Category 3 Quality Improvements

Category 3 Introduction
The overall objective of Category 3 is to assess the effectiveness of Category 1 and 2 interventions. As described in the Program Funding and Mechanics (PFM) Protocol, each project selected in Categories 1 and 2 will have an associated outcome measure from Category 3.

For the purposes of the RHP Planning and PFM Protocols, outcome measures are defined as "*measures that assess the results of care experienced by patients, including patients' clinical events, patients' recovery and health status, patients' experiences in the health system, and efficiency/cost."*

Outcomes in Category 3 consist of Process Milestones during DY2 and DY3 and Improvements Targets beginning no later than DY4. Process milestones will define what activities are undertaken to prepare for measuring and reporting of the outcomes in future years. These activities could include development of the plans to prepare for reporting, establishment of the baselines, and preparing data systems, among other activities.

Outcomes for Category 3 include

- Process Milestones for DY 2 and DY3
- Improvement Targets for DY4 and DY5 (could also be in DY3 for hospital inpatient projects)

The process milestones and improvement targets listed in this category will be specified by the performing provider, tailored to meet the target population and intervention goals of the related Category 1 and 2 projects.

The outcome improvement targets are labeled as standalone measures or non-standalone measures. Providers can select among the following methods to meet Category 3 requirements for each Category 1 and 2 project:

- **At least one standalone measure:** Providers can select a standalone measure from any outcome domain listed in the table below for Category 1 and 2 projects. Cost-related outcomes may be used as the standalone outcome only for project area 2.5 (Cost Containment). Cost outcomes can be selected as non-standalone measures for other project areas.
- **At least one standalone measure and additional non-standalone measure(s):** One or more non-standalone measures from any outcome domain can be combined with at least one standalone measure. If the selected measures are from different domains, the provider must includes a valid, evidence-based rationale explaining how the measures are complementary.
- **A combination of at least 3 non-standalone measures from the same outcome domain:** A provider can select a combination of 3 non-standalone measures for a Category 1 or 2 project as long as the measures come from the same outcome domain.

All Category 3 improvement targets listed below are evidence based and nationally endorsed by National Quality Forum (NQF), Agency for Healthcare Research and Quality (AHRQ), Centers for Medicare and Medicaid Services (CMS) or another nationally recognized organization.
Outcomes included in Category 3 for DY4 and DY5 as listed below do not represent an all-inclusive list of outcome measures. Performing providers can propose additional outcomes specific to their projects. The two tables below can be used as a guide for identifying outcome domains as they relate to the Category 1 and 2 project areas.

Project Area → / Outcome Domain ↓	1.1 PC Capacity	1.2 PC Work-force	1.3 Chronic Disease Registry	1.4 Interp. Services/ Culturally Competent Care	1.5 Collect REAL Data	1.6 Urgent Care/ Advice	1.7 Telemedi-cine/ Telehealth	1.8 Dental Servi-ces	1.9 Specialty Care Capacity	1.10 Perfor-mance Improve-ment	1.11 Tech. assisted services for BH	1.12 Appropriate levels of BH care	1.13 BH crisis stabilization services	1.14 Work-force for BH
PC & Chronic Disease (&)	X	X	X			X	X		X		X			X
PPA (*)	X	X	X	X	X	X	X	X	X		X			X
PPR (*)	X	X	X	X	X	X	X		X		X		X	X
PPC/ HAC (&)				X		X	X		X	X				
Cost (^)	X	X	X			X	X	X	X	X	X	X	X	X
Patient Satisfaction-ion (*)	X	X	X	X		X	X	X	X	X	X	X	X	X
Oral Health (&)								X						
Perinatal Outcomes (&)	X	X					X		X		X			
Right Care (*)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Functional Status/QOL (*)	X	X	X		X			X			X	X	X	
Health Disparities (&)	X	X	X	X	X		X	X	X	X	X	X	X	
Primary Care and Prevention (^)	X	X	X	X	X		X	X	X	X	X			
Palliative Care (&)				X			X							

* indicates all measures in this domain are stand alone
& indicates measures in this domain are stand alone and non-stand alone
^ indicates all measures in this domain are non-stand alone

This table identifies outcome domains as they may relate to project areas in Category 1. This list is not exhaustive or intended to dictate metric selection by project area, but more, offers guidance around how these outcomes can apply to the project areas, depending on the specific interventions proposed. Performing providers are expected to provide rationale for how each improvement target (metric) selected relates to the specific Category 1 project proposed.

2.20 Expand Primary Care Capacity
2.21 Increase Training of Primary Care Workforce
2.22 Implement a Chronic Disease Management Registry
2.23 Enhance Interpretation Services and Culturally Competent Care
2.24 Collect Valid and Reliable Race, Ethnicity, and Language (REAL) Data to Reduce Disparities
2.25 Expand Access to Urgent Care and Enhance Urgent Medical Advice
2.26 Introduce, Expand, or Enhance Telemedicine/Telehealth
2.27 Increase, Expand, and Enhance Dental Services
2.28 Expand Specialty Care Capacity
2.29 Enhance Performance Improvement and Reporting Capacity
2.30 Implement technology-assisted services (telehealth, telemonitoring, telementoring, or telemedicine) to support, coordinate, or deliver behavioral health services
2.31 Enhance service availability (i.e., hours, locations, transportation, mobile clinics) to appropriate levels of behavioral health care
2.32 Development of behavioral health crisis stabilization services as alternatives to hospitalization.
2.33 Develop Workforce enhancement initiatives to support access to behavioral health providers in underserved markets and areas (e.g., psychiatrists, psychologists, LMSWs, LPCs and LMFTs.)

Project Area → / Outcome Domain ↓	2.1 Medical Homes	2.2 Chronic Care Mgmt	2.3 Redesign PC	2.4 Redesign Pt. Exp	2.5 Cost	2.6 HP	2.7 Dis Prev.	2.8 PI	2.9 Pt. Nav.	2.10 Palliative Care	2.11 Rx Manage	2.12 Care Transitions Programs	2.13 BH Intervention	2.14 Well-ness	2.15 PC and BH	2.16 Guidance to BH providers	2.17 Care transitions for BH/SA	2.18 Peer support	2.19 Care Mgmt Inte-grate PC & BH
PC & Chronic Disease (&)	X	X	X	X		X	X	X	X				X	X	X	X		X	X
PPA (*)	X	X	X	X		X	X		X	X	X		X	X	X	X			X
PPR (*)	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X		X
PPC/ HAC (&)								X			X		X						
Cost (^)	X	X	X	X	X (*)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Patient Satisfaction(*)	X	X	X	X		X	X	X	X	X	X	X	X	X	X		X	X	X
Oral Health (&)						X													
Perinatal Outcomes (&)				X		X			X										
Right Care (*)	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
Functional Status/QOL (*)	X	X	X	X		X	X		X	X	X	X	X	X	X		X	X	X
Health Disparities (&)	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X
Primary Care and Prevention (^)	X	X	X	X		X	X		X		X	X			X	X			X
Palliative Care (&)									X	X	X	X							X

* indicates all measures in this domain are stand alone
& indicates measures in this domain are stand alone and non-stand alone
^ indicates all measures in this domain are non-stand alone

This table identifies outcome domains as they may relate to project areas in Category 2. This list is not exhaustive or intended to dictate metric selection by project area, but more, offer guidance around how these outcomes can apply to the project areas, depending on the specific interventions proposed. Performing providers are expected to provide rationale for how each improvement target (metric) selected relates to the specific Category 2 project proposed.

2.1 Enhance/Expand Medical Homes
2.2 Expand Chronic Care Management Models
2.3 Redesign Primary Care
2.4 Redesign to Improve Patient Experience
2.5 Redesign for Cost Containment
2.6 Implement Evidence-based Health Promotion Programs
2.7 Implement Evidence-based Disease Prevention Programs
2.8 Apply Process Improvement Methodology to Improve Quality/Efficiency
2.9 Establish/Expand a Patient Care Navigation Program
2.10 Use of Palliative Care Programs
2.11 Conduct Medication Management
2.12 Implement/Expand Care Transitions Programs
2.13 Provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting (i.e., the criminal justice system, ER, urgent care etc.)
2.14 Implement person-centered wellness self-management strategies and self directed financing models that empower consumers to take charge of their own health care
2.15 Integrate Primary and Behavioral Health Care Services
2.16 Provide virtual psychiatric and clinical guidance to all participating primary care providers delivering services to behavioral patients regionally
2.17 Establish improvements in care transition from the inpatient setting for individuals with mental health and / or substance abuse disorders.
2.18 Recruit, train and support consumers of mental health services to provide peer support services
2.19 Develop Care Management Function that integrates primary and behavioral health needs of individuals

Process Milestones – DY2 and DY3

These are the milestones that the performing provider will report on throughout DYs 2-3. Metrics, data sources, goals and rationale will be specified by the performing provider for each of the selected process milestones listed below.

P- 1 Project planning - engage stakeholders, identify current capacity and needed resources, determine timelines and document implementation plans
P- 2 Establish baseline rates
P- 3 Develop and test data systems
P- 4 Conduct Plan Do Study Act (PDSA) cycles to improve data collection and intervention activities
P- 5 Disseminate findings, including lessons learned and best practices, to stakeholders
P- 7 Other activities not described above

Improvement Targets – DY4 and DY5 (can also start in earlier years)

Providers can select outcome improvement targets from the list below as they relate to their Category 1 and 2 projects. Providers can also propose outcomes not included in this list as long as they meet the above definition of an outcome measure. Providers should explicitly explain why the new outcome measure they are proposing is appropriate for their population and their project and demonstrate that it is based on local data and their community needs assessment.

Providers will specify how the outcome and the Category 1 or 2 projects are related (specifically, why that outcome was identified as the best suited to measure the impact of the Category 1/2 intervention) and identify improvement target goals. Providers should include an evidence-based explaining how each Category 1 or 2 project will achieve the selected improvement target(s) by DY4 and 5 and demonstrate a logical progression between the process milestones above and the outcome selected below.

Category 3 Outcomes are organized into related domains: Primary Care and Chronic Disease Management, Potentially Preventable Admissions, Readmissions and Complications, Cost of Care, Patient Satisfaction, Oral Health, Perinatal Care, Right Care in Right Setting and Patient Centeredness, Functional Status, Health Disparities, Primary Care and Primary Prevention, and Palliative Care. Each domain includes a list of the suggested improvement targets with metrics that contain metric specifications (numerator and denominator, where applicable) that the provider will report according to the schedule and relative to the baseline and prior reporting year, as identified in the PFM Protocol.

Outcome Domains

OD-1- Primary Care and Chronic Disease Management

IT-1.1 Third next available appointment[217,218]: *(Non- standalone measure)*

Average length of time in days between the day a patient makes a request for an appointment with a physician and the third available appointment for a new patient physical, routine exam, or return visit exam.

a Numerator: Continuous variable statement: Average number of days to third next available appointment for an office visit for each clinic and/or department.

b Denominator: This measure applies to providers within a reported clinic and/or department

- Inclusions: This measure applies to providers* within a reported clinic and/or department**

  *Providers:

  A. All providers are included. Full-time and part-time providers are included, regardless of the number of hours s/he practices per week.
     1. Providers who truly job share are counted as one provider (i.e., they share one schedule, and/or they work separate day and share coverage of one practice).
     2. When measuring a care team, each member of the care team is counted separately (i.e., MD, NP, PA).
     3. If a provider is practicing in a specialty other than the one which s/he is board certified, the provider should be included in the specialty in which s/he is practicing.
     4. For providers practicing at more than 1 location, measure days to third next available for only the provider's primary location as long as the provider is at that location 51%+ of their time.
     5. New providers who started seeing patients during the reporting period and have an active schedule should be included.
  B. Locums are included in the measure only if they are assigned to a specific site for an extended period of time (greater than 4 weeks) and provide continuity care to a panel of patients.
  C. Mid-Level providers are included in the measure (NP, PA, CNM).
     1. Mid-Level providers should have continuity practice and their own schedule available to see patients.
  D. Resident Providers are to be included if they have an active schedule AND are considered a Primary Care Provider within the organization.
  E. Providers with closed practices should be included. They still have to schedule their current patients. In addition, it may not be clear when they start seeing new patients again.

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[217] http://www.ihi.org/knowledge/Pages/Measures/ThirdNextAvailableAppointment.aspx
[218] http://www.qualitymeasures.ahrq.gov/popups/printView.aspx?id=23918

**Departments:

1. Primary Care
   a. General Internal Medicine
   b. Family Practice
   c. Pediatrics with the focus on generalists, not specialists
   d. Med/Peds (physicians who see both adults and children)
2. Specialty Care
   a. Obstetrics
      1. Physical exam - New OB visit

- Exclusions:
  - Exclude clinicians who do not practice for an extended period of time (greater than 4 weeks) due to maternity leave, sabbatical, family medical leave.
  - Mid-Level providers who function only as an "extender," overflow to another practice, or urgent care should not be included.
  - Exclude Resident Providers if they are not considered a Primary Care Provider, have an inconsistent schedule, and a restricted patient panel.

c Data Source: Appointment management system

d Rationale/Evidence: Access is a measure of the patient's ability to seek and receive care with the provider of their choice, at the time they choose, regardless of the reason for their visit. Counting the third next available appointment is the healthcare industry's standard measure of access to care and indicates how long a patient waits to be seen. Access to healthcare is important to the quality of healthcare outcomes. Patients who can promptly schedule appointments with their healthcare providers will have higher satisfaction, will likely return to work sooner, and may well have better medical outcomes.

- *Overarching Goals:*
  - Decrease number of days to third next available appointment to zero days (same day) for Primary Care.
  - Decrease number of days to third next available appointment to two days for Specialty Care.

- *Data Collection*: Sample all physicians on team the same day of the week, once a week. Count the number of days between a request for an appointment (e.g., enter dummy patient) with a physician and the third next available appointment for a new patient physical, routine exam, or return visit exam. Report the average number of days for all physicians sampled. Note: Count calendar days (e.g. include weekends) and days off. Do not count any saved appointments for urgent visits (since they are "blocked off" on the schedule.) The data collection can be done manually or electronically. Manual collection means looking in the schedule book and counting from the "index" (day when the "dummy" appointment is requested) to the day of the third available appointment. Some electronic

scheduling systems can be programmed to compute the number of days automatically.

