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 14 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 denied claims and 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, 2012 and June 30, 2013.

Measure Selection: Q Corp's Measurement and Reporting Committee, composed of consumers, providers, employers, policymakers and health insurers, studies 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 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.

Recently, Q Corp elected to add 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, 2011 – June 30, 2013)
- 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 25 patients per clinic was originally established for inclusion in the measure calculation. This was increased to 30 beginning in 2013. 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.

During initial rounds of reporting, clinic results were presented only in categories (no raw rates) on the public website www.PartnerForQualityCare.org. Clinics with rates that were above or below one standard deviation from the statewide average rate were reported as "Better" or "Below," respectively. As a result, approximately two-thirds of Oregon clinics were reported as "Average." Quality Corp will continue to report results publicly using these categories. Beginning in summer 2012, raw clinic rates were also reported on the public website.

Medical group rates are calculated across all patients, including patients in clinics that are too small to be publicly reported (less than three primary care providers). 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 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 summer 2013 reporting round, between 18.7 – 49.7 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
Breast Cancer Screening	Women who had a mammogram during the measurement period* or the year prior. *Note: The U.S. Preventive Services Task Force released updated guidelines in November 2009 that do not recommend biennial screening mammography for women under age 50 years. Although Q Corp will continue reporting scores for the 40-69 age group to medical groups for their own uses, only the 50-74 age group will be included in a clinic's publicly reported score. The HEDIS 2014 Breast Cancer Screening specifications have changed to 50-74 years of age to align with the U.S. Preventive Task Force recommendations.*	**Women eligible for breast cancer screening include:** 1st measure: Women 40-49 years of age 2nd measure: Women 40-69 years of age 3rd measure: Women 50-74 years of age 4th measure: Women 75-84 years of age 5th measure: Women 85 years of age and older **Exclusions:** Women who had a bilateral mastectomy or 2 separate mastectomies billed in 2005 – June 2013.
Cervical Cancer Screening	Women who had a Pap test during the measurement period* or the two years prior. *Note: The U.S. Preventive Services Task Force released updated guidelines in March 2012 that allow for a five year interval between cervical cancer screenings, when administered in combination with HPV testing, for women aged 30-65 years. The 2014 HEDIS specifications will change to align with USPSTF recommendations which will impact measure results reported in 2015.*	**Women eligible for a Pap test include:** Women 21-64 years of age. **Exclusions**: Women who had a hysterectomy billed in 2005 – June 2013.
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.

Measure Name	Numerator: Definition for Compliance of Measure	Denominator: Definition of Condition and Exclusions
Asthma: Use of appropriate medications for children with persistent asthma	Dispensed at least one prescription for a preferred therapy 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:** Child: Patients 5–18 years of age: Patients 5–18 years of age during the measurement period* and the year prior who 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 patient discharge with asthma as the principal diagnosis, or at least four outpatient asthma visits. Exclude from the eligible population all members diagnosed with emphysema, COPD, cystic fibrosis or acute respiratory failure.
Diabetes: HbA1c testing	Had at least one HbA1c test performed during the measurement period*.	**Diabetes is defined by:** 1. Patients 18-75 years of age who were dispensed insulin or oral hypoglycemics/antihyperglycemics on an ambulatory basis; 2. Patients who had two face-to-face encounters with different dates of service in an outpatient setting or non-acute inpatient setting with a diagnosis of diabetes; or, 3. Patients with two[†] or more face-to-face encounter in an acute inpatient or emergency room setting with a diagnosis of diabetes. **Exclusions**: Patients with gestational diabetes, steroid-induced diabetes, or polycystic ovaries. *[†] The NCQA HEDIS definition requires only a single face-to-face encounter in an acute inpatient or emergency room setting 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: LDL-C test	Had at least one LDL-C screening test done during the measurement period*.	
Diabetes: Eye exam (retinal) performed	Had an eye screening for diabetic retinal disease. This includes those diabetics who had a retinal or dilated eye exam, or a *negative* retinal or eye exam (negative for retinopathy), by an eye care professional (optometrist or ophthalmologist) during 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 nephrologist visit, a urine macroalbumin test as documented by claims, and/or treatment with ACE inhibitor/ARB therapy.	
Coronary Artery Disease: Cholesterol management (LDL test) for patients with cardiovascular conditions	Had at least one LDL-C test during the measurement period*.	**Coronary artery disease is defined by:** 1. Patients 18-75 years discharged alive for AMI, CABG, or PCI from Jan 1, 2011 – Nov 1, 2011; or 2. Patients 18-75 years who had a diagnosis of any ischemic vascular disease (IVD) July 1, 2011 – June 30, 2013. *Note: AMI and CABG are from inpatient claims using facility claims only.*

