Quality Corp Measures Description and Methodologies

Overview: The Oregon Health Care Quality Corporation (Q Corp) is dedicated to improving the quality and affordability of health care in Oregon by leading community collaborations and producing unbiased information. The goal of this measurement initiative is to improve patient care by coordinating and consolidating quality and utilization information that health plans share with providers, consumers, employers, policymakers and health insurers. Measuring the quality of health care requires a number of complicated technical decisions. Q Corp facilitates a community-wide process to resolve these complex issues by seeking input from key health care stakeholders – those who give care, get care, and those who pay for health care. This summary highlights how scores were computed and how fundamental decisions were made. A multi-stakeholder process was used to adopt principles, conduct research, and produce background information to help guide key decisions. For a more detailed description of the measure definitions, please see the table at the end of this document.

Data Sources: Claims data for the current report were submitted by 15 participating data suppliers including commercial health plans, the Oregon Health Authority (OHA), and Centers for Medicare and Medicaid Services (CMS). Q Corp has received approval from CMS to become a certified Qualified Entity, which allows Q Corp to receive and create reports using Medicare Fee for Service (FFS) and Medicare Part D data. Claims for fee-for-service Medicare patients are now included in Q Corp's data set as of spring 2014. Claims from Cigna, Aetna and other non-domestic insurers are not included, nor are self-pay visits.

Claims were submitted to the data services vendor, Milliman, Inc, who aggregated the data to calculate results at the medical group, clinic and provider levels. Q Corp used clinic-supplied information to link providers to the clinics where they deliver care to create clinic-level and medical group-level results. Reports include results for Oregon primary care providers, including nurse practitioners and physician assistants. For most measures, the data represents care provided to patients between July 1, 2014 and June 30, 2015.

Measure Selection: Q Corp's Measurement and Reporting Committee, composed of consumers, providers, employers, policymakers and health insurers, give Q Corp staff feedback measurement issues and makes recommendations to the Q Corp Board of Directors. The Committee identified principles for measure selection and the first set of Oregon measures. To ensure measures adhered to national standards set by the National Quality Forum (NQF), the Committee primarily chose measures from the National Committee for Quality Assurance (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS), a subset of the measures endorsed by the NQF and the most widely-used set for ambulatory care. Since the first round of reporting in 2009, additional measures have been added. These include measures of appropriate low back pain imaging, appropriate testing for children with pharyngitis, well-child visits, generic drug fills, potentially avoidable Emergency Department (ED) visits, hospital admissions for ambulatory-sensitive conditions. The generic drug fill measures were developed by the Puget Sound Health Alliance; the potentially avoidable ED visits measures were developed by the MediCal Managed Care Division of the California Department of Healthcare Services and specifications are currently maintained by the Oregon Health Authority; and the composite measures of hospital admissions for ambulatory-sensitive conditions are among the set of US Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators (PQIs). Measures will continue to be tested and added or deleted as the effort matures.

Q Corp includes measures at the provider level that align with quality and resource use measures used for Coordinated Care Organization (CCO) incentives. These results are produced independently by Q Corp and represent insured populations including commercial, Medicaid and Medicare.

Assigning Patients to Providers (Attribution): Assigning the correct patients to providers is an important part of developing accurate quality measurement reports. The general consensus among Q Corp's Committees is that the method for attributing patients to a primary care provider must be fair, consistent and transparent.

Patients are assigned to a primary care provider (PCP) contained in the Q Corp provider directory. The logic model for attribution then adheres to the following formula:

- Use the PCP the patient has seen the most across the two-year attribution period (July 1, 2013 – June 30, 2015)
- A patient will be attributed to a single PCP
- If there is a tie, use the most recently-seen PCP

Kaiser Health Plans is the exception to this attribution methodology. Kaiser patients are attributed to the Kaiser designated PCP.

If a patient receives care only from a specialist or urgent care clinic, they are not assigned a primary care provider (unattributed). In addition, if a claim does not specify the correct CPT codes or provider, the patient is not attributed. For example, unattributed patients for the cervical cancer screening measure might include healthy young women that only receive care from an ob-gyn.

Overall, Q Corp has observed roughly a 33 percent loss of patients who are unattributed to a primary care provider. While this method has attributed fewer patients overall (smaller denominator sizes), it has resulted in providers confirming 95 percent accuracy of the patients assigned to them.