IT-1.2 Annual monitoring for patients on persistent medications (NCQA-HEDIS 2012)[219]– angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs) (*Non- standalone measure*)

Percentage of members 18 years of age and older who received at least 180 treatment days of ACE inhibitors or ARBs during the measurement year and had at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year.[220]

a Numerator: Members from the denominator with at least one serum potassium *and* either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year (refer to Table MPM-A in the original measure documentation for codes to identify physiologic monitoring tests)

Inclusions

Members from the denominator with at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year (refer to Table MPM-A in the original measure documentation for codes to identify physiologic monitoring tests). The member must meet one of the following criteria to be compliant.

- A code for a lab panel test during the measurement year
- A code for a serum potassium and a code for serum creatinine during the measurement year
- A code for serum potassium and a code for blood urea nitrogen during the measurement year

Note: The tests do not need to occur on the same service date, only within the measurement year.

b Denominator: Members 18 years of age and older as of December 31 of the measurement year on persistent angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs) -- defined as members who received at least 180 treatment days of ambulatory medication during the measurement year

Inclusions:

Members 18 years of age and older as of December 31 of the measurement year on persistent angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs) -- defined as members who received at

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[219] This addresses 4 drug types (using 2012 specifications) – it is then reported as 4 rates – so it is a composite measure. Measure specifications are in development.
http://www.ncqa.org/tabid/1442/Default.aspx
http://www.ncqa.org/LinkClick.aspx?fileticket=O-31v4G27sU%3d&tabid=1415

[220] http://www.qualitymeasures.ahrq.gov/content.aspx?id=34028

least 180 treatment days of ambulatory medication during the measurement year

Note:

- Members must have been continuously enrolled during the measurement year.
- Allowable gap: No more than one gap in enrollment of up to 45 days during each year of continuous enrollment (commercial, Medicare). 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.
- Treatment days are the actual number of calendar days covered with prescriptions within the measurement year (i.e., a prescription of 90 days supply dispensed on December 1 of the measurement year counts as 30 treatment days).
- Refer to Table CDC-L in the original measure documentation to identify ACE inhibitors and ARBs. Members may switch therapy with any medication listed in Table CDC-L during the measurement year and have the days supply for those medications count toward the total 180 treatment days (i.e., a member who received 90 days of ACE inhibitors and 90 days of ARBs meets the denominator definition for this measure).

Exclusions:
Exclude members who had an inpatient (acute or nonacute) claim/encounter during the measurement year.

c Data Source: EHR, Claims

d Rationale/Evidence: Patient safety is highly important, especially for patients at increased risk of adverse drug events from long-term medication use. Persistent use of these drugs warrants monitoring and follow-up by the prescribing physician to assess for side-effects and adjust drug dosage/therapeutic decisions accordingly. The drugs included in this measure also have more deleterious effects in the elderly. The costs of annual monitoring are offset by the reduction in health care costs associated with complications arising from lack of monitoring and follow-up of patients on long-term medications. The total costs of drug-related problems due to misuse of drugs in the ambulatory setting has been estimated to exceed $76 billion annually. Appropriate monitoring of drug therapy remains a significant issue to guide therapeutic decision making and provides largely unmet opportunities for improvement in care for patients on persistent medications

IT-1.3 Annual monitoring for patients on persistent medications (NCQA-HEDIS 2012)221**– digoxin (*Non- standalone*)**

Percentage of members 18 years of age and older who received at least 180 treatment days of digoxin during the measurement year and had at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year.[222]

a Numerator: Members from the denominator with at least one serum potassium *and* either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year (refer to Table MPM-A in the original measure documentation for codes to identify physiologic monitoring tests)

Inclusions
Members from the denominator with at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year (refer to Table MPM-A in the original measure documentation for codes to identify physiologic monitoring tests). The member must meet one of the following criteria to be compliant.

- A code for a lab panel test during the measurement year
- A code for a serum potassium and a code for serum creatinine during the measurement year
- A code for serum potassium and a code for blood urea nitrogen during the measurement year

Note: The tests do not need to occur on the same service date, only within the measurement year.

b Denominator: Members 18 years of age and older as of December 31 of the measurement year on persistent digoxin -- defined as members who received at least 180 treatment days of ambulatory medication during the measurement year

Inclusions
Members* 18 years of age and older as of December 31 of the measurement year on persistent digoxin -- defined as members who received at least 180 treatment days of ambulatory medication during the measurement year
Note: Treatment days are the actual number of calendar days covered with prescriptions within the measurement year (i.e., a prescription of

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[221] This addresses 4 drug types (using 2012 specifications) – it is then reported as 4 rates – so it is a composite measure. Measure specifications are in development.
http://www.ncqa.org/tabid/1442/Default.aspx
http://www.ncqa.org/LinkClick.aspx?fileticket=O-31v4G27sU%3d&tabid=1415
[222] http://www.qualitymeasures.ahrq.gov/content.aspx?id=34029

90 days supply dispensed on December 1 of the measurement year counts as 30 treatment days).
*Members must have been continuously enrolled during the measurement year.
Allowable gap: No more than one gap in enrollment of up to 45 days during each year of continuous enrollment (commercial, Medicare). 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.

Exclusions
Exclude members who had an inpatient (acute or nonacute) claim/encounter during the measurement year.

IT-1.4 Annual monitoring for patients on persistent medications (NCQA-HEDIS 2012)[223]– diuretic ***(Non- standalone measure)***

Percentage of members 18 years of age and older who received at least 180 treatment days of a diuretic during the measurement year and had at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year.[224]

a Numerator: Members from the denominator with at least one serum potassium *and* either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year (refer to Table MPM-A in the original measure documentation for codes to identify physiologic monitoring tests)

Inclusions
Members from the denominator with at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year (refer to Table MPM-A in the original measure documentation for codes to identify physiologic monitoring tests). The member must meet one of the following criteria to be compliant.

- A code for a lab panel test during the measurement year
- A code for a serum potassium and a code for serum creatinine during the measurement year
- A code for serum potassium and a code for blood urea nitrogen during the measurement year

Note: The tests do not need to occur on the same service date, only within the measurement year.

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[223] This addresses 4 drug types (using 2012 specifications) – it is then reported as 4 rates – so it is a composite measure. Measure specifications are in development.
http://www.ncqa.org/tabid/1442/Default.aspx
http://www.ncqa.org/LinkClick.aspx?fileticket=O-31v4G27sU%3d&tabid=1415
[224] http://www.qualitymeasures.ahrq.gov/content.aspx?id=34031

b Denominator: Members 18 years of age and older as of December 31 of the measurement year on persistent digoxin -- defined as members who received at least 180 treatment days of ambulatory medication during the measurement year

Inclusions

Members 18 years of age and older as of December 31 of the measurement year on persistent diuretics -- defined as members who received at least 180 treatment days of ambulatory medication during the measurement year

Note:

Members must have been continuously enrolled during the measurement year.

Allowable gap: No more than one gap in enrollment of up to 45 days during each year of continuous enrollment (commercial, Medicare). 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.

Treatment days are the actual number of calendar days covered with prescriptions within the measurement year (i.e., a prescription of 90 days supply dispensed on December 1 of the measurement year counts as 30 treatment days).

Refer to Table MPM-C in the original measure documentation to identify diuretics. Members may switch therapy with any medication listed in Table MPM-C during the measurement year and have the days supply for those medications count toward the total 180 treatment days.

Exclusions

Exclude members who had an inpatient (acute or nonacute) claim/encounter during the measurement year.

IT-1.5 Annual monitoring for patients on persistent medications (NCQA-HEDIS 2012)[225]– anticonvulsant
(Non- standalone measure)

Percentage of members 18 years of age and older who received at least 180 treatment days for an anticonvulsant during the measurement year and had at least one drug serum concentration level monitoring test for the prescribed drug in the measurement year.[226]

a Numerator: Members from the denominator with at least one drug serum concentration level monitoring test for the prescribed drug in the measurement

[225] This addresses 4 drug types (using 2012 specifications) – it is then reported as 4 rates – so it is a composite measure. Measure specifications are in development.
http://www.ncqa.org/tabid/1442/Default.aspx
http://www.ncqa.org/LinkClick.aspx?fileticket=O-31v4G27sU%3d&tabid=1415
[226] http://www.qualitymeasures.ahrq.gov/content.aspx?id=34030

year (refer to Table MPM-E in the original measure documentation for codes to identify drug serum concentration monitoring tests) If a member received only one type of anticonvulsant, the drug serum concentration level test must be for the specific drug taken as a persistent medication (i.e., a member on phenytoin received a drug serum test for phenytoin). If a member persistently received multiple types of anticonvulsants, each anticonvulsant medication and drug monitoring test combination is counted as a unique event (i.e., a member on both phenytoin and valproic acid with at least 180 treatment days for each drug in the measurement year must separately show evidence of receiving drug serum concentration tests for each drug [Table MPM-E] to be considered numerator-compliant for each drug).

Inclusions
Members from the denominator with at least one drug serum concentration level monitoring test for the prescribed drug in the measurement year (refer to Table MPM-E in the original measure documentation for codes to identify drug serum concentration monitoring tests)
If a member received only one type of anticonvulsant, the drug serum concentration level test must be for the specific drug taken as a persistent medication (i.e., a member on phenytoin received a drug serum test for phenytoin).
If a member persistently received multiple types of anticonvulsants, each anticonvulsant medication and drug monitoring test combination is counted as a unique event (i.e., a member on both phenytoin and valproic acid with at least 180 treatment days for each drug in the measurement year must separately show evidence of receiving drug serum concentration tests for each drug [Table MPM-E] to be considered numerator-compliant for each drug).

b Denominator: Members 18 years of age and older as of December 31 of the measurement year on persistent anticonvulsants -- defined as members who received at least 180 treatment days of ambulatory medication during the measurement year (see the related "Denominator Inclusions/Exclusions" field)

Inclusions
Members 18 years of age and older as of December 31 of the measurement year on persistent anticonvulsants -- defined as members who received at least 180 treatment days of ambulatory medication during the measurement year

Note:

- Members must have been continuously enrolled during the measurement year.
- *Allowable gap:* No more than one gap in enrollment of up to 45 days during each year of continuous enrollment (commercial, Medicare). 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.

- Treatment days are the actual number of calendar days covered with prescriptions within the measurement year (i.e., a prescription of 90 days supply dispensed on December 1 of the measurement year counts as 30 treatment days).
- Refer to Table MPM-D in the original measure documentation to identify anticonvulsants. Members who are on multiple anticonvulsant drugs count toward the denominator multiple times if they meet the persistent medications criteria for each drug taken during the measurement year (i.e., a member who received at least 180 days of phenytoin and 180 days of valproic acid is counted twice in the denominator, once for each drug).

Exclusions
Exclude members who had an inpatient (acute or nonacute) claim/encounter during the measurement year.

IT-1.6 Cholesterol management for patients with cardiovascular conditions (NCQA-HEDIS 2012)[227] *(Standalone measure)*

a Numerator: Number of patients who had each of the following during the reporting period:
- Low-density Lipoprotein Cholesterol (LDL-C) Screening: An LDL-C test performed during the measurement year.
- LDL-C Level Less Than 100 mg/dL: The most recent LDL-C level during the measurement year is less than 100 mg/dL.

b Denominator: Patients aged 18 to 75 years as of December 31 of the measurement year who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG), or percutaneous coronary interventions (PCI) from January 1 through November 1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during measurement year and the year prior to the measurement year.

c Data Source: EHR, Registry

d Rationale/Evidence: Total blood cholesterol is directly related to the development of coronary artery disease (CAD) and coronary heart disease (CHD), with most of the risk being associated with low-density lipoprotein cholesterol (LDL-C). When LDL-C levels are high, cholesterol can build up within the walls of the arteries, causing atherosclerosis, the build-up of plaque. Hemorrhaging or clot formation can occur at the site of plaque build-up, blocking arteries and causing heart attack and stroke. Reducing cholesterol in patients with known heart disease is critically important, as treatment can reduce morbidity (heart attack and stroke) and mortality by as much as 40%. The National Cholesterol Education Program (NCEP) has established guidelines for managing cholesterol levels in patients with heart disease. The guidelines established the need for close monitoring of LDL cholesterol in patients with coronary heart disease and set a target for LDL-C of less than or equal to 100

[227] http://qualitymeasures.ahrq.gov/content.aspx?id=34654

mg/dL for such patients. Cholesterol screening and control depends on the combined efforts of patient, physician and organization. Lifestyle factors and new medications offer tangible means for reducing cholesterol and the risk of heart disease.

IT-1.7 Controlling high blood pressure (NCQA-HEDIS 2012, NQF 0018)[228] *(Standalone measure)*

a Numerator: The number of patients in the denominator whose most recent blood pressure (BP) is adequately controlled (BP less than 140/90 mm Hg)during the measurement year

b Denominator: Patients 18 to 85 years of age as of December 31 of the measurement year with a diagnosis of hypertension

c Data Source: EHR, Registry

d Rationale/Evidence: Approximately 76.4 million (33.5 percent) of people in the United States have high blood pressure. Numerous clinical trials have shown that aggressive treatment of high blood pressure reduces mortality from heart disease, stroke and renal failure; results are particularly striking in elderly hypertensives, which are more likely to have heart failure. A pool of past clinical trials demonstrated that a 5 mm to 6 mm Hg reduction in diastolic blood pressure was associated with a 42 percent reduction in stroke mortality and a 14 percent to 20 percent reduction in mortality from coronary heart disease (CHD). Literature from clinical trials indicates that 53 percent to 75 percent of people under treatment achieved control of their blood pressure. The specifications for this measure are consistent with current guidelines, such as those of the USPSTF and the Joint National Committee.

IT-1.8 Depression management[229] : Screening and Treatment Plan for Clinical Depression (PQR 2011, #134) [230] *(Non- standalone measure)*

(CMS encourages providers to pick both measures for depression management improvement target – IT -1.8 and IT-1.9**)**

a Numerator: Patient's screening for clinical depression using a standardized tool AND follow-up plan is documented.

- Screening – Testing done on people at risk of developing a certain disease, even if they have no symptoms. Screening tests can predict the likelihood of someone having or developing a particular disease. This measure looks for the test being done in the practitioner's office that is filing the code.

