; STOP processing. This enrollee is already included in the denominator but will not be included in the numerators. Note: In this step, all claims with missing or invalid SERVICE-CODE, missing or invalid NUCC maintained Provider Taxonomy Codes, or NUCC maintained Provider Taxonomy Codes that do not appear in Table 1 should not be included in the numerator. YOU NOW HAVE NUMERATOR NUM COUNT: Enrollees who received a dental service 5. Report a. Unduplicated number of enrollees in numerator b. Unduplicated number of enrollees in denominator c. Measure Rate (NUM/DEN) d. Rate stratified by age Table 1: NUCC maintained Provider Taxonomy Codes classified as “Dental Service”* 122300000X 1223P0106X 1223X0008X 261QF0400X 1223D0001X 1223P0221X 1223X0400X 261QR1300X 1223D0004X 1223P0300X 124Q00000X+ 1223E0200X 1223P0700X 125J00000X 1223G0001X 1223S0112X 125K00000X *Services provided by County Health Department dental clinics may also be included as “dental” services. +Only dental hygienists who provide services under the supervision of a dentist should be classified as “dental” services. Services provided by independently practicing dental hygienists should be classified as “oral health” services and are not applicable for this measure. Available in attached appendix at A.1

	2517 Oral Evaluation, Dental Services
Status	Submitted
Steward	American Dental Association on behalf of the Dental Quality Alliance
Description	Percentage of enrolled children under age 21 years who received a comprehensive or periodic oral evaluation within the reporting year.
Type	Process
Data Source	Administrative claims Not applicable. No data collection instrument provided No data dictionary
Level	Health Plan, Integrated Delivery System
Setting	Ambulatory Care : Clinician Office/Clinic
Time Window	12 months for both numerator and denominator
Numerator Statement	Unduplicated number of enrolled children under age 21 years who received a comprehensive or periodic oral evaluation as a dental service
Numerator Details	Please see Section S18.
Denominator Statement	Unduplicated number of enrolled children under age 21 years
Denominator Details	Please see Section S18.
Exclusions	Medicaid/ CHIP programs should apply the following overall exclusions before determining the denominator: - Undocumented aliens who are eligible only for emergency Medicaid services; - Other groups of individuals under age 21 who are eligible only for limited services as part of their Medicaid eligibility (e.g., pregnancy-related services) and would not be eligible for routine dental care Programs should report the exclusion criteria along with the number and percentage of members excluded. There are no other exclusions.
Exclusion details	There are no other exclusions than those described above.
Risk Adjustment	No risk adjustment or risk stratification Not applicable. Provided in response box S.15a
Stratification	This measure will be stratified by age using the following categories: <1; 1-2; 3-5; 6-7; 8-9; 10-11; 12-14; 15-18; 19-20 No new data are needed for this stratification. Please see attached specifications for complete measure details.
Type Score	Rate/proportion better quality = higher score

	2517 Oral Evaluation, Dental Services
Algorithm	Oral Evaluation Calculation 1. Run records for one reporting year for paid and unpaid claims. 2. Check if the enrollee meets age criteria at the last day of the reporting year a. If age criterion is met, then proceed to next step. b. If age criterion is not met or there are missing or invalid field codes (e.g., date of birth), then STOP processing. This enrollee does not get counted in the denominator. 3. Check if subject is continuously enrolled for at least 180 days , a. If subject meets continuous enrollment criterion, then include in denominator; proceed to next step. b. If subject does not meet enrollment criterion, then STOP processing. This enrollee does not get counted in the denominator. YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: All enrollees who meet age and enrollment criteria 4. Check if subject received an oral evaluation as a dental service a. If [SERVICE-CODE] = D0120 or D0150 or D0145, and; b. If [RENDERING PROVIDER TAXONOMY] code = any of the NUCC maintained Provider Taxonomy Codes in Table 1 below, then include in numerator; proceed to next step. c. If both a AND b are not met, then the service was not provided or not a "dental service"; STOP processing. This enrollee is already included in the denominator but will not be included in the numerator. Note: In this step, all claims with missing or invalid SERVICE-CODE, missing or invalid NUCC maintained Provider Taxonomy Codes, or NUCC maintained Provider Taxonomy Codes that do not appear in Table 1 should not be included in the numerator. YOU NOW HAVE NUMERATOR (NUM) COUNT: Enrollees who received an oral evaluation as a dental service 5. Report a. Unduplicated number of enrollees in numerator b. Unduplicated number of enrollees in denominator c. Measure Rate NUM/DEN d. Rate stratified by age Table 1: NUCC maintained Provider Taxonomy Codes classified as "Dental Service"* 122300000X 1223P0106X 1223X0008X 261QF0400X 1223D0001X 1223P0221X 1223X0400X 261QR1300X 1223D0004X 1223P0300X 124Q00000X+ 1223E0200X 1223P0700X 125J00000X 1223G0001X 1223S0112X 125K00000X *Services provided by County Health Department dental clinics may also be included as "dental" services. +Only dental hygienists who provide services under the supervision of a dentist should be classified as "dental" services. Services provided by independently practicing dental hygienists should be classified as "oral health" services and are not applicable for this measure. Available in attached appendix at A.1