Q Corp will vary from this attribution methodology for specific measures. For the low back pain imaging measure, images are attributed to either a PCP or a provider from a list of designated specialties. Attribution is determined by ranking the number of visits during the two-year period ending with the measurement end date and the RVUs for those visits. The tie-breaker goes to the provider with the most recent date of service. The following specialties are included in the available attribution pool for the low back pain imaging measure:

- Chiropractor
- Family Medicine
- General Practice
- Internal Medicine
- Naturopathy
- Neurology
- Nurse Practitioner & Physician Assistant
- Orthopaedic Surgery
- Osteopathy
- Physical Medicine & Rehabilitation
- Women's Health

For measures of hospital based services, the patient will only be attributed to physicians seen before the hospital visit or admit date. This ensures that a patient has actually established care with the PCP before the potentially avoidable event occurred. The following measures use this methodology:

- Potentially Avoidable Emergency Department Visits
- Hospital Admissions for Ambulatory-Sensitive Conditions
- HEDIS 30-Day Plan All-Cause Readmissions

Calculating Clinic Rates and Scores: A minimum threshold of 30 patients per clinic is required for inclusion in the measure calculation. Clinic-level rates were calculated as follows:

$$Rate = 100 * \frac{Number\ of\ eligible\ patients\ who\ met\ the\ measure\ specification}{Number\ of\ eligible\ patients}$$

Rates were first calculated for each clinic and then an overall clinic rate average for Oregon was calculated for comparison.

Clinic results are reported on Q Corp's public website, www.q-corp.org/compare-your-care once a year following the Spring round of reporting. To be publicly reported, a clinic must have three or more practicing primary care providers and at least 30 patients in a measure. Rates above or below one standard deviation from the statewide average rate are reported as "Better" or "Below," respectively. As a result, approximately two-thirds of Oregon clinics are reported as "Average."

Medical group rates are calculated across all patients, including patients in clinics that are too small to be publicly reported. The data displays and confidence intervals on provider reports are intended to help with interpretation when case numbers are small. Reports were sent to all providers in eligible clinics regardless of the number of patients in the report in order to increase awareness of the initiative and to solicit feedback. The term "doctor's office" is used in place of the term "clinic" on the public website for easier consumer understanding.

Achievable Benchmark of Care (ABC): The ABC Benchmark, developed at the University of Alabama at Birmingham, indicates the pared mean rate of best performing Oregon clinics providing care to at least 10 percent of the patient population. The achievable benchmark for each measure was calculated using data from this initiative. The ABC Benchmark provides an objective method for identifying comparative performance levels *already achieved* by "best-in-class" clinics within Oregon. For detailed information, see the website: http://www.coere.cme.uab.edu/Default.aspx.

Validation and Medical Group Pre-testing: Claims were submitted by data suppliers to the data services vendor, Milliman. Milliman worked with each data supplier to validate the submitted data. There were two levels of validation – one that ensured the correct transmission and format of the data and another that ensured measure results were consistent between Milliman and the data supplier. Once validated, the data were aggregated across plans for measure calculation.

Prior to adding new measures to reports, Q Corp recruits volunteer medical groups to compare preliminary results on Q Corp's secure portal to patient records. This validation ensures that measures are running as expected and are producing accurate and useful results. A medical group review period is also offered following each new round of reports.

Small Numbers of Patients for Some Providers: Despite the large number of claims in the dataset, some providers and clinics may have only a small number of patients for some measures. In the spring 2014 reporting round, between 11.7 – 34.7 percent of patients were "lost" because only patients who were continuously enrolled in health plans during the measurement period were counted. Additionally, some patients were not captured in measures because: 1) their condition may not have been coded in a claim, 2) they are not members of a participating health plan, 3) they do not meet extremely strict inclusion criteria (esp. asthma measure), or 4) they were assigned to a different provider. In some cases, the provider may not have had a full-time, full-year experience at the medical group during the measurement period.

Accuracy of Claims Data: Through the validation process, errors and omissions in data have been identified as stemming from multiple sources including both the health plans and medical groups' billing practices. After extensive refinement, test clinics determined that 98 percent of their patients were correctly attributed to their PCP. Remaining sources of error were varied and often specific to the medical group or health plan. For some conditions, such as diabetes, the denominator was extremely accurate. For others, such as Pap tests, the denominator occasionally included women who had received a hysterectomy prior to 2005. Evidence of services is not always captured in claims and this is usually due to coding issues. Attending physicians who serve in residency programs may have patients attributed to them who were seen and followed by a resident physician. However, validation clinics determined that billing data can provide useful patient-level information to clinics including prescription fills, ER visits, and evidence of diagnostic tests.