- Standardized Tool – An assessment tool that has been appropriately normalized and validated for the population in which it is used. Some depression screening tools include: Patient Health Questionnaire (PHQ9), Beck Depression Inventory (BDI or BDI-II), Center for

[228] http://qualitymeasures.ahrq.gov/content.aspx?id=34655
[229] http://www.cms.gov/medicare-coverage-database/details/nca-decision-memo.aspx?NCAId=251
[230] http://www.aota.org/DocumentVault/Surveys/2011-PQRS/134.aspx?FT=.pdf

Epidemiologic Studies Depression Scale (CES-D), Depression Scale (DEPS), Duke Anxiety-Depression Scale (DADS), Geriatric Depression Scale (GDS), GDS – Short Version, Hopkins Symptom Checklist (HSCL), The Zung Self-Rating Depression Scale (SDS), and Cornell Scale Screening (this is a screening tool which is used in situations where the patient has cognitive impairment and is administered through the caregiver).

- Follow-Up Plan – Proposed outline of treatment to be conducted as a result of clinical depression screen. Such follow-up must include further evaluation if screen is positive and may include documentation of a future appointment, education, additional evaluation and/or referral to a practitioner who is qualified to diagnose and treat depression, and/or notification of primary care provider.
- Not Eligible/Not Appropriate – A patient is not eligible if one or more of the following conditions exist:
    - Patient refuses to participate
    - Patient is in an urgent or emergent situation where time is of the essence and to delay treatment would jeopardize the patient's health status
    - Situations where the patient's motivation to improve may impact the accuracy of results of nationally recognized standardized depression assessment tools. For example: certain court appointed cases
    - Patient was referred with a diagnosis of depression
- Patient has been participating in on-going treatment with screening of clinical depression in a preceding reporting period
- Severe mental and/or physical incapacity where the person is unable to express himself/herself in a manner understood by others. For example: cases such as delirium or severe cognitive impairment, where depression cannot be accurately assessed through use of nationally recognized standardized depression assessment tools

Numerator Quality-Data Coding Options for Reporting Satisfactorily:

Positive Screen for Clinical Depression, Follow-up Plan Documented
G8431: Positive screen for clinical depression using a standardized tool and a follow-up plan documented

OR

Negative Screen for Clinical Depression Documented, Follow-up Plan not Indicated
G8510: Negative screen for clinical depression using standardized tool, patient not eligible/appropriate for follow-up plan documented

OR

Screening for Clinical Depression not Documented, Patient not Eligible/Appropriate
G8433: Screening for clinical depression using a standardized tool not documented, patient not eligible/appropriate

OR

Screening for Clinical Depression not Documented, Reason not Specified

G8432: No documentation of clinical depression screening using a standardized tool

OR

Screening for Clinical Depression Documented, Follow-Up Plan not Documented, Reason not Specified

G8511: Screen for clinical depression using a standardized tool documented, follow-up plan not documented, reason not specified

b Denominator: All patients aged 18 years and older
Denominator Criteria (Eligible Cases):
Patients aged ≥ 18 years on date of encounter
AND
Patient encounter during the reporting period (CPT): 90801, 90802, 90804, 90805,
90806, 90807, 90808, 90809, 92557, 92567, 92568, 92590, 92625, 92626, 96150, 96151, 97003

c Data Source: EHR, Claims

d Rationale/Evidence: Despite the high prevalence and substantial impact of depression, detection and treatment in the primary care setting have been suboptimal. Studies have shown that usual care by primary care physicians fails to recognize 30% to 50% of depressed patients. Because patients in whom depression goes unrecognized cannot be appropriately treated, systematic screening has been advocated as a means of improving detection, treatment, and outcomes of depression. Compared with usual care, screening for depression can improve outcomes, particularly when screening is coupled with system changes that help ensure adequate treatment and follow-up.

IT-1.9 Depression management[231] : Depression Remission at Twelve Months (NQF# 0710)[232] ***(Standalone measure)***

a Numerator: Adults age 18 and older with a diagnosis of major depression or dysthymia and an initial PHQ-9 score greater than nine who achieve remission at twelve months as demonstrated by a twelve month (+/- 30 days) PHQ-9 score of less than five.

b Denominator: Adults age 18 and older with a diagnosis of major depression or dysthymia and an initial PHQ-9 score greater than nine.

- Patients who die, are a permanent resident of a nursing home or are enrolled in hospice are excluded from this measure. Additionally, patients who have a diagnosis (in any position) of bipolar or personality disorder are excluded.

c Data Source: Electronic Clinical Data, Electronic Health Record, Paper Records

d Rationale/Evidence: Adult patients age 18 and older with major depression or dysthymia and an initial PHQ-9 score > 9 who demonstrate remission at twelve

[231] http://www.cms.gov/medicare-coverage-database/details/nca-decision-memo.aspx?NCAId=251
[232] http://www.qualityforum.org/MeasureDetails.aspx?actid=0&SubmissionId=55#k=0710

months defined as a PHQ-9 score less than 5. This measure applies to both patients with newly diagnosed and existing depression whose current PHQ-9 score indicates a need for treatment.
The Patient Health Questionnaire (PHQ-9) tool is a widely accepted, standardized tool that is completed by the patient, ideally at each visit, and utilized by the provider to monitor treatment progress. This measure additionally promotes ongoing contact between the patient and provider as patients who do not have a follow-up PHQ-9 score at twelve months (+/- 30 days) are also included in the denominator.

IT-1.10 Diabetes care: *HbA1c poor control (>9.0%)*[233]*- NQF 0059 (Standalone measure)*

a Numerator: Percentage of patients 18-75 years of age with diabetes (type 1 or type 2) who had hemoglobin A1c (HbA1c) control > 9.0%.
b Denominator: Members 18 to 75 years of age as of December 31 of the measurement year with diabetes (type 1 and type 2)
c Data Source: EHR, Registry, Claims, Administrative clinical data
d Rationale/Evidence: Diabetes is one of the most costly and highly prevalent chronic diseases in the United States. Approximately 20.8 million Americans have diabetes, and half these cases are undiagnosed. Complications from the disease cost the country nearly $100 billion annually. In addition, diabetes accounts for nearly 20 percent of all deaths in people over 25 years of age. Many complications, such as amputation, blindness, and kidney failure, can be prevented if detected and addressed in the early stages. Although many people live with diabetes years after diagnosis, it is a costly condition that leads to serious and potentially fatal health complications. Diabetes control can improve the quality of life for millions of Americans and save billions of health care dollars.

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IT-1.11 Diabetes care: *BP control (<140/80mm Hg)*[234] *– NQF* 0061 *(Standalone measure)*

a Numerator: Use automated data to identify the most recent blood pressure (BP) reading during the measurement year. The member is numerator compliant if the BP is less than 140/90 mm Hg.
b Denominator: Members 18 to 75 years of age as of December 31 of the measurement year with diabetes (type 1 and type 2)
c Data Source: EHR, Registry, Claims, Administrative clinical data
d Rationale/Evidence: Diabetes is one of the most costly and highly prevalent chronic diseases in the United States. Approximately 20.8 million Americans have diabetes, and half these cases are undiagnosed. Complications from the disease cost the country nearly $100 billion annually. In addition, diabetes accounts for nearly 20 percent of all deaths in people over 25 years of age. Many complications, such as amputation, blindness, and kidney failure, can be

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[233] http://www.htsrec.com/janda/pdf/2012EP_MeasureSpecifications/NQF%200059/NQF_HQMF_HumanReadable_0059.pdf
[234] http://www.qualitymeasures.ahrq.gov/content.aspx?id=34667

prevented if detected and addressed in the early stages. Although many people live with diabetes years after diagnosis, it is a costly condition that leads to serious and potentially fatal health complications. Diabetes control can improve the quality of life for millions of Americans and save billions of health care dollars.

IT-1.12 Diabetes care: *Retinal eye exam[235]—NQF 0055 (Non- standalone measure)*

a Numerator: An eye screening for diabetic retinal disease as identified by administrative data. This includes diabetics who had one of the following:
- A retinal or dilated eye exam by an eye care professional (optometrist or ophthalmologist) in the measurement year, or
- A negative retinal exam (no evidence of retinopathy) by an eye care professional in the year prior to the measurement year

b Denominator: Members 18 to 75 years of age as of December 31 of the measurement year with diabetes (type 1 and type 2)

c Data Source: EHR, Registry, Claims, Administrative clinical data

d Rationale/Evidence: Diabetes is one of the most costly and highly prevalent chronic diseases in the United States. Approximately 20.8 million Americans have diabetes, and half these cases are undiagnosed. Complications from the disease cost the country nearly $100 billion annually. In addition, diabetes accounts for nearly 20 percent of all deaths in people over 25 years of age. Many complications, such as amputation, blindness, and kidney failure, can be prevented if detected and addressed in the early stages. Although many people live with diabetes years after diagnosis, it is a costly condition that leads to serious and potentially fatal health complications. Diabetes control can improve the quality of life for millions of Americans and save billions of health care dollars.

IT-1.13 Diabetes care *Foot exam- NQF 0056 (Non- standalone measure)*

a Numerator: Percentage of patients 18-75 years of age with diabetes (type 1 or type 2) who received a foot exam (visual inspection, sensory exam with monofilament, or pulse exam) during the measurement year.

b Denominator: Patients 18-75 years of age as of December 31 of the measurement year who had a diagnosis of diabetes (type 1 or type 2).

c Data Source: EHR, Registry, Claims, Administrative clinical data.

d Rationale/Evidence: Diabetes is one of the most costly and highly prevalent chronic diseases in the United States. Approximately 20.8 million Americans have diabetes, and half these cases are undiagnosed. Complications from the disease cost the country nearly $100 billion annually. In addition, diabetes accounts for nearly 20 percent of all deaths in people over 25 years of age. Many complications, such as amputation, blindness, and kidney failure, can be prevented if detected and addressed in the early stages. Although many people live with diabetes years after diagnosis, it is a costly condition that leads to serious and potentially fatal health complications. Diabetes control can improve

[235] http://www.qualitymeasures.ahrq.gov/content.aspx?id=34661

the quality of life for millions of Americans and save billions of health care dollars.

IT-1.14 Diabetes care: *Microalbumin/Nephropathy- NQF 0062 (Non- standalone measure)*

a Numerator: Percentage of patients 18-75 years of age with diabetes (type 1 or type 2) who had a nephropathy screening test or evidence of nephropathy.
b Denominator: Patients 18-75 years of age as of December 31 of the measurement year who had a diagnosis of diabetes (type 1 or type 2).
c Data Source: EHR, Registry, Claims, Administrative clinical data.
d Rationale/Evidence: Diabetes is one of the most costly and highly prevalent chronic diseases in the United States. Approximately 20.8 million Americans have diabetes, and half these cases are undiagnosed. Complications from the disease cost the country nearly $100 billion annually. In addition, diabetes accounts for nearly 20 percent of all deaths in people over 25 years of age. Many complications, such as amputation, blindness, and kidney failure, can be prevented if detected and addressed in the early stages. Although many people live with diabetes years after diagnosis, it is a costly condition that leads to serious and potentially fatal health complications. Diabetes control can improve the quality of life for millions of Americans and save billions of health care dollars.

IT-1.15 Peritoneal Dialysis Adequacy Clinical Performance (NQF # 0318) ***(Standalone measure)***

a Numerator: Patients are included in the numerator if delivered peritoneal dialysis was a weekly Kt/V urea of at least 1.7 (dialytic + residual) during the measurement period.
b Denominator: All adult (>= 18 years old) peritoneal dialysis patients who have been on peritoneal dialysis for at least 90 days.
c Data Source: EHR, Claims
d Rationale/Evidence: Evaluation of PD adequacy every four months is critical to ensure timely dose adjustment as needed, and adequate dialysis doses (Kt/V urea > 1.7) have been linked to improved patient outcomes. Therefore, continued implementation of this measure is needed to ensure frequent adequacy measurement and adequate dialysis dosing.

IT-1.16 Hemodialysis Adequacy Clinical Performance (NQF #0249) ***(Standalone measure)***

a Numerator: Number of patients in denominator whose delivered dose of hemodialysis (calculated from the last measurements of the month using the UKM or Daugirdas II formula) was a sp Kt/V >= 1.2.
b Denominator: All adult (>= 18 years old) patients in the sample for analysis who have been on hemodialysis for 90 days or more and dialyzing thrice weekly.
c Data Source: EHR, Claims
d Rationale/Evidence: The dose of dialysis is used to estimate the ability of hemodialysis to clear the blood of accumulated toxins. In the adult population, outcome studies have shown an association between dose of hemodialysis in terms of small solute removal and clinical outcomes.

IT-1.17 Hemodialyis Adequacy for Pediatric Hemodialysis Patients (NQF #1423) ***(Standalone measure)***

a Numerator: Number of patients in the denominator whose delivered dose of hemodialysis (calculated from the last measurements of the month using the UKM or Daugirdas II formula) was a sp Kt/V>=1.2
b Denominator: Number of pediatric (<18 years old) in-center HD patients who have been on hemodialysis for 90 days or more and dialyzing 3 or 4 times weekly.
c Data Source: EHR, Claims
d Rationale/Evidence: In considering target sp Kt/V, the pediatric population should receive at least an sp Kt/V of 1.2, which is the minimum requirement for the adult population in order to allow for the increased nutritional needs of children. Analysis of CPM data further support this cut-off since adolescents with sp Kt/V below 1.2 were found to have significantly increased risk of hospitalization as compared to those with sp Kt/V of 1.2-1.