	2518 Care Continuity, Dental Services
Status	Submitted
Steward	American Dental Association on behalf of the Dental Quality Alliance
Description	Percentage of enrolled children aged 2-21 years enrolled in two consecutive years who received a comprehensive or periodic oral evaluation in both years.
Type	Process
Data Source	Administrative claims Not applicable. No data collection instrument provided No data dictionary
Level	Health Plan, Integrated Delivery System
Setting	Ambulatory Care : Clinician Office/Clinic
Time Window	24 months for both numerator and denominator
Numerator Statement	Unduplicated number of children who received a comprehensive or periodic oral evaluation as a dental service in both years
Numerator Details	Please see Section S18.
Denominator Statement	Unduplicated number of children aged 2-21 years enrolled in two consecutive years
Denominator Details	Please see Section S18.
Exclusions	Medicaid/ CHIP programs should apply the following overall exclusions before determining the denominator: - Undocumented aliens who are eligible only for emergency Medicaid services; - Other groups of individuals under age 21 who are eligible only for limited services as part of their Medicaid eligibility (e.g., pregnancy-related services) and would not be eligible for routine dental care Programs should report the exclusion criteria along with the number and percentage of members excluded. There are no other exclusions.
Exclusion details	There are no other exclusions than those described above.
Risk Adjustment	No risk adjustment or risk stratification Not applicable. Provided in response box S.15a
Stratification	This measure will be stratified by age using the following categories: 2-5; 6-7; 8-9; 10-11; 12-14; 15-18; 19-20 No new data are needed for this stratification. Please see attached specifications for complete measure details.
Type Score	Rate/proportion better quality = higher score

	2518 Care Continuity, Dental Services
Algorithm	Care Continuity Calculation 1. Run records for one reporting year for paid and unpaid claims. 2. Check if the enrollee meets age criteria at the last day of the reporting year a. If age criterion is met, then proceed to next step. b. If age criterion is not met or there are missing or invalid field codes (e.g. date of birth), then STOP processing. This enrollee does not get counted in the denominator. 3. Check if subject is continuously enrolled for at least 180 days in each year (i.e., 180 days in reporting year AND 180 days in prior year) a. If subject meets continuous enrollment criterion, then include in denominator; proceed to next step. b. If subject does not meet enrollment criterion, then STOP processing. This enrollee does not get counted in the denominator. YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: All enrollees who meet age and enrollment criteria in each year 4. Check if subject received oral evaluation as a dental service in each year. a. If [SERVICE CODE] = D0120 or D0150 or D0145 in the reporting year AND in the prior year, and; b. If [RENDERING PROVIDER TAXONOMY] code = any of the NUCC maintained Provider Taxonomy Codes in Table 1 below, then include in numerator; proceed to next step. c. If both a AND b are not met, then the service was not a "dental service"; STOP processing. This enrollee is already included in the denominator but will not be included in the numerator. Note: In this step, all claims with missing or invalid SERVICE-CODE, missing or invalid NUCC maintained Provider Taxonomy Codes, or NUCC maintained Provider Taxonomy Codes that do not appear in Table 1 should not be included in the numerator. YOU NOW HAVE NUMERATOR (NUM) COUNT: Enrollees who received oral evaluation as a dental service in each year 5. Report a. Unduplicated number of enrollees in numerator b. Unduplicated number of enrollees in denominator c. Measure rate (NUM/DEN) d. Rate stratified by age Table 1: NUCC maintained Provider Taxonomy Codes classified as "Dental Service"* 122300000X 1223P0106X 1223X0008X 261QF0400X 1223D0001X 1223P0221X 1223X0400X 261QR1300X 1223D0004X 1223P0300X 124Q00000X+ 1223E0200X 1223P0700X 125J00000X 1223G0001X 1223S0112X 125K00000X *Services provided by County Health Department dental clinics may also be included as "dental" services. +Only dental hygienists who provide services under the supervision of a dentist should be classified as "dental" services. Services provided by independently practicing dental hygienists should be classified as "oral health" services and are not applicable for this measure. Available in attached appendix at A.1