Measure Name	Numerator: Definition for Compliance of Measure	Denominator: Definition of Condition and Exclusions
Asthma: Use of appropriate medications for people with persistent asthma	Dispensed at least one prescription for an asthma controller medication during the measurement period*. Preferred asthma medications include antiasthmatic combinations, antibody inhibitor, inhaled steroid combinations, inhaled corticosteroids, leukotriene modifiers, mast cell stabilizers, and methylxanthines.	**Asthma is defined by:** Patients 5-18 years who, during the measurement period* or the year prior, were identified as having persistent asthma because of at least four asthma medication dispensing events, at least one ED visit with asthma as the primary diagnosis, at least one acute inpatient discharge with asthma as the principal diagnosis, or at least four outpatient asthma visits paired with at least two asthma medication dispensing events. Exclude from the eligible population all members diagnosed with emphysema, COPD, obstructive chronic bronchitis, chronic respiratory conditions due to fumes/vapors, cystic fibrosis or acute respiratory failure.
Breast Cancer Screening	Women who had a mammogram during the measurement period* [or the 15 months prior].	**Women eligible for breast cancer screening include:** Women 50-74 years of age **Exclusions:** Women who had a bilateral mastectomy or 2 separate mastectomies prior to the end of the measurement period*..
Cervical Cancer Screening	Women who had were screened for cervical cancer by the following: 1. Women 24-64 who had a Pap test during the measurement period* or the two years prior. 2. For women who did not meet step 1, women 35-64 who had a Pap followed by an HPV test within four days during the measurement period* or the four years prior.	**Women eligible for a Pap test include:** Women 21-64 years of age. **Exclusions**: Women who had a hysterectomy prior to the end of the measurement period*.

Measure Name	Numerator: Definition for Compliance of Measure	Denominator: Definition of Condition and Exclusions
Chlamydia Screening	Women who had a Chlamydia test during the measurement period*.	**Women eligible for a Chlamydia screen include:** Sexually active women 16-24 years of age. Sexually active women are identified by either having filled a prescription for contraceptives during the measurement period* or had at least 1 claim with a code to identify sexually active women. **Exclusions:** Women who had a pregnancy test during the measurement period followed within 7 days by either a prescription for Accutane or an x-ray are excluded.
Diabetes: HbA1c testing	Had at least one HbA1c test performed during the measurement period*.	**Diabetes is defined by:** Patients 18-75 who, during the measurement period* or the year prior: 1. Were dispensed insulin or hypoglycemics/antihyperglycemics on an ambulatory basis; or 2. Had two face-to-face encounters with different dates of service in an outpatient setting, emergency room setting or non-acute inpatient setting with a diagnosis of diabetes; or 3. Had two[†] or more face-to-face encounter in an acute inpatient setting with a diagnosis of diabetes. **Exclusions**: Patients with gestational diabetes, steroid-induced diabetes, or polycystic ovaries who did not have a face-to-face visit with a non-gestational diabetes diagnosis during the year prior to the measurement year or the measurement year. [†] *The NCQA HEDIS definition requires only a single face-to-face encounter in an acute inpatient with a diagnosis of diabetes. Based on clinic chart review results, Q Corp modified the definition to require two or more face-to-face encounters beginning with Fall 2012 reporting. The modified definition is expected to impact less than 2.5% of patients identified in the measure.*
Diabetes: Eye exam (retinal) performed	Had an eye screening for diabetic retinal disease by one of the following: A retinal or dilated eye exam in the measurement period*; or A *negative* retinal or eye exam (negative for retinopathy), by an eye care professional (optometrist or ophthalmologist) in the year prior to the measurement period*.	
Diabetes: Evidence of nephropathy assessment, treatment, or prevention	Screening for nephropathy or evidence of nephropathy during the measurement period*. Evidence of nephropathy includes a nephropathy screening test, treatment for nephropathy or ACE/ARB therapy, stage 4 chronic kidney disease, ESRD, kidney transplant, nephrologist visit, a urine macroalbumin test as documented by claims, or at least one ACE inhibitor or ARB dispensing event.	