IT-1.18 Follow-Up After Hospitalization for Mental Illness- NQF 0576[236] *(Standalone measure)*

a. Numerator:
   - Rate 1: An outpatient visit, intensive outpatient encounter or partial hospitalization with a mental health practitioner within 30 days after discharge. Include outpatient visits, intensive outpatient encounters or partial hospitalizations that occur on the date of discharge.
   - Rate 2: An outpatient visit, intensive outpatient encounter or partial hospitalization with a mental health practitioner within 7 days after discharge. Include outpatient visits, intensive outpatient encounters or partial hospitalizations that occur on the date of discharge.
b. Denominator: Members 6 years and older as of the date of discharge who were discharged alive from an acute inpatient setting (including acute care psychiatric facilities) with a principal mental health diagnosis on or between January 1 and December 1 of the measurement year. The denominator for this measure is based on discharges, not members. Include all discharges for members who have more than one discharge on or between January 1 and December 1 of the measurement year.
   Mental health readmission or direct transfer:
   If the discharge is followed by readmission or direct transfer to an acute facility for a mental health principal diagnosis (within the 30-day follow-up period, count only the readmission discharge or the discharge from the facility to which the member was transferred. Although rehospitalization might not be for a selected mental health disorder, it is probably for a related condition.
c. Data Source: EHR, Claims
d. Rationale/Evidence: This measure assesses the percentage of discharges for members 6 years of age and older who were hospitalized for treatment of selected mental health disorders and who had an outpatient visit, an intensive outpatient encounter or partial hospitalization with a mental health practitioner. Two rates are reported.
   Rate 1. The percentage of members who received follow-up within 30 days of

[236] http://www.qualityforum.org/QPS/

discharge
Rate 2. The percentage of members who received follow-up within 7 days of discharge.

IT-1.19 Antidepressant Medication Management - NQF 0105[237] *(Standalone measure)*

a. Numerator: A) Effective Acute Phase Treatment: At least 84 days (12 weeks) of continuous treatment with antidepressant medication during the 114-day period following the IPSD (inclusive). The continuous treatment allows gaps in medication treatment up to a total of 30 days during the 114-day period. Gaps can include either washout period gaps to change medication or treatment gaps to refill the same medication.

   Regardless of the number of gaps, there may be no more than 30 gap days. Count any combination of gaps (e.g., two washout gaps of 15 days each, or two washout gaps of 10 days each and one treatment gap of 10 days).

   B) Effective Continuation Phase Treatment: At least 180 days (6 months) of continuous treatment with antidepressant medication (Table AMM-D) during the 231-day period following the IPSD (inclusive). Continuous treatment allows gaps in medication treatment up to a total of 51 days during the 231-day period. Gaps can include either washout period gaps to change medication or treatment gaps to refill the same medication.

   Regardless of the number of gaps, gap days may total no more than 51. Count any combination of gaps (e.g., two washout gaps, each 25 days or two washout gaps of 10 days each and one treatment gap of 10 days).

b. Denominator: Members 6 years and older as of the date of discharge who were discharged alive from an acute inpatient setting (including acute care psychiatric facilities) with a principal mental health diagnosis on or between January 1 and December 1 of the measurement year. The denominator for this measure is based on discharges, not members. Include all discharges for members who have more than one discharge on or between January 1 and December 1 of the measurement year.

   Mental health readmission or direct transfer:
   If the discharge is followed by readmission or direct transfer to an acute facility for a mental health principal diagnosis (within the 30-day follow-up period, count only the readmission discharge or the discharge from the facility to which the member was transferred. Although rehospitalization might not be for a selected mental health disorder, it is probably for a related condition.

c. Data Source: EHR, Claims

d. Rationale/Evidence: The percentage of members 18 years of age and older who were diagnosed with a new episode of major depression and treated with

[237] http://www.qualityforum.org/QPS/

antidepressant medication, and who remained on an antidepressant medication treatment. Two rates are reported.
a) Effective Acute Phase Treatment. The percentage of newly diagnosed and treated members who remained on an antidepressant medication for at least 84 days (12 weeks).
b) Effective Continuation Phase Treatment. The percentage of newly diagnosed and treated members who remained on an antidepressant medication for at least 180 days (6 months).

IT-1.20 Other Outcome Improvement Target: must be evidence based, appropriate for proposed project, and meet the definition of an outcome measure.

a Numerator: TBD by performing provider
b Denominator: TBD by performing provider
c Data Source: TBD by performing provider
d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need

OD-2- Potentially Preventable Admissions

IT-2.1 Congestive Heart Failure Admission rate (CHF)[238]- PQI #8 *(Standalone measure)*

a Numerator: All non-maternal discharges of age 18 years and older with a principal diagnosis code for CHF.
b Denominator: Population in Metro Area or county, age 18 years and older.
c Data Source: EHR, Claims
d Rationale/Evidence: Please see footnote for specific diagnosis codes to be included as well as criteria for case exclusion.

IT-2.2 End-Stage Renal Disease (ESRD) Admission Rate *(Standalone measure)*

a Numerator: All discharges of age 18 years and older with a principal diagnosis code for end stage renal disease.
b Denominator: Discharges in the numerator are assigned to the denominator based on the Metro Area[1] or county of the patient residence, not the Metro Area or county of the hospital where the discharge occurred.
c Data Source: EHR, Claims
d Rationale/Evidence: Hospitalization rates are an important indicator of patient morbidity and quality of life. On average, dialysis patients are admitted to the hospital twice a year and hospitalizations account for approximately 36 percent of total Medicare expenditures for dialysis patients (U.S. Renal Data System, 2007). Measures of the frequency of hospitalization help efforts to control escalating medical costs, and play an important role in providing cost effective health care.

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[238]http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V41/TechSpecs/PQI%2008%20CHF%20Admission%20Rate.pdf

IT-2.3 Hypertension Admission Rate (HTN)[239]- PQI #7 *(Standalone measure)*

a Numerator: All discharges of age 18 years and older with a principal diagnosis code for hypertension.
b Denominator: Discharges in the numerator are assigned to the denominator based on the Metro Area[1] or county of the patient residence, not the Metro Area or county of the hospital where the discharge occurred.
c Data Source: EHR, Claims
d Rationale/Evidence: Please see footnote for specific diagnosis codes to be included as well as criteria for case exclusion.

IT-2.4 Behavioral Health/Substance Abuse (BH/SA) Admission Rate *(Standalone measure)*

Performing provider should report on both categories below:

1. One for BH/SA as the principal diagnosis;
   a. Numerator: All discharges for patients aged 18 years and older with a principle or secondary diagnosis of behavioral health or substance abuse.
   b. Denominator: Number of residents age 18 and older living in the RHP counties

2. A second category in which a significant BH/SA secondary diagnosis is present (e.g. admission for an accident or diabetes with a secondary diagnosis of psychosis.
   a. Numerator: All discharges for patients aged 18 years and older with a principle or secondary diagnosis of behavioral health or substance abuse.
   b. Denominator: Number of residents age 18 and older living in the RHP counties
   c. Data source: EHR, Claims
   d. Rationale/Evidence: There is ample evidence indicating that adequate outpatient services decrease hospital use for behavioral health and substance abuse disorders[240]. Diagnoses of behavioral health/substance abuse are included in among the PPAs list as very often these patients are only admitted once to respective facilities

IT-2.5 Chronic Obstructive Pulmonary Disease (COPD) Admission Rate- [241]PQI 5 *(Standalone measure)*

a Numerator: All non-maternal discharges of age 18 years and older with a principal diagnosis code for COPD.
b Denominator: Population in Metro Area or county, age 18 years and older.
c Data Source: EHR, Claims

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[239]http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V43/TechSpecs/PQI%2007%20Hypertension%20Admission%20Rate.pdf

[240] S dosReis, E Johnson, D Steinwachs, C Rohde, EA Skinner, M Fahey, AF Lehman; Antipsychotic treatment patterns and hospitalizations among adults with schizophrenia. *Schizophrenia Research*, 2008, Volume 101, Issue 1, Pages 304-311

[241]http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V41/TechSpecs/PQI%2005%20Chronic%20Obstructive%20Pulmonary%20Disease%20(COPD)%20Admission%20Rate.pdf

d Rationale/Evidence: Please see footnote for specific diagnosis codes to be included as well as criteria for case exclusion.

IT-2.6 Adult Asthma Admission Rate[242]- PQI 15 *(Standalone measure)*

a Numerator: All discharges of age 18 years and older with a principal diagnosis code of asthma.
b Denominator: Population in Metro Area or county, age 18 years and older.
c Data Source: EHR, Claims
d Rationale/Evidence: Please see footnote for specific diagnosis codes to be included as well as criteria for case exclusion.

IT-2.7 Diabetes Short Term Complication Admission Rate- PQI 1[243] *(Standalone measure)*

a Numerator: All non-maternal/non-neonatal discharges of age 18 years and older with a principal diagnosis code for short-term complications (ketoacidosis, hyperosmolarity, coma)
b Denominator: Population in Metro Area or county, age 18 years and older.
c Data Source: EHR, Claims
d Rationale/Evidence: Please see footnote for specific diagnosis codes to be included as well as criteria for case exclusion.

IT-2.8 Diabetes Long Term Complications Admission Rate- PQI 3[244] *(Standalone measure)*

a Numerator: Discharges age 18 years and older with a principal diagnosis code for long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified).
b Denominator: Population in Metro Area or county, age 18 years and older.
c Data Source: EHR, Claims
d Rationale/Evidence: Please see footnote for specific diagnosis codes to be included as well as criteria for case exclusion.

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[242] http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V42/TechSpecs/PQI%2015%20Adult%20Asthma%20Admission%20Rate.pdf

[243] http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V41/TechSpecs/PQI%2001%20Diabetes%20Short-term%20Complications.pdf

[244] http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V41/TechSpecs/PQI%2003%20Diabetes%20Long-term%20Complications%20Admission%20Rate.pdf

IT-2.9 Uncontrolled Diabetes Admissions Rate- PQI 14245 ***(Standalone measure)***

a Numerator: All non-maternal discharges of age 18 years and older with a principal diagnosis code for uncontrolled diabetes, without mention of a short-term or long-term complication.
b Denominator: Population in Metro Area or county, age 18 years and older.
c Data Source: EHR, Claims
d Rationale/Evidence: Please see footnote for specific diagnosis codes to be included as well as criteria for case exclusion. Population in Metro Area or county, age 18 years and older. 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).

IT-2.10 Flu and pneumonia Admission Rate ***(Standalone measure)***

a Numerator: All discharges of age 18 years and older with a principal diagnosis code of flu or pneumonia.
b Denominator: Population in Metro Area or county, age 18 years and older.
c Data Source: EHR, Claims
d Rationale/Evidence: Hospitalizations for the Bacterial Pneumonia are considered "potentially preventable," because if the individual had access to and cooperated with appropriate outpatient healthcare, the hospitalization would likely not have occurred. The methodology used to identify "potentially preventable hospitalizations" was developed by the Agency for Healthcare Research and Quality (AHRQ). AHRQ is the lead federal agency responsible for research on healthcare quality costs, outcomes and patient safety.

IT-2.11 Ambulatory Care Sensitive Conditions Admissions Rate[246]: ***(Standalone measure)***

a Numerator: Total number of acute care hospitalizations for ambulatory care sensitive conditions under age 75 years (see the related "Numerator Inclusions/Exclusions")
- Inclusions
  - Total number of acute care hospitalizations for ambulatory care sensitive conditions* under age 75

  *Based on a list of conditions developed by Billings et al., any one most responsible diagnosis code of: Grand mal status and other epileptic convulsions Chronic obstructive pulmonary diseases Asthma Heart failure and pulmonary edema Hypertension Angina Diabetes

  Note: Refer to the Technical Note: Ambulatory Care Sensitive Conditions (ASCS) document listed in the "Companion Documents" field for codes used.

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[245] http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V41/TechSpecs/PQI%2014%20Uncontrolled%20Diabetes%20Admission%20Rate.pdf
[246] http://www.qualitymeasures.ahrq.gov/content.aspx?id=27275

- Exclusions
  - Individuals 75 years of age and older
  - Death before discharge

b Denominator: Total mid-year population under age 75

c Data Source: EHR, Claims

d Rationale/Evidence: Hospitalization for an ambulatory care sensitive condition (ACSC) is considered to be a measure of access to appropriate primary health care. While not all admissions for these conditions are avoidable, it is assumed that appropriate ambulatory care could prevent the onset of this type of illness or condition, control an acute episodic illness or condition, or manage a chronic disease or condition. A disproportionately high rate is presumed to reflect problems in obtaining access to appropriate primary care.

IT-2.12 Prevention Quality Indicators (PQI) Composite Measures Potentially Preventable Hospitalizations for Ambulatory Care Sensitive Conditions[247] *(Standalone measure)*

Overall Composite – PQI 90

PQI #01 Diabetes Short-Term Complications Admission Rate	PQI #11 Bacterial Pneumonia Admission Rate
PQI #03 Diabetes Long-Term Complications Admission Rate	PQI #12 Urinary Tract Infection Admission Rate
PQI #05 Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate	PQI #13 Angina without Procedure Admission Rate
PQI #07 Hypertension Admission Rate	PQI #14 Uncontrolled Diabetes Admission Rate
PQI #08 Heart Failure Admission Rate	PQI #15 Asthma in Younger Adults Admission Rate
PQI #10 Dehydration Admission Rate	PQI #16 Rate of Lower-Extremity Amputation Among Patients With Diabetes

Acute Composite- PQI 91

PQI #10 Dehydration Admission Rate	PQI #12 Urinary Tract Infection Admission Rate
PQI #11 Bacterial Pneumonia Admission Rate	

Chronic Composite- PQI 92

PQI #01 Diabetes Short-Term Complications Admission Rate	PQI #13 Angina without Procedure Admission Rate
PQI #03 Diabetes Long-Term Complications Admission Rate	PQI #14 Uncontrolled Diabetes Admission Rate
PQI #05 Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate	PQI #15 Asthma in Younger Adults Admission Rate

[247] http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V44/Composite_User_Technical_Specification_PQI%20V4.4.pdf

PQI #07 Hypertension Admission Rate

PQI #16 Rate of Lower-Extremity Amputation Among Patients With Diabetes

PQI #08 Congestive Heart Failure (CHF) Admission Rate

a Numerator: Composites are constructed by summing the hospitalizations across the component conditions and dividing by the population. Rates can optionally be adjusted for age, sex and socio-economic status when comparing across regions or demographic groups.

b Data Source: EHR, Claims

c Rationale/Evidence: An overall composite captures the general concept of potentially avoidable hospitalization connecting the individual PQI measures, which are all rates at the area level. Separate composite measures were created for acute and chronic conditions to investigate different factors influencing hospitalization rates for each condition. The PQI composites are intended to be used to provide national estimates that can be tracked over time and to provide state and county level estimates that can be compared with the national estimate and to each other.

As anticipated, areas with higher rates of diabetes and hypertension show higher hospitalizations, particularly in the chronic composite. However, for asthma the contrary relation is true suggesting other confounding factors. Notably in V4.3, the diabetic population serves as the denominator for PQI #01, PQI #03 and PQI #14.