	2528 Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services
Status	Submitted
Steward	American Dental Association on behalf of the Dental Quality Alliance
Description	Percentage of enrolled children aged 1-21 years who are at “elevated” risk (i.e., “moderate” or “high”) who received at least 2 topical fluoride applications within the reporting year.
Type	Process
Data Source	Administrative claims Not applicable. No data collection instrument provided No data dictionary
Level	Health Plan, Integrated Delivery System
Setting	Ambulatory Care : Clinician Office/Clinic
Time Window	Numerator: 12 months Denominator: 12 months for denominator with look-back period of up to three years to identify children at elevated risk; however, children are not required to be enrolled during the prior three years.
Numerator Statement	Unduplicated number of enrolled children aged 1-21 years who are at “elevated” risk (i.e., “moderate” or “high”) who received at least 2 topical fluoride applications as a dental service
Numerator Details	Please see section S18.
Denominator Statement	Unduplicated number of enrolled children aged 1-21 years who are at “elevated” risk (i.e., “moderate” or “high”)
Denominator Details	Please see Section S18.
Exclusions	Medicaid/ CHIP programs should apply the following overall exclusions before determining the denominator: - Undocumented aliens who are eligible only for emergency Medicaid services; - Other groups of individuals under age 21 who are eligible only for limited services as part of their Medicaid eligibility (e.g., pregnancy-related services) and would not be eligible for routine dental care Programs should report the exclusion criteria along with the number and percentage of members excluded. There are no other exclusions.
Exclusion details	There are no other exclusions than those described above
Risk Adjustment	No risk adjustment or risk stratification Not applicable. Provided in response box S.15a
Stratification	This measure will be stratified by age using the following categories: 1-2; 3-5; 6-7; 8-9; 10-11; 12-14; 15-18; 19-20 No new data are needed for this stratification. Please see attached specifications for complete measure details.
Type Score	Rate/proportion better quality = higher score
Algorithm	Topical Fluoride Intensity Calculation for Children at Elevated Caries Risk 1. Run records for one reporting year for paid and unpaid claims. 2. Check if the enrollee meets age criteria at the last day of the reporting year a. If age criterion is met, then proceed to next step.

b. If age criterion is not met or there are missing or invalid field codes (e.g., date of birth), then STOP processing. This enrollee does not get counted.

3. Check if subject is continuously enrolled for the reporting year (12 months) with a gap of no more than 31 days (one month gap for programs that determine eligibility on a monthly basis),

a. If subject meets continuous enrollment criterion, then proceed to next step.

b. If subject does not meet enrollment criterion, then STOP processing. This enrollee does not get counted.

YOU NOW HAVE THE COUNT OF THOSE WHO MEET THE AGE AND ENROLLMENT CRITERIA

4. Check if subject is at "elevated risk"

a. If subject meets any of the following criteria then include in denominator:

i. the subject has a visit with a CDT code = (D0602 or D0603) in the reporting year, OR

ii. the subject has a SERVICE Code among those in Table 1 in the reporting year, OR

iii. the subject has a SERVICE Code among those in Table 1 in any of the three years prior to the reporting year (NOTE: The subject does not need to be enrolled in any of the prior three years for the denominator enrollment criteria; this is a "look back" for enrollees who do have claims experience in any of the prior three years.)

b. If the subject does not meet any of the above criteria for elevated risk, then STOP processing. This enrollee will not be included in the measure denominator.

YOU NOW HAVE THE DENOMINATOR (DEN): Enrollees who are at "elevated risk"

5. Check if subject received at least two fluoride applications as dental service during the reporting year – at least two unique dates of service when topical fluoride was provided. Service provided on each date of service should satisfy the following criteria:

a. If [SERVICE CODE] = D1206 or D1208 , and

b. If [RENDERING PROVIDER TAXONOMY] code = any of the NUCC maintained Provider Taxonomy Codes in Table 1 below, then include in numerator; proceed to next step.

c. If both a AND b are not met, then the service was not a "dental service"; STOP processing. This enrollee is already included in the denominator but will not be included in the numerator.

Note 1: No more than one fluoride application can be counted for the same member on the same date of service.

Note 2: All claims with missing or invalid SERVICE-CODE, missing or invalid NUCC maintained Provider Taxonomy Codes, or NUCC maintained Provider Taxonomy Codes that do not appear in Table 2 should not be included in the numerator.

YOU NOW HAVE NUMERATOR (NUM) COUNT: Enrollees at "elevated risk" who received fluoride as a dental service

6. Report

a. Unduplicated number of enrollees in numerator

b. Unduplicated number of enrollees in denominator

c. Measure Rate (NUM/DEN)

d. Rate stratified by age

Table 1: CDT Codes to identify "elevated risk"

D2140	D2394	D2630	D2720	D2791	D3120
D2150	D2410	D2642	D2721	D2792	D3220
D2160	D2420	D2643	D2722	D2794	D3221

	2528 Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services
	D2161 D2430 D2644 D2740 D2799 D3222 D2330 D2510 D2650 D2750 D2930 D3230 D2331 D2520 D2651 D2751 D2931 D3240 D2332 D2530 D2652 D2752 D2932 D3310 D2335 D2542 D2662 D2780 D2933 D3320 D2390 D2543 D2663 D2781 D2934 D3330 D2391 D2544 D2664 D2782 D2940 D2392 D2610 D2710 D2783 D2950 D2393 D2620 D2712 D2790 D3110 Table 2: NUCC maintained Provider Taxonomy Codes classified as "Dental Service"* 122300000X 1223P0106X 1223X0008X 261QF0400X 1223D0001X 1223P0221X 1223X0400X 261QR1300X 1223D0004X 1223P0300X 124Q00000X+ 1223E0200X 1223P0700X 125J00000X 1223G0001X 1223S0112X 125K00000X *Services provided by County Health Department dental clinics may also be included as "dental" services. +Only dental hygienists who provide services under the supervision of a dentist should be classified as "dental" services. Services provided by independently practicing dental hygienists should be classified as "oral health" services and are not applicable for this measure. Available in attached appendix at A.1