Measure Name	Numerator: Definition for Compliance of Measure	Denominator: Definition of Condition and Exclusions
Alcohol Misuse: Screening, Brief Intervention, Referral for Treatment (SBIRT)	Total number of unique members with one or more screening, brief intervention, and referral to treatment (SBIRT) services.	1st measure: Patients age 12-17 2nd measure: Patients age 12 and older 3rd measure: Patients age 18 and older The number of unique patients with at least one outpatient visit during the measurement period. The outpatient visit is identified using the same criteria as the HEDIS Ambulatory Outpatient Visit measure*.
Use of Imaging Studies for Low Back Pain	Patients on whom an imaging study was not conducted on or within the 28 days following the episode date.	**Low back pain is defined by:** Patients aged 18-50 during the measurement period* who had an outpatient or ED visit with a primary diagnosis of low back pain. **Exclusions:** Patients with a low back pain diagnosis during the 180 days (6 months) prior to the episode date. Patients for whom an imaging study in the presence of low back pain is clinically indicated: cancer anytime in the patient's medical history; recent trauma; intravenous drug abuse; or neurological impairment within 12 months of the episode date.
Generic Prescription Fills: SSRIs and other Second Generation Antidepressants	Number of prescription fills for second generation antidepressant prescriptions identified as generic.	**A prescription fill is defined by:** A prescription fill for at least a 30-day supply of second or third generation antidepressants, both brand-name and generic, during the measurement period* by a patient aged 18 years or older. Includes SSRIs, SNRIs and DNRIs. *Note that Medicare Part D data is not included in this measure.*

Measure Name	Numerator: Definition for Compliance of Measure	Denominator: Definition of Condition and Exclusions
Generic Prescription Fills: Statins	Number of prescription fills for statins identified as generic.	**A prescription fill is defined by:** A prescription fill for at least a 30-day supply of statins, both brand-name and generic, during the measurement period* by a patient aged 18 years or older. *Note that Medicare Part D data is not included in this measure.*
Generic Prescription Fills: Antihypertensives	Number of prescription fills for antihypertensive drugs identified as generic.	**A prescription fill is defined by:** A prescription fill for at least a 30-day supply of antihypertensive drugs, both brand-name and generic, during the measurement period* by a patient aged 18 years or older. *Note that Medicare Part D data is not included in this measure.*
Ambulatory Care: Emergency Department and Outpatient Utilization	The total number of emergency department visits that does not result in an inpatient stay for the eligible population. The total number of outpatient visits for the eligible population.	1st measure (Adult): The number of member months for patients aged 18 years and older during the measurement period*. 2nd measure (Child): The number of member months for patients aged 1-17 years during the measurement period*. 3rd measure (Adult): The number of member months for patients aged 18 years and older during the measurement period*. 4th measure (Child): The number of member months for patients aged 1-17 years during the measurement period*. *Note: Ambulatory Care rates reported as per 1,000 member months.*

Measure Name	Numerator: Definition for Compliance of Measure	Denominator: Definition of Condition and Exclusions
Potentially Avoidable ED Visits, % of Total	The total number of emergency department visits with a primary diagnosis code that appears on OHA's list of avoidable diagnosis codes for emergency department care, among the eligible population.	1st measure (Adult): The total number of emergency department visits among the patients aged 18 years and older. 2nd measure (Child): The total number of emergency department visits among patients aged 1-17 years. **Exclusions (Adult and Child):** Visits that result in an inpatient stay. Patients with mental health and chemical dependency services. Infants less than 12 months of age on the date of the emergency department visit.
Potentially Avoidable ED Visits, Rate per 100 Patients **(See Notes)**	The total number of emergency department visits among patients enrolled for the entire last month of the measurement period* with a primary diagnosis code that appears on OHA's list of avoidable diagnosis codes for emergency department care, among the eligible population.	1st measure (Adult): The number of patients aged 18 years and older enrolled for the entire last month of the measurement period*. 2nd measure (Child): The number of patients aged 1-17 years and older enrolled for the entire last month of the measurement period*. **Exclusions (Adult and Child):** Visits that result in an inpatient stay. Patients with mental health and chemical dependency services. Infants less than 12 months of age on the date of the emergency department visit. *Notes: In medical group reports, Q Corp reports results as ED visits per 100 patients to facilitate interpretation by medical groups and providers. In other reporting, Q Corp may scale results to ED visits per 100,000 patients.*

Measure Name	Numerator: Definition for Compliance of Measure	Denominator: Definition of Condition and Exclusions
Hospital Admissions for Ambulatory-Sensitive Conditions	Overall Composite: The number of patients with a discharge with principal diagnosis code for any of the conditions listed in the Acute/Chronic Composite measures (below). Acute Composite: The number of patients with a discharge with principal diagnosis code for any of the following: • PQI #10 – Dehydration • PQI #11 – Bacterial Pneumonia • PQI #12 – Urinary Tract Infection Chronic Composite: The number of patients with a discharge with principal diagnosis code for any of the following: • PQI #1 – Diabetes Short-Term Complications • PQI #3 – Diabetes Long-Term Complications Admission Rate • PQI #5 – Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults • PQI #7 – Hypertension • PQI #8 – Heart Failure • PQI #13 – Angina without Procedure • PQI #14 – Uncontrolled Diabetes • PQI #15 – Asthma in Younger Adults PQI #16 – Lower-Extremity Amputation among Patients with Diabetes	The number of patients aged 18 years and older enrolled for the entire last month of the measurement period*. **Exclusions:** Maternal/neonatal discharges. Transfers from another institution. *Notes: Q Corp reports results as hospital admissions per 100 patients to facilitate interpretation by medical groups and providers. The Agency for Healthcare Research and Quality (ARHQ) scales results per 100,000 patients.*