Areas with low levels of poverty also show lower hospitalization rates for each of the PQI composites, which is independent of access to care.

The PQI composites provide the following advantages:

- Provide assessment of quality and disparity
- Provide baselines to track progress
- Identify information gaps
- Emphasize interdependence of quality and disparities
- Promote awareness and change

IT-2.13 Other Admissions Rate [*To be selected by provider*] *(Standalone measure)*

a Numerator: TBD by performing provider

b Denominator: TBD by performing provider

c Data Source: EHR, Claims

d Rationale/Evidence: Rationale to include citation and significance of target towards intervention population or community of need.

OD-3 Potentially Preventable Re-Admissions- 30 day Readmission Rates (PPRs)

The relationship between hospital readmission rates and quality of care is well-documented, and is driven by a general consensus that readmissions may result from circumstances surrounding the initial hospital stay.[248] Given data limitations, only readmissions to the same facility will be included as part of each hospital's rates.

Readmission rates are calculated for the following individual medical conditions: Congestive heart failure, diabetes, chronic obstructive pulmonary disease, stroke, and asthma. For all individual conditions, admissions for patients that meet any of the following criteria are excluded. These exclusions were originally listed as part of the Heart Failure readmission metric,[249] obtained from the National Quality Forum, and are applied to all other individual-condition metrics for consistency.

- With an in-hospital death (because they are not eligible for readmission);
- Without at least 30 days post-discharge enrollment in Medicare FFS (because the 30-day readmission outcome cannot be assessed in this group;
- Transferred to another acute care facility (When a patient is transferred from one acute care hospital to another, these multiple, contiguous hospitalizations are considered one episode of care. Readmissions for transferred patients are attributed to the hospital that ultimately discharges the patient to a non-acute setting);
- Discharged against medical advice (AMA) (because providers did not have the opportunity to deliver full care and prepare the patient for discharge);
- Admitted with heart failure within 30 days of discharge from an index admission (Admissions within 30 days of discharge of an index admission will be considered readmissions. No admission is counted as a readmission and an index admission. The next eligible admission after the 30-day time period following an index admission will be considered an index admission.)

IT-3.1 All cause 30 day readmission rate- NQF 1789[250] *(Standalone measure)*

a Numerator: The outcome for this measure is unplanned all-cause 30-day readmission. Readmission is defined as an inpatient admission to any acute care facility which occurs within 30 days of the discharge date of an eligible index admission. All readmissions are counted as outcomes except those that are considered planned.

b Denominator: This claims-based measure can be used in either of two patient cohorts: (1) admissions to acute care facilities for patients aged 65 years or older or (2) admissions to acute care facilities for patients aged 18 years or older. We have tested the measure in both age groups.

- Please see footnote for specific diagnosis codes to be included as well as criteria for case exclusion.

c Data Source: EHR, Claims

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[248] Goldfield N, McCullough E, Hughes, Tang A, Eastman B, Rawlins L, Averill R. 2008. "Identifying Potentially Preventable Readmissions." *Health Care Financing Review*. 30:1; pp75-91.

[249] Quality Positioning System (QPS) Measure Description Display Information: Heart Failure. http://www.qualityforum.org/QPS/. Accessed June 5, 2012.

[250] http://www.qualityforum.org/QPS/

d Rationale/Evidence: This measure estimates the hospital-level, risk-standardized rate of unplanned, all-cause readmission after admission for any eligible condition within 30 days of hospital discharge (RSRR) for patients aged 18 and older. The measure reports a single summary RSRR, derived from the volume-weighted results of five different models, one for each of the following specialty cohorts (groups of discharge condition categories or procedure categories): surgery/gynecology, general medicine, cardio-respiratory, cardiovascular, and neurology, each of which will be described in greater detail below. The measure also indicates the hospital standardized risk ratios (SRR) for each of these five specialty cohorts. The measure was developed for patients 65 years and older using Medicare fee-for-service (FFS) claims and subsequently tested and specified the measure for patients aged 18 years and older using all-payer data. The following was used: the California Patient Discharge Data (CPDD), a large database of patient hospital admissions, for our all-payer data.

IT-3.2 Congestive Heart Failure 30 day readmission rate *(Standalone measure)*

a Numerator: The number of readmissions (for patients 18 years and older), for any cause, within 30 days of discharge from the index HF admission. If an index admission has more than 1 readmission, only first is counted as a readmission.

b Denominator: The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of HF and with a complete claims history for the 12 months prior to admission.

IT-3.3 Diabetes 30 day readmission rate *(Standalone measure)*

a Numerator: The number of readmissions (for patients 18 years and older), for any cause, within 30 days of discharge from the index diabetes admission. If an index admission has more than 1 readmission, only first is counted as a readmission.

b Denominator: The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of diabetes and with a complete claims history for the 12 months prior to admission.

IT-3.4 Renal Disease 30 day readmission rate *(Standalone measure)*

a Numerator: The number of readmissions (for patients 18 years and older), for any cause, within 30 days of discharge from the index renal disease admission. If an index admission has more than 1 readmission, only first is counted as a readmission.

b Denominator: The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of renal disease and with a complete claims history for the 12 months prior to admission.

IT-3.5 Acute Myocardial Infarction (AMI) 30 day readmission rate *(Standalone measure)*

a Numerator: The number of readmissions (for patients 18 years and older), for any cause, within 30 days of discharge from the index AMI admission. If an index admission has more than 1 readmission, only first is counted as a readmission.

b Denominator: The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of AMI and with a complete claims history for the 12 months prior to admission.

IT-3.6 Coronary Artery Disease (CAD) 30 day readmission rate *(Standalone measure)*

a Numerator: The number of readmissions (for patients 18 years and older), for any cause, within 30 days of discharge from the index CAD admission. If an index admission has more than 1 readmission, only first is counted as a readmission.

b Denominator: The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of CAD and with a complete claims history for the 12 months prior to admission.

IT-3.7 Stroke (CVA) 30 day readmission rate *(Standalone measure)*

a Numerator: The number of readmissions (for patients 18 years and older), for any cause, within 30 days of discharge from the index CVA admission. If an index admission has more than 1 readmission, only first is counted as a readmission.

b Denominator: The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of CVA and with a complete claims history for the 12 months prior to admission

IT-3.8 Behavioral Health /Substance Abuse 30 day readmission rate *(Standalone measure)*

a Numerator: The number of readmissions, for patients 18 years and older, for any cause, within 30 days of discharge from the index behavioral health and substance abuse admission is indicated as either the primary or secondary diagnosis. If an index admission has more than 1 readmission, only the first is counted as a readmission.

b Denominator: The number of admissions, for patients 18 years and older, for patients discharged from the hospital with a principal or secondary diagnosis of behavioral health and substance abuse and with a complete claims history for the 12 months prior to admission

IT-3.9 Chronic Obstructive Pulmonary Disease 30 day readmission rate *(Standalone measure)*

a Numerator: The number of readmissions (for patients 18 years and older), for any cause, within 30 days of discharge from the index COPD admission. If an index admission has more than 1 readmission, only first is counted as a readmission.

a Denominator: The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of COPD and with a complete claims history for the 12 months prior to admission.

IT-3.10 Adult Asthma 30 day readmission rate *(Standalone measure)*

a Numerator: The number of readmissions (for patients 18 years and older), for any cause, within 30 days of discharge from the index asthma admission. If an index admission has more than 1 readmission, only first is counted as a readmission.
b Denominator: The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of asthma and with a complete claims history for the 12 months prior to admission.

IT-3.11 Pediatric Asthma 30-Day Readmission Rate *(Standalone measure)*

a Numerator: The number of readmissions (for patients ages 5-18), for any cause, within 30 days of discharge from the index asthma admission. If an index admission has more than 1 readmission, only first is counted as a readmission.
b Denominator: The number of admissions (for patients ages 5-18), for patients discharged from the hospital with a principal diagnosis of asthma, and with a complete claims history for the 12 months prior to admission

IT-3.12 Other - readmission rate [*To be selected by provider*] ***(Standalone measure)***

a Numerator: The number of readmissions (for patients 18 years and older), for any cause, from the index admission. If an index admission has more than 1 readmission, only first is counted as a readmission.
c Denominator: The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of [TBD by provider] and with a complete claims history for the 12 months prior to admission.

OD-4 Potentially Preventable Complications and Healthcare Acquired Conditions

IT-4.1 Improvement in risk adjusted Potentially Preventable Complications rate(s) *(Standalone measure)*

a Numerator: Percent change in risk adjusted PPC rate for targeted conditions Select 5 from the list of 10 highest volume complications or the list of complications with rates higher than the state rate. Report on percent improvement in the selected 5 measures.
b Data Source: TX PPC report, EHR, Claims
c Rationale/Evidence: Each RHP will be responsible for determining appropriate proxy measures for the 5 selected PPCs to allow the RHP to monitor improvement in real time.

IT-4.2 Central line-associated bloodstream infections (CLABSI) rates *(Standalone measure)*

a Numerator: Number of cases of CLABSI as designated by IQR criteria[251]

b Data Source: EHR, Claims, IQR/NHSN data

c Rationale/Evidence: An estimated 41,000 central line-associated bloodstream infections (CLABSI) occur in U.S. hospitals each year. These infections are usually serious infections typically causing a prolongation of hospital stay and increased cost and risk of mortality. CLABSI can be prevented through proper management of the central line. These techniques are addressed in the CDC's Healthcare Infection Control Practices Advisory Committee (CDC/HIPAC) *Guidelines for the Prevention of Intravascular Catheter-Related Infections, 2011*.

IT-4.3 Catheter-associated Urinary Tract Infections (CAUTI) rates *(Standalone measure)*

a Numerator: Number of cases of CAUTI as designated by IQR criteria[252]

b Data Source: EHR, Claims, IQR/NHSN data

a Rationale/Evidence: The urinary tract is the most common site of healthcare-associated infection, accounting for more than 30% of infections reported by acute care hospitals1. Virtually all healthcare-associated urinary tract infections (UTIs) are caused by instrumentation of the urinary tract. CAUTI can lead to such complications as cystitis, pyelonephritis, gram-negative bacteremia, prostatitis, epididymitis, and orchitis in males and, less commonly, endocarditis, vertebral osteomyelitis, septic arthritis, endophthalmitis, and meningitis in all patients. Complications associated with CAUTI cause discomfort to the patient, prolonged hospital stay, and increased cost and mortality. Each year, more than 13,000 deaths are associated with UTIs. Prevention of CAUTIs is discussed in the CDC/HICPAC document, *Guideline for Prevention of Catheter-associated Urinary Tract Infections.*

IT-4.4 Surgical site infections (SSI) rates[253] *(Standalone measure)*

a Numerator: Number of cases of SSI as designated by IQR criteria[254]

b Data Source: EHR, Claims, IQR/NHSN data

a Rationale/Evidence: While advances have been made in infection control practices, including improved operating room ventilation, sterilization methods, barriers, surgical technique, and availability of antimicrobial prophylaxis, SSIs remain a substantial cause of morbidity and mortality among hospitalized patients. In one study, among nearly 100,000 HAIs reported in one year, deaths were associated with SSIs in more than 8,000 cases. Surveillance of SSI with feedback of appropriate data to surgeons has been shown to be an

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[251] http://www.cdc.gov/nhsn/PDFs/pscManual/4PSC_CLABScurrent.pdf

[252] http://www.cdc.gov/nhsn/PDFs/pscManual/7pscCAUTIcurrent.pdf

[253] All reported and collected through CDCs NHSN site with participation in IQR. http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1228760487021

[254] http://www.cdc.gov/nhsn/PDFs/pscManual/9pscSSIcurrent.pdf?agree=yes&next=Accept

important component of strategies to reduce SSI risk. A successful surveillance program includes the use of epidemiologically-sound infection definitions and effective surveillance methods, stratification of SSI rates according to risk factors associated with SSI development, and data feedback.5,6 Recommendations are outlined in the CDC's *Guideline for Prevention of Surgical Site Infection*, *1999*.

IT-4.5 Patient Fall Rate- NQF 0141[255] *(Standalone measure)*

a Numerator: Total number of patient falls (with or without injury to the patient and whether or not assisted by a staff member) during the reporting period.

- Fall Definition: A patient fall is an unplanned descent to the floor (or extension of the floor, e.g., trash can or other equipment) with or without injury to the patient, and occurs on an eligible reporting nursing unit. All types of falls are to be included whether they result from physiological reasons (fainting) or environmental reasons (slippery floor). Include assisted falls – when a staff member attempts to minimize the impact of the fall.

- **Included Populations**:
  Patient falls occurring while on an eligible reporting unit
  Assisted falls
  Repeat falls

- **Excluded Populations**:
  Falls by:
  Visitors
  Students
  Staff members

- Data Elements: Collected at a patient level
  - Month
  - Year
  - Age
  - Gender
  - Event Type (fall, assisted fall, repeat fall)
  - Type of Unit
  - Fall Risk Assessment
  - Fall Risk
  - Fall Prevention Protocol

[255] http://www.qualityforum.org/MeasureDetails.aspx?actid=0&SubmissionId=1118#k=0141

b Denominator: Patient days by hospital during the reporting period.

Included Populations:
Inpatients, short stay patients, observation patients and same day surgery patients who receive care on eligible in-patient units for all or part of a day. Adult critical care, step-down, medical, surgical, medical-surgical combined units.
Any age patient on an eligible reporting unit is included in the patient day count.

c Data Source: EHR, Claims, Administrative records

d Rationale/Evidence: 256 Four (4) Patient Days reporting methods are recognized:

•Method 1-Midnight Census
This is adequate for units that have all in-patient admissions. It is the least accurate method for units that have both in-patient and short stay patients. The daily number should be summed for every day in the month.

•Method 2-Midnight Census + Patient Days from Actual Hours for Short Stay Patients
This is an accurate method for units that have both in-patients and short stay patients. The short stay "days" should be reported separately from midnight census and will be summed to obtain patient days. The total daily hours for short stay patients should be summed for the month and divided by 24.

•Method 3-from Average Hours for Short Stay Patients
This method has been eliminated from the list of acceptable reporting methods.

•Method 4-Patient Days from Actual Hours
This is the most accurate method. An increasing number of facilities have accounting systems that track the actual time spent in the facility by each patient. Sum actual hours for all patients, whether in-patient or short stay, and divide by 24.

•Method 5-Patient Days from Multiple Census Reports
Some facilities collect censuses multiple times per day (e.g., every 4 hours or each shift). This method is more accurate than the Midnight Census, but not as accurate as Midnight Census + Actual Short Stay hours, or as Actual Patient Hours. A sum of the daily average censuses can be calculated to determine patient days for the month on the unit.

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[256] http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier3&cid=1228759479767

For all patient day reporting methods, it is recommended that hospitals consistently use the same method for a reporting unit over time. However, units with short stay patients should transition either to Method 2 or Method 4 when it becomes feasible.

IT-4.6 Hospital-acquired Venous Thrombembolism (VTE) [257] ***(Standalone measure)***

a Numerator: Incidence of hospital-acquired VTE, defined as a clot first discovered during the course of hospitalization, or discovered within 30 days of a prior hospitalization.

b Data Source: EHR, Claims: Methods for Defining Hospital-Acquired VTE

- Method 1 (Minimum)
  Track total # DVT and PE diagnosis codes in your medical center. Then divide by 2 to estimate the fraction that is hospital-acquired. The literature suggests that
  approximately half of all cases of DVT and PE diagnosed in the hospital are hospital-acquired.
- Method 2(Better)
  Method 1, then pull charts post-discharge and retrospectively determine if hospital or community acquired.
- Method 3 (Better yet)
  Method 2, then retrospectively determine if hospital-acquired VTE were on appropriate prophylaxis when VTE developed.
- Method 4(Best)
  Prospectively capture new cases of DVT or PE as they occur by setting up reporting system with radiology departments.

* Alternately, use all VTE codes listed as a secondary diagnosis as a surrogate for hospital-acquired VTE.

c Rationale/Evidence: The chances to reduce the likelihood of hospital-acquired VTE begin the moment the patient is admitted. To help the institution team focus its time on the most high yield interventions, it is extremely helpful to identify the most frequent sources of missed chances to prevent HA-VTE. In order to avoid the missed chances an institution has to know the prevalence of appropriate prophylaxis for VTE and the incidence of hospital-acquired VTE.

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[257] http://www.hospitalmedicine.org/AM/Template.cfm?Section=Search_Advanced_Search&Template=/CM/ContentDisplay.cfm&ContentID=6092

IT-4.7 Hospital-acquired Deep pressure ulcers[258] - *(Standalone measure)*

a Numerator: Number of occurrences of the following diagnosis codes as a secondary diagnosis (diagnoses 2-9 on a claim) with a POA code of 'N' or 'U':
- 707.23
- 707.24

b Denominator: Number of acute inpatient FFS discharges during time period.

c Data Source: EHR, Claims

d Rationale/Evidence: Section 5001(c) of Deficit Reduction Act of 2005 requires the Secretary of the Department of Health and Human Services (DHHS) to identify hospital-acquired conditions (HACs) that:
1. are high cost or high volume or both
2. result in the assignment of a case to a diagnosis-related group (DRG) that has a higher payment when present as a secondary diagnosis
3. could reasonably have been prevented through the application of evidence-based guidelines

On July 31, 2008, in the Inpatient Prospective Payment System (IPPS) Fiscal Year (FY) 2009 Final Rule, the Centers for Medicare & Medicaid Services (CMS) selected 10 categories of conditions for a HAC payment provision. For discharges occurring on or after October 1, 2008, hospitals no longer receive additional payment for cases in which one of the selected conditions was not present on admission. That is, the case would be paid as though the secondary diagnosis were not present.

As announced in the IPPS FY 2012 Final Rule, CMS will use eight of these 10 HACs for the Hospital Inpatient Quality Reporting (IQR) Program. CMS first posted hospital-specific data on these eight HAC measures on *Hospital Compare* in October 2011 and plans to update this data on *Hospital Compare* in July 2012. Only hospitals participating in the IQR Program and paid under the IPPS will have results for the HAC measures on *Hospital Compare* because the HAC measures rely on Present on Admission (POA) coding, which is only required of IPPS hospitals.

IT-4.8 Sepsis mortality *(Standalone measure)*

a. Numerator: Number of patients expiring during current month hospitalization with sepsis, severe sepsis or septic shock and/or an infection and organ dysfunction.

b. Denominator: Number of patients identified that month with sepsis, severe sepsis or septic shock and/or an infection and organ dysfunction.

c. Data Source: Performing Provider data

d. Rationale/Evidence: [259]Mortality rates from severe sepsis are on a similar scale to lung, breast, and colon cancer, and it is one of the leading causes of death in the intensive care unit (ICU) (1-3).

Due to its aggressive, multifactorial nature, sepsis is a rapid killer. Death

[258]http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1228759483171

[259] http://www.survivingsepsis.org/About_the_Campaign/Pages/AbouttheCampaign.aspx

is common among sepsis patients, with around 30% of patients dying within the first month of diagnosis and 50% dying within 6 months (4-6). The 28-day mortality rate in sepsis patients is comparable to the 1960s hospital mortality rate for patients of acute myocardial infarction (AMI) (7). Over recent years, there has been an improvement in the awareness and management of AMI, resulting in a decline in mortality, while sepsis remains an unacknowledged killer (7).
Moreover, the number of severe sepsis cases is set to grow at a rate of 1.5% per annum, adding an additional 1 million cases per year in the USA alone by 2020 (8). This will increase total mortality and increase the burden on healthcare resources. The increase is mainly due to the growing use of invasive procedures and increasing numbers of elderly and high-risk individuals, such as cancer and HIV patients. Older people are at an increased risk of sepsis as they are more vulnerable to infections due to aging, co-morbidities, use of invasive surgical techniques, and problems associated with institutionalization.

IT-4.9 Average length of stay *(Non-standalone measure)*

a. Numerator: Total number of inpatient days for patients diagnosed with severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl).
b. Denominator: Total number of patients diagnosed with severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl).
c. Data Source: Performing Provider data
d. Rationale/Evidence: [260]Those hospitalized for septicemia or sepsis had an average length of stay that was 75% longer than those hospitalized for other conditions. Those under age 65 hospitalized for septicemia or sepsis had an average length of stay that was more than double that of other hospitalizations. Those aged 65 and over hospitalized for septicemia or sepsis had an average length of stay that was 43% higher than that of other patients. In-hospital deaths were more than eight times as likely among patients hospitalized for septicemia or sepsis (17%) compared with other diagnoses (2%). In addition, those hospitalized for septicemia or sepsis were one-half as likely to be discharged home, twice as likely to be transferred to another short-term care facility, and three times as likely to be discharged to long-term care institutions, as those with other diagnoses

[260] http://www.cdc.gov/nchs/data/databriefs/db62.pdf

IT-4.10 Other Outcome Improvement Target: must be evidence based, appropriate for proposed project, and meet the definition of an outcome measure.

a Numerator: TBD by performing provider
b Denominator: TBD by performing provider
c Data Source: TBD by performing provider
d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need.

OD-5 Cost of Care

IT-5.1 Improved cost savings: Demonstrate cost savings in care delivery (*Standalone measure for Project 2.5 only. For all other projects –Non- standalone measure)*

a. Type of analysis to be determine by provider from the following list: Cost of Illness Analysis, Cost Minimization Analysis, Cost Effectiveness Analysis (CEA), Cost Consequence Analysis, Cost Utility Analysis, Cost Benefit Analysis
b. Data source: TBD by provider as appropriate for analysis type
c. Rationale/Evidence: TBD by provider

IT-5.2 Per episode cost of care[261] *(Standalone measure for Project 2.5 only. For all other projects- Non- standalone measure)*

Per episode cost of care measurement quantifies the services involved in the diagnosis, management and treatment of specific clinical conditions. Episode-of-care measures can be developed for the full range of acute and chronic conditions, including diabetes, congestive heart failure, acute myocardial infarction, asthma, low back pain and many others.

a. Numerator: total cost for episode of care
b. Denominator: total number of episodes in one month/year [The monthly reporting is more adequate at institution level, while the annual reporting is more suited at individual physician level]
c. Data source: EHR; provider and regional data;
d. Rationale/Evidence: As health care costs rise – regulators, policymakers and industry leaders are increasingly interested in developing accurate ways to measure and, ultimately to try to reduce health care costs for individuals, as well as society. Developing cost-of-care measures that can help those who get, give and pay for care understand how different providers use resources and compare them to national benchmarks was one of the TX HHSC DSRIP project's goals.

Relative resource use or costs will require 1 year of enrollment with no more than a 30 day gap in coverage.

[261] http://www.healthqualityalliance.org/userfiles/COC%20draft%20080410.pdf

IT-5.3 Other Outcome Improvement Target: must be evidence based, appropriate for proposed project, and meet the definition of an outcome measure.

a Numerator: TBD by performing provider
b Denominator: TBD by performing provider
c Data Source: TBD by performing provider
d Rationale/Evidence: TBD

OD-6 Patient Satisfaction

IT-6.1 Percent improvement over baseline of patient satisfaction scores (*all questions within a survey need to be answered to be a standalone measure)*

Percent improvement over baseline of patient satisfaction scores for one or more of the patient satisfaction domains that the provider targets for improvement in a specific tool. Certain supplemental modules for the adult CG-CAHPS survey may be used to establish if patients:
(1) are getting timely care, appointments, and information; ***(Standalone measure)***
(2) how well their doctors communicate; ***(Standalone measure)***
(3) patient's rating of doctor access to specialist; ***(Standalone measure)***
(4) patient's involvement in shared decision making, and ***(Standalone measure)***
(5) patient's overall health status/functional status. ***(Standalone measure)***

a Numerator: Percent improvement in targeted patient satisfaction domain
b Data Source: Patient survey
c Denominator: Number of patients who were administered the survey
d Rationale/Evidence: The intent of the HCAHPS initiative is to provide a standardized survey instrument and data collection methodology for measuring patients' perspectives on hospital care. The surveys are designed to produce comparable data on the patient's perspective on care that allows objective and meaningful comparisons between institutions on domains that are important to consumers. Public reporting of the survey results is designed to create incentives for institutions to improve their quality of care. Public reporting will serve to enhance public accountability in health care by increasing the transparency of the quality of institutional care provided in return for the public investment.

IT-6.2 Other Outcome Improvement Target: must be evidence based, appropriate for proposed project, and meet the definition of an outcome measure.

a Numerator: TBD by performing provider
b Denominator: TBD by performing provider
c Data Source: TBD by performing provider
d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need

OD-7 Oral Health

IT-7.1 Dental Sealant: Percentage of children age 6-9 with a dental sealant on a permanent first molar tooth (Healthy People 2020; CMS Oral Health Initiative goal *(Non-standalone measure)*

a Numerator: Number of children age 6-9 with a dental sealant on at least one permanent first molar within the measurement period
b Denominator: Total number of children age 6-9 that have seen a dental provider within the measurement period
c Data Source: EHR, Claims
d Rationale/Evidence: Children who have regular access to a dental provider are more likely to have received preventive dental services such as sealant placement.

IT-7.2 Cavities: Percentage of children with untreated dental caries (Healthy People 2020) *(Standalone measure)*

a Numerator: Number of children with untreated dental caries
b Denominator: Total number of children that have seen a dental provider within the measurement period
c Data Source: EHR, Claims
d Rationale/Evidence: Children who have regular access to a dental provider are less likely to suffer from untreated dental caries

IT-7.3 Early Childhood Caries (fluoride applications) *(Non-standalone measure)*
Primary Caries Prevention Intervention as Offered by Primary Care Providers, including Dentists - Percentage of children, age 0-6 years, who received a fluoride varnish application during the measurement period.

a Numerator: Number of children age 0-6 years that have received at least one fluoride varnish application during the measurement period
b Denominator: Total number of children age 0-6 years that have been seen by a primary care or dental provider.
c Data Source: EHR, Claims
d Rationale/Evidence: Children who have regular access to a dental provider are more likely to have received preventive dental services such as fluoride varnish application.

IT-7.4 Topical Fluoride application *(Non-standalone measure)*
Primary Caries Prevention Intervention as Offered by Primary Care Providers, including Dentists - Percentage of children, age 0-20 years, who received a fluoride varnish application during the measurement period.

a Numerator: Number of children age 0-20 years that have received at least one fluoride varnish application during the measurement period
b Denominator: Total number of children age 0-20 years that have been seen by a primary care or dental provider.
c Data Source: EHR, Claims
d Rationale/Evidence: Children who have regular access to a dental provider are more likely to have received preventive dental services such as fluoride varnish application

IT-7.5 Proportion of older adults aged 65 to 74 years who have lost all their natural teeth (Healthy People 2020) *(Standalone measure)*

a Numerator: Number of adults aged 65-74 that have lost all of their natural teeth.
b Denominator: Number of adults aged 65-74 in the patient or target population.
c Data Source: EHR, Claims

IT-7.6 Urgent Dental Care Needs in Children: Percentage of children with urgent dental care needs *(Standalone measure)*
Urgent dental care is defined as needing dental care within 24-48 hours because of signs or symptoms that include pain, infection, and/or swelling.

a Numerator: Number of children with urgent dental care needs
b Denominator: Total number of children seen by a dental provider
c Data Source: EHR, Claims
d Rationale/Evidence: Children are less likely to suffer from more severe, urgent oral health problems with adequate and regular access to dental care

IT-7.7 Urgent Dental Care Need in Older Adults: Proportion of older adults aged 65 and older with urgent dental care needs ***(Standalone measure)***

a Numerator: Number of adults 65 and older with urgent dental care needs
b Denominator: Total number of geriatric patients seen by a dental provider
c Data Source: EHR, Claims
d Rationale/Evidence: Geriatric patients are less likely to suffer from more severe, urgent oral health problems with adequate and regular access to dental care

IT-7.8 Chronic Disease Patients Accessing Dental Services: Percentage of patients with chronic disease conditions accessing dental services following referral by their medical provider ***(Standalone measure)***

a Numerator: Number of chronic disease patients who access dental services as the result of a referral
b Denominator: Total number of referrals for dental services for chronic disease patient by medical providers
c Data Source: EHR, Claims
d Rationale/Evidence: Patients are more likely to seek dental services when the importance of need is documented by a formal referral being made

IT-7.9 Medical Treatment Needs Among Chronic Disease Patients: Percentage of chronic disease patients with improved disease controls status following dental treatment ***(Standalone measure)***

a Numerator: Percent change of chronic disease patients who following dental treatment have improved disease control status (e.g. uncontrolled, poorly or well controlled)
b Denominator:
c Data Source: EHR, Claims
d Rationale/Evidence: Reduction in inflammatory mediators by addressing oral health conditions helps to improve disease control status

IT-7.10 Other Outcome Improvement Target: must be evidence based, appropriate for proposed project, and meet the definition of an outcome measure **(*Standalone measure)***

a Numerator: TBD by performing provider
b Denominator: TBD by performing provider
c Data Source: TBD by performing provider
d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need

OD- 8 Perinatal Outcomes

IT-8.1 Timeliness of Prenatal/Postnatal Care[262] (CHIPRA Core Measure/NQF #1517) *(Non-standalone measure)*

a. Numerator: Deliveries of live births for which women receive the following facets of prenatal and postpartum care:
Rate 1: Received a prenatal care visit as a member of the organization in the first trimester or within 42 days of enrollment in the organization.
Rate 2: Had a postpartum visit for a pelvic exam or postpartum care on or between 21 and 56 days after delivery.
b. Denominator: Deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year
c. Data source: EHR, claims
d. Rationale/Evidence: The percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year. For these women, the measure assesses the following facets of prenatal and postpartum care.
• Rate 1: Timeliness of Prenatal Care. The percentage of deliveries that received a prenatal care visit as a member of the organization in the first trimester or within 42 days of enrollment in the organization.
• Rate 2: Postpartum Care. The percentage of deliveries that had a postpartum visit on or between 21 and 56 days after delivery.