Measure Name	Numerator: Definition for Compliance of Measure	Denominator: Definition of Condition and Exclusions
30-Day All-Cause Readmissions, Unadjusted	The number of acute inpatient stays for any diagnosis with an admission date within 30 days of a previous index discharge date. **Exclusions:** • Acute inpatient hospital stays with a maternity related discharge	The number of acute inpatient discharges for members 18 years of age and older who had one or more discharges on or between Jan 1 and Dec 1 of the measurement period*. **Exclusions:** • Inpatient stays with a discharge status indicating death • Inpatient stays with a principal diagnosis for pregnancy or other condition originating in the perinatal period • Inpatient stays with a planned admission within 30 days of discharge date. Planned admissions are identified as those with a primary diagnosis code of maintenance chemotherapy, rehabilitation, organs transplant, or a potentially planned procedure that is not coupled with an acute primary diagnosis code.
Well-Child Visits in the First 15 Months of Life	1st measure: Children who had 5 or more well-child visits during their first 15 months of life. Note: The PCP does not have to be the practitioner assigned to the child. 2nd measure: Children who had 6 or more well-child visits during their first 15 months of life. *(Note: This is the standard HEDIS measure.)* Note: Q Corp deviates from the HEDIS specifications by removing the requirement that the well-child visit must be with a PCP.	**Eligible children are defined by:** • Children who turned 15 months of age during the measurement period*.
Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life	Children who had at least one well-child visit during the measurement period*. Note: Q Corp deviates from the HEDIS specifications by removing the requirement that the well-child visit must be with a PCP.	**Eligible children are defined by:** Children aged 3-6 years as of the last day of the measurement period*.

Measure Name	Numerator: Definition for Compliance of Measure	Denominator: Definition of Condition and Exclusions
Developmental Screenings in the First 36 Months of Life	Children who had a developmental screening in the 12 month period prior to their 1st, 2nd or 3rd birthday.	Children who turned age 1, 2, or 3 years during the measurement period* and were continuously enrolled for the 12 months prior to their birthdate in the measurement period*.
Adolescent Well-Care Visits	Patients with at least one comprehensive well-care visit during the measurement period*. *Note: Q Corp follows the OHA deviation which drops the requirement that a well-care visit be with only a PCP or OB/GYN practitioner.*	Patients aged 12-21 years as of the last day of the measurement period*.
Appropriate Testing for Children with Pharyngitis	Children who had a group A streptococcus test in the seven-day period starting three days prior to the episode date to three days after.	**Eligible children are defined by:** Children aged 2 years - as of the first day of the year prior to the measurement period - to 18 years as of the last day of the measurement period* who had an outpatient or ED visit with only a diagnosis of pharyngitis and a dispensed antibiotic for that episode of care. **Exclusions:** Children who received more than one diagnosis on the episode date. Children who were dispensed antibiotics more than three days after the episode date. Children who were dispensed a new or refill antibiotic prescription within the 30 days prior to the episode date, or still had an active antibiotics prescription from more than 30 days prior.
Appropriate Testing for Children With Upper Respiratory Infection	Children who were not dispensed an antibiotic prescription.	Children 3 months – 18 year of age as of the last day of the measurement period* who had an outpatient or ED visit with only a diagnosis of upper respiratory infection (URI).
Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis	Patients who were not dispensed an antibiotic prescription.	Patients aged 18 to 64 as of the last day of the measurement period* who had an outpatient or ED visit with a diagnosis of acute bronchitis.

Measure Name	Numerator: Definition for Compliance of Measure	Denominator: Definition of Condition and Exclusions
Annual Monitoring for Patients on Persistent Medications	1st measure (Total): Sum of the numerators from measures 2-4 below 2nd measure: Patients with at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test. 3rd measure: Patients with at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test. 4th measure: Patients with at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test. .	The number of patients aged 18 years and older who received at least 180 treatment days of ambulatory medication therapy in the measurement period* for members on: 1st measure (Total): Sum of the denominators from measures 2-54below. 2nd measure: Angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARB) 3rd measure: Digoxin 4th measure: Diuretics

*Measurement period: **July 1, 2014 – June 30, 2015**.