IT-8.2 Percentage of Low Birth- weight births (CHIPRA/NQF # 1382)[263] *(Standalone measure)*

a. Numerator: The number of babies born weighing <2,500 grams at birth
b. Denominator: All births
c. Data source: EHR, claims

IT-8.3 Early Elective Delivery (Medicaid Adult Core Measure/NQF #469)[264] *(Standalone measure)*

a. Numerator: Patients with elective deliveries with a Principal Procedure Code or an Other Procedure Codes for one or more of the following:
• Medical induction of labor as defined in Appendix A, Table 11.05 available at:

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[262] http://www.qualityforum.org/QPS
[263] http://www.qualityforum.org/QPS
[264] http://www.qualityforum.org/QPS

http://manual.jointcommission.org
• Cesarean section as defined in Appendix A, Table 11.06 while not in Active Labor or experiencing Spontaneous Rupture of Membranes available at: http://manual.jointcommission.org

b. Denominator: Patients delivering newborns with >= 37 and < 39 weeks of gestation completed
   - Exclusions:
     Principal Diagnosis Code or Other Diagnosis Codes for conditions possibly justifying elective delivery prior to 39 weeks gestation as defined in Appendix A, Table 11.07
     • Less than 8 years of age
     • Greater than or equal to 65 years of age
     • Length of Stay >120 days
     • Enrolled in clinical trials
c. Data source: EHR, claims
d. Rationale/Evidence: This measure assesses patients with elective vaginal deliveries or elective cesarean sections at >= 37 and < 39 weeks of gestation completed. This measure is a part of a set of five nationally implemented measures that address perinatal care (PC-02: Cesarean Section, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding)

IT-8.4 Antenatal Steroids (Medicaid Adult Core Measure/NQF #476)[265] *(Non-stand alone measure)*

a. Numerator: Patients with a full course of antenatal steroids completed prior to delivering preterm newborns (refer to Appendix B, Table 11.0, antenatal steroid medications available at: http://manual.jointcommission.org)
b. Denominator: Patients delivering live preterm newborns with >=24 and <32 weeks gestation completed
   - Exclusions:
     Less than 8 years of age
     • Greater than or equal to 65 years of age
     • Length of Stay >120 days
     • Enrolled in clinical trials
     • Documented Reason for Not Administering Antenatal Steroid
     • Principal Diagnosis Code or Other Diagnosis Codes for fetal demise as defined in Appendix A, Table 11.09.1 available at: http://manual.jointcommission.org
c. Data source: EHR, claims
d. Rationale/Evidence: This measure assesses patients at risk of preterm delivery at >=24 and <32 weeks gestation receiving antenatal steroids prior to delivering preterm newborns. This measure is a part of a set of five nationally implemented measures that address perinatal care (PC-01: Elective Delivery, PC-

[265] http://www.qualityforum.org/

02: Cesarean Section, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding).

IT-8.5 Frequency of ongoing prenatal care (AHRQ[266]/CHIRPA[267])*(Non-stand alone measure)*

a. Numerator: Women in the denominator sample who had an unduplicated count of less than 21%, 21-40%, 41-60%, 61-80%, or more than 81% of expected visits, adjusted for the month of pregnancy at enrollment and gestational age.
b. Denominator: Women who delivered a live birth during the measurement yr.
c. Data source: EHR, Claims
d. Rationale/Evidence: This measure looks at the use of prenatal care services. It tracks Medicaid-enrolled women who had live births during the past year to determine the percentage of recommended prenatal visits they had. Complications can arise at any time during pregnancy. For that reason, continued monitoring throughout pregnancy is necessary. Frequency and adequacy of ongoing prenatal visits are important factors in minimizing pregnancy problems. The American College of Obstetricians and Gynecologists recommends that prenatal care begin as early as possible in the first trimester of pregnancy. Visits should follow a schedule.
    - Every 4 weeks for the first 28 weeks of pregnancy
    - Every 2 to 3 weeks for the next 7 weeks
    - Weekly thereafter until delivery

IT-8.6 Cesarean Rate for Nulliparous Singleton Vertex (AHRQ[268]/CHIRPA[269]) *(Non-stand alone measure)*

a. Numerator: The number of women in the denominator who had a cesarean section
b. Denominator: Nulliparous patients delivered of a live term singleton newborn in vertex presentation
c. Data source: EHR, Claims
d. Rationale/Evidence: The removal of any pressure to not perform a cesarean birth has led to a skyrocketing of hospital, state and national cesarean section (CS) rates. Some hospitals now have CS rates over 50%. Hospitals with CS rates at 15% to 20% have infant outcomes that are just as good and better maternal outcomes (Gould et al., 2004). There are no data that higher rates improve any outcomes, yet the CS rates continue to rise. This measure seeks to focus attention on the most variable portion of the CS epidemic, the term labor CS in nulliparous women. This population segment accounts for the large majority of the variable portion of the CS rate, and is the area most affected by subjectivity. As compared to other CS measures, what is different about nulliparous term singleton vertex (NTSV) CS rate (Low-risk Primary CS in first births) is that there are clear cut quality improvement activities that can be done to address the

[266] http://www.qualitymeasures.ahrq.gov/content.aspx?id=34125
[267] http://www.ahrq.gov/chipra/corebackground/corebacktab.htm#ncqa
[268] http://www.qualitymeasures.ahrq.gov/content.aspx?id=34144
[269] http://www.ahrq.gov/chipra/corebackground/corebacktab.htm#ncqa

differences. Main et al. (2006) found that over 60% of the variation among hospitals can be attributed to first birth labor induction rates and first birth early labor admission rates. The results showed if labor was forced when the cervix was not ready the outcomes were poorer. Alfirevic et al. (2004) also showed that labor and delivery guidelines can make a difference in labor outcomes. Many authors have shown that physician factors, rather than patient characteristics or obstetric diagnoses, are the major driver for the difference in rates within a hospital (Berkowitz et al., 1989; Goyert et al., 1989; Luthy et al., 2003). The dramatic variation in NTSV rates seen in all populations studied is striking according to Menacker (2005). Hospitals within a state (Coonrod et al., 2008; California Office of Statewide Hospital Planning and Development [OSHPD], 2007) and physicians within a hospital (Main, 1999) have rates with a 3-5 fold variation.

IT-8.7 Birth Trauma Rates (AHRQ-PSI)[270] *(Non-stand alone measure)*

a Numerator: Discharges among cases meeting the inclusion and exclusion rules for the denominator with diagnosis code for birth trauma in any diagnosis field.
- Exclude:
  - Preterm infants with a birth weight less than 2,000 grams
  - Infants with any diagnosis code of injury to brachial plexus
  - Infants with any diagnosis code of osteogenesis imperfecta

b Denominator: All newborns

c Data Source: EHR, Claims

d Rationale/Evidence: This indicator has been widely used in the obstetric community. It was proposed by Miller and colleagues (2001) in the original "Agency for Healthcare Research and Quality (AHRQ) Patient Safety Indicator (PSI) Algorithms and Groupings."

IT-8.8 Infant Mortality *(Standalone measure)*

a. Numerator: Number of infant deaths during the measurement period
b. Denominator: Number of live births during the time period
c. Data Source: EHR, county vital statistics

IT-8.9 Other Outcome Improvement Target: must be evidence based, appropriate for proposed project, and meet the definition of an outcome measure.

a Numerator: TBD by performing provider

b Denominator: TBD by performing provider

c Data Source: TBD by performing provider

d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need

OD- 9 Right Care, Right Setting

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[270] http://www.qualitymeasures.ahrq.gov/content.aspx?id=26531

IT-9.1 Decrease in mental health admissions and readmissions to criminal justice settings such as jails or prisons *(Standalone measure)*

a Numerator: The number of individuals receiving project intervention(s) who had a potentially preventable admission/readmission to a criminal justice setting (e.g. jail, prison, etc.) within the measurement period.

b Denominator: The number of individuals receiving project intervention(s)

c Data Sources: Claims/ encounter and clinical record data; anchor hospital and other hospital records, criminal justice system records, local MH authority and state MH data system records

d Rationale/Evidence: Admission and readmission to criminal justice settings such as jails and prisons is disruptive and deleterious to recovery from behavioral health disorders. Studies of recidivistic criminal justice patients in Texas and other states have demonstrated poorer physical health status, increased incidence of homelessness increased propensity to use emergency department and inpatient services. Interventions which can prevent individuals from cycling through the criminal justice system can help avert poor health and mental health outcomes, reduce long term medical costs and improve functioning.

IT-9.2 ED appropriate utilization *(Standalone measure)*

- Reduce all ED visits (including ACSC)[271]
- Reduce pediatric Emergency Department visits (CHIPRA Core Measure)[272]
- Reduce Emergency Department visits for target conditions
  - Congestive Heart Failure
  - Diabetes
  - End Stage Renal Disease
  - Cardiovascular Disease /Hypertension
  - Behavioral Health/Substance Abuse
  - Chronic Obstructive Pulmonary Disease
  - Asthma

IT-9.3 Pediatric/Young Adult Asthma Emergency Department Visits- NQF 1381[273] *(Standalone measure)*

a Numerator: Percentage of patients with asthma who have greater than or equal to one visit to the emergency room for asthma during the measurement period.

b Denominator: Denominator is all patients age two through age 20, diagnosed with asthma during the measurement period. The denominator will include recipients with claims with asthma as primary and secondary diagnoses with the dates of service “Begin Date through End Date" equal any consecutive 12 month period with paid dates from "Begin Date through End Date which includes 3

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[271] http://archive.ahrq.gov/data/safetynet/billappb.htm

[272] http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/CHIPRA-Initial-Core-Set-of-Childrens-Health-Care-Quality-Measures.html

[273] http://www.qualityforum.org/QPS

month tail". This is the measurement period. Total period of our pilot initiative was 24 months. We used Baseline Measurement period of March 1, 2006 through February 28, 2007 with paid dates through May 31, 2007 to provide a 3 month claims tail.

c Data Source: EHR, Claims

d Rationale/Evidence: Please see footnote for specific diagnosis codes to be included as well as criteria for case exclusion.

IT-9.4 Other Outcome Improvement Target: must be evidence based, appropriate for proposed project, and meet the definition of an outcome measure.

a Numerator: TBD by performing provider

b Denominator: TBD by performing provider

c Data Source: TBD by performing provider

d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need.

OD- 10 Quality Of Life/ Functional Status [274]

IT-10.1 Quality of Life-[275],[276],[277] (*Standalone measure)*

a. Demonstrate improvement in quality of life (QOL) scores, as measured by evidence based and validated assessment tool, for the target population.

b. Data source: Provider may select a validated assessment tool for quality of life. Some examples include AQoL, SF-36, 20 or 12, PedsQL

c. Rationale/Evidence: Although much of health care is focused on increasing longevity, many of the medical treatments are specifically designed to improve symptoms and function, two essential components of health-related quality of life. In many cases, the best way to measure symptoms and functional status is by direct patient survey. The importance of such patient-reported outcomes is evidenced by their increased use in clinical trials and in drug and device label claims. Effective quality improvement requires relentless focus on the patient outcomes.

IT-10.2 Activities of Daily Living *(Standalone measure)*

a. Demonstrate improvement in ADL scores, as measured by evidence based and validated assessment tool, for the target population.

b. Data source: Provider may select a validated assessment tool for activities of daily living. Some examples include the Katz ADL Scale, Lawton IADL Scale[278], Barthal Index of Activities of Daily Living[279] and Bristol Activities of Daily Living Scale (for dementia patients).

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[274] http://www.nihpromis.org/default

[275] http://www.qualitymeasures.ahrq.gov/expert/expert-commentary.aspx?id=16466&search=quality+of+life

[276] http://www.ncbi.nlm.nih.gov/pubmed/10472152

[277] http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3349491/

[278] http://son.uth.tmc.edu/coa/FDGN_1/RESOURCES/ADLandIADL.pdf

[279] http://www.healthcare.uiowa.edu/igec/tools/function/barthelADLs.pdf

c. Rationale/Evidence: Although much of health care is focused on increasing longevity, many of the medical treatments are specifically designed to improve symptoms and function, two essential components of health-related quality of life. In many cases, the best way to measure symptoms and functional status is by direct patient survey. The importance of such patient-reported outcomes is evidenced by their increased use in clinical trials and in drug and device label claims. Effective quality improvement requires relentless focus on the patient outcomes.

IT-10.3 Functional status metrics *(Standalone measure)*

Applied Cognition domain[280]:

a. Numerator: Mean change score in applied cognition of patients in a post-acute care setting as assessed using the "Applied Cognition" domain of the Activity Measure for Post-acute Care (AM-PAC)
b. Denominator: Patients in the post-acute care setting who were assessed at baseline and at some follow-up point in time using the "Applied Cognition" domain of the Activity Measure for Post-acute Care (AM-PAC)
c. Data source: Patient/Individual survey
d. Rationale/Evidence: Initially, Activity Measure for Post-acute Care (AM-PAC) test items were administered to a large sample of patients from different care settings with different diagnoses. Factor analytic work identified three distinct, interpretable factors that accounted for 72% of the variance: Applied Cognition (44%), Daily Activities (19%) and Basic Mobility (9%). These factors were verified by a confirmatory factor analysis and defined as the three AM-PAC domains. Using Item Response Theory (IRT), items in each domain were scaled along a continuum of item difficulty. Items that were redundant or did not fit the model were eliminated. The remaining items formed the AM-PAC item banks, which included a wide range of items calibrated along a continuum of difficulty. Adequate levels of reliability of individual items and validity of the AM-PAC have been established and have been reported. Refer to the articles referenced in the "Evidence for Reliability/Validity Testing" field for further information.

Basic Mobility Domain[281]:

a. Numerator: Mean change score in basic mobility of patients in a post-acute care setting as assessed using the "Basic Mobility" domain of the Activity Measure for Post-acute Care (AM-PAC)
b. Denominator: Patients in the post-acute care setting who were assessed at baseline and at some follow-up point in time using the "Basic Mobility" domain of the Boston University Activity Measure for Post-acute Care (AM-PAC)
c. Data source: Patient/Individual survey

Daily Activities Domain[282]:

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[280] http://www.qualitymeasures.ahrq.gov/content.aspx?id=27139&search=functional+status
[281] http://www.qualitymeasures.ahrq.gov/content.aspx?id=27137&search=functional+status
[282] http://www.qualitymeasures.ahrq.gov/content.aspx?id=27138&search=functional+status

a. Numerator: Mean change score in daily activity of patients in a post-acute care setting as assessed using the "Daily Activities" domain of the Boston University Activity Measure for Post-acute Care (AM-PAC)
b. Denominator: Patients in the post-acute care setting who were assessed at baseline and at some follow-up point in time using the "Daily Activities" domain of the Activity Measure for Post-acute Care (AM-PAC)
c. Data source: Patient/Individual survey

IT-10.4 Functional status assessment for knee replacement (ONC 104A)- Percentage of patients aged 18 years and older with primary total knee arthroplasty (TKA) who completed baseline and follow-up (patient-reported) functional status assessments. ***(Standalone measure)***

a Numerator: Patients with functional status assessment results present in the EHR at the encounter before and after procedure during the measurement year
b Denominator: Adults aged 18 as of January 1 in the measurement year who had an outpatient encounter within 6 months prior to procedure and at least 60 days and not more than 180 days after TKA procedure
c Data Source: EHR, Claims

IT-10.5 Functional status assessment for hip replacement (ONC 104B)- Percentage of patients aged 18 years and older with primary total hip arthroplasty (THA) who completed baseline and follow-up (patient-reported). functional status assessments. ***(Standalone measure)***

a Numerator: Patients with functional status assessment results present in the EHR at the encounter before and after procedure during the measurement year
b Denominator: Adults aged 18 as of January 1 in the measurement year who had an outpatient encounter within 6 months prior to procedure and at least 60 days and not more than 180 days after THA procedure
c Data Source: EHR, Claims

IT-10.6 Functional status assessment for complex chronic conditions (ONC 106)- Percentage of patients with two or more high impact conditions who completed initial and follow-up (patient-reported) functional status assessments. ***(Non-standalone measure)***

a Numerator: Functional status assessment results present in the EHR at the encounter at an initial visit and follow-up visit during the measurement year
b Denominator: Patients who had an outpatient encounter and an active diagnosis of two high impact medical conditions.
c Data Source: EHR, Claims

IT-10.7 Other Outcome Improvement Target : must be evidence based, appropriate for proposed project, and meet the above definition of an outcome measure.

a Numerator: TBD by performing provider
b Denominator: TBD by performing provider
c Data Source: TBD by performing provider

d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need

OD- 11 Addressing Health Disparities in Minority Populations

IT-11.1 Improvement in Clinical Indicator in identified disparity group. Clinical indicator to be improved and disparity group to be determined by provider ***(Standalone measure)***

a Numerator: TBD by performing provider
b Denominator: TBD by performing provider
c Data Source: TBD by performing provider
d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need

IT-11.2 Improvement in disparate health outcomes for target population, including identification of the disparity gap. ***(Non-stand alone measure)***

a Numerator: TBD by performing provider
b Denominator: TBD by performing provider
c Data Source: TBD by performing provider
d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need

IT-11.3 Improve utilization rates of clinical preventive services (testing, preventive services, treatment) in target population with identified disparity. ***(Non-standalone measure)***

a Numerator: TBD by performing provider
b Denominator: TBD by performing provider
c Data Source: TBD by performing provider
d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need

IT-11.4 Improve patient satisfaction and/or quality of life scores in target population with identified disparity. ***(Non-stand alone measure)***

a Numerator: TBD by performing provider
b Denominator: TBD by performing provider
c Data Source: TBD by performing provider
d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need

IT-11.5 Select any other Category 3 outcome (PPAs, PPRs, or ED utilization) or a combination of non-standalone measures and target a specific minority population with a demonstrated disparity in the particular measure ***(Standalone measure)***

a Numerator: TBD by performing provider
b Denominator: TBD by performing provider
c Data Source: TBD by performing provider
d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need

IT-11.6 Other Outcome Improvement Target: must be evidence based, appropriate for proposed project, and meet the definition of an outcome measure.

a Numerator: TBD by performing provider
b Denominator: TBD by performing provider
c Data Source: TBD by performing provider
d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need

OD- 12 Primary Care and Primary Prevention

IT-12.1 Breast Cancer Screening (HEDIS 2012) ***(Non-standalone measure)***

a Numerator: Number of women aged 40 to 69 that have received an annual mammogram during the reporting period. Denominator: Number of women aged 40 to 69 in the patient or target population. Women who have had a bilateral mastectomy are excluded
b Data Source: EHR, Claims
c Rationale/Evidence: Screening for cancer implies testing for early stages of disease before symptoms occur. It involves application of an early detection test to a large number of apparently healthy people to identify those having unrecognized cancer. People with positive screening tests are subsequently investigated with diagnostic tests and those with confirmed disease are offered appropriate treatment and follow-up. The objective of screening is to reduce incidence of and/or death from cancer by detecting early preclinical disease when treatment may be easier and more effective than for advanced cancer diagnosed after the symptoms occur. It is important to evaluate the efficacy of a given screening approach to reduce disease burden, harm and cost, as well as its overall cost-effectiveness, before it is considered for widespread implementation in large population settings. The only justification for a screening program is early diagnosis that leads to a cost-effective and significant reduction in disease burden.

IT-12.2 Cervical Cancer Screening (HEDIS 2012) ***(Non-standalone measure)***

a Numerator: Number of women aged 21 to 64 that have received a PAP in the measurement year or two prior years.

b Denominator: Women aged 21 to 64 in the patient or target population. Women who have had a complete hysterectomy with no residual cervix are excluded.

c Data Source: EHR, Claims

d Rationale/Evidence: Screening for cancer implies testing for early stages of disease before symptoms occur. It involves application of an early detection test to a large number of apparently healthy people to identify those having unrecognized cancer. People with positive screening tests are subsequently investigated with diagnostic tests and those with confirmed disease are offered appropriate treatment and follow-up. The objective of screening is to reduce incidence of and/or death from cancer by detecting early preclinical disease when treatment may be easier and more effective than for advanced cancer diagnosed after the symptoms occur. It is important to evaluate the efficacy of a given screening approach to reduce disease burden, harm and cost, as well as its overall cost-effectiveness, before it is considered for widespread implementation in large population settings. The only justification for a screening program is early diagnosis that leads to a cost-effective and significant reduction in disease burden.

IT-12.3 Colorectal Cancer Screening (HEDIS 2012) ***(Non-standalone measure)***

a Numerator: Number of adults aged 50 to 75 that have received one of the following screenings. Fecal occult blood test yearly, Flexible sigmoidoscopy every five years, Colonoscopy every 10 years

b Denominator: Number of adults aged 50 to 75 in the patient or target population. Adults with colorectal cancer or total colectomy are excluded.

c Data Source: EHR, Claims

d Rationale/Evidence: Screening for cancer implies testing for early stages of disease before symptoms occur. It involves application of an early detection test to a large number of apparently healthy people to identify those having unrecognized cancer. People with positive screening tests are subsequently investigated with diagnostic tests and those with confirmed disease are offered appropriate treatment and follow-up. The objective of screening is to reduce incidence of and/or death from cancer by detecting early preclinical disease when treatment may be easier and more effective than for advanced cancer diagnosed after the symptoms occur. It is important to evaluate the efficacy of a given screening approach to reduce disease burden, harm and cost, as well as its overall cost-effectiveness, before it is considered for widespread implementation in large population settings. The only justification for a screening program is early diagnosis that leads to a cost-effective and significant reduction in disease burden.

IT-12.4 Pneumonia vaccination status for older adults (HEDIS 2012) ***(Non-standalone measure)***

a Numerator: Number of adults aged 65 and older that have ever received a pneumonia vaccine.

b Denominator: Number of adults aged 64 and older in the patient or target population.
c Data Source: EHR, Claims

IT-12.5 Other USPSTF-endorsed screening outcome measures

a Numerator: TBD by provider
b Denominator: TBD by provider.
c Data Source: EHR, Claims
d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need

IT-12.6 Other Outcome Improvement Target: must be evidence based, appropriate for proposed project, and meet the definition of an outcome measure.

a Numerator: TBD by performing provider
b Denominator: TBD by performing provider
c Data Source: TBD by performing provider
d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need

OD- 13 Palliative Care

IT-13.1 Pain assessment (NQF-1637) *(Non-standalone measure)*

Percentage of hospice or palliative care patients who screened positive for pain and who received a clinical assessment of pain within 24 hours of screening.[283]

a. Numerator: Patients who received a comprehensive clinical assessment to determine the severity, etiology and impact of their pain within 24 hours of screening positive for pain.
b. Denominator: Patients enrolled in hospice OR receiving palliative care who report pain when pain screening is done on the admission evaluation / initial encounter.
    - Exclusion: patients with length of stay < 1 day in palliative care or <7 days in hospice, patients who were not screened for pain. Patients who screen negative for pain are excluded from the denominator.
c. Data Source: EHR, Claims
d. Rationale/Evidence: Pain is under-recognized by clinicians and undertreated, resulting in excess suffering from patients with serious illness. Pain screening and assessments are necessary in order to improve the patient centered outcome of pain, and its effects on global outcomes of function and quality of life.

IT-13.2 Treatment Preferences (NQF 1641) *(Non-standalone measure)*

Percentage of patients with chart documentation of preferences for life sustaining treatments.[284]

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[283] http://www.nahc.org/regulatory/HospiceRegs/1637.PDF
[284] http://www.nahc.org/regulatory/HospiceRegs/1641-1.PDF

a. Numerator: Patients whose medical record includes documentation of life sustaining preferences
b. Denominator: Seriously ill patients enrolled in hospice OR receiving specialty palliative care in an acute hospital setting.
    - Exclusions: patients with length of stay < 1 day in palliative care or <7 days in hospice.
c. Data Source: EHR, Claims
d. Rationale/Evidence: Pain is under-recognized by clinicians and undertreated, resulting in excess suffering from patients with serious illness. Pain screening and assessments are necessary in order to improve the patient centered outcome of pain, and its effects on global outcomes of function and quality of life.

IT-13.3 Proportion with more than one emergency room visit in the last days of life (NQF 0211)- Percentage of patients who died from cancer with more than one emergency room visit in the last days of life.[285] ***(Standalone measure)***

a. Numerator: Patients who died from cancer and had >1 ER visit in the last 30 days of life
b. Denominator: Patients who died from cancer.
c. Data Source: EHR, Claims
d. Rationale/Evidence: Although, when operationalized as a claims-based measure, this does not take patient preferences into account, the idea is for the measure to be seen as an overall indication of practice style and/or available palliative resources. An individual patient experiencing this process of care has not necessarily received poor quality care, but unless there is a reason to think that the patients in one setting have a significantly greater proportion with differing preferences, aggregate rates of the measure can justifiably be compared across settings. In this way it is a reflection of the quality of end-of-life care.

IT-13.4 Proportion admitted to the ICU in the last 30 days of life (NQF 0213) - Percentage of patients who died from cancer admitted to the ICU in the last 30 days of life. [286]***(Standalone measure)***

a. Numerator: Patients who died from cancer and were admitted to the ICU in the last 30 days of life
b. Denominator: Patients who died from cancer.
c. Data Source: EHR, Claims
d. Rationale/Evidence: Using patient satisfaction with end-of-life care as a desired outcome, patient survey data reflect patients' desires to die at home and to not be connected to machines at the end-of-life. ICU use near the end of life may indicate a lack of discussion about advance directives. ICU care is expensive and uncomfortable, and generally not appropriate for the dying patient.

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[285] www.qualityforum.org
[286] www.qualityforum.org

IT-13.5 Percentage of patients receiving hospice or palliative care services with documentation in the clinical record of a discussion of spiritual/religions concerns or documentation that the patient/caregiver did not want to discuss. (NQF 1647 modified) ***(Non-standalone measure)***

a. Numerator: Number of patient with clinical record documentation of spiritual/religious concerns or documentation that the patient/family did not want to discuss.
b. Denominator: Total number of patient's discharged from hospice or palliative care during the designated reporting period.
c. Data Source: EHR, Claims
d. Rationale/Evidence: One of the unique aspects of hospice care involves a true interdisciplinary approach providing care for both the physical and psychosocial and spiritual needs of the patient and caregiver. Discussion of spiritual concerns is the core of a rigorous assessment of spiritual care needs and is essential to assuring that these needs are met. This measure will help agencies improve processes for addressing spiritual/religious concerns for patients and families receiving hospice care.

IT-13.6 Other Outcome Improvement Target: must be evidence based, appropriate for proposed project, and meet the definition of an outcome measure.

a Numerator: TBD by performing provider
b Denominator: TBD by performing provider
c Data Source: TBD by performing provider
d Rationale/Evidence: Rationale to include citation, evidence base and significance of target towards intervention population or community of need