Measure Name	Numerator: Definition for Compliance of Measure	Denominator: Definition of Condition and Exclusions
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 encounter 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 use, or neurological impairment within 12 months of the episode date.
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 12-month 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: 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 12-month 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.*
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 12-month measurement period* by a patient aged 18 years or older. *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
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 the episode date.	**Eligible children are defined by:** Children aged 2 years as of July 1, 2012 to 18 years as of June 30, 2013 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.
Well-Child Visits in the First 15 Months of Life	1st measure: Children who had 5 or more well-child visits with a PCP 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 with a PCP during their first 15 months of life. *(Note: This is the standard HEDIS measure.)* Note: The PCP does not have to be the practitioner assigned to the child.	**Eligible children are defined by:** Children aged 15 months anytime 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 with a PCP during the measurement period*. Note: The PCP does not have to be the practitioner assigned to the child.	**Eligible children are defined by:** Children aged 3-6 years as of March 31 of the measurement period*.

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 and the predicted probability of an acute readmission. **Exclusions:** • Acute inpatient hospital stays with a maternity related discharge	The number of acute inpatient discharges for Commercial and Medicare members 18 years of age and older who had one or more discharges during the measurement period. **Exclusions:** • Nonacute inpatient rehabilitation services, including nonacute inpatient stays at acute rehabilitation facilities • Hospital stays where the Index Admission Date is the same as the Index Discharge Date • Any acute inpatient stay with a discharge date in the 30 days prior to the Index Admission Date • Inpatient stays with discharges for death • Acute inpatient discharge with a principal diagnosis for pregnancy or for any other condition originating in the perinatal period *Notes: For commercial, ages 18 to 64 years as of the index discharge date. For Medicare, ages 18 years and older as of the index discharge date.*

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 California MediCal's list of Avoidable ICD-9 Diagnosis Codes for ED Care (see link below), among the eligible population. Link to MediCal Avoidable Visits ICD-9 diagnosis codes – see Appendix A: http://www.dhcs.ca.gov/dataandstats/reports/Documents/MMCD_Qual_Rpts/EQRO_QIPs/CA2010-11_QIP_Coll_ER_Remeasure_Report_F1.pdf	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 (June 2013) with a primary diagnosis code that appears on California MediCal's list of Avoidable ICD-9 Diagnosis Codes for ED Care (see link below), among the eligible population. Link to MediCal Avoidable Visits ICD-9 diagnosis codes – see Appendix A: http://www.dhcs.ca.gov/dataandstats/reports/Documents/MMCD_Qual_Rpts/EQRO_QIPs/CA2010-11_QIP_Coll_ER_Remeasure_Report_F1.pdf	1st measure (Adult): The number of patients aged 18 years and older enrolled for the entire last month of the measurement period (June 2013). 2nd measure (Child): The number of patients aged 1-17 years and older enrolled for the entire last month of the measurement period (June 2013). **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 ICD-9-CM 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 ICD-9-CM 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 ICD-9-CM 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 Admission Rate • PQI #8 – Congestive Heart Failure (CHF) • PQI #13 – Angina without Procedure • PQI #14 – Uncontrolled Diabetes • PQI #15 – Asthma in Younger Adults • PQI #16 – Rate of 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 (June 2013). **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.*
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.	The number of unique patients aged 18 years and older enrolled as of the last day measurement period (June 30, 2013).

Measure Name	Numerator: Definition for Compliance of Measure	Denominator: Definition of Condition and Exclusions
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.*
Developmental Screenings in the First 36 Months of Life	Children who had a developmental screening during the measurement period*.	Children aged 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*.
Follow-up Care for Children Prescribed ADHD Medications: Initiation and Continuation & Maintenance (C&M) Phase	**Initiation Phase:** Patients with one face-to-face outpatient, intensive outpatient, or partial hospitalization follow-up visits with a practitioner with prescribing authority within 30 days of the Index Prescription Start Date (IPSD). **C&M Phase:** The percentage of the patients 6-12 years as of the IPSD with an ambulatory prescription dispensed for ADHD medication, who remained on the medication for at least 210 days and who in addition to the visit in the Initiation Phase, had at least two follow-up visits with a practitioner within 270 days (nine months) after the Initiation Phase ended.	Patients 6 years of age as of March 1 of the year prior to the measurement period to 12 years of age as of Feb 28 of the measurement period who were dispensed an ADHD medication during the 12 month intake period.

* Results are based on administrative claims data with dates of service between July 1, 2010 – June 30, 2013, and the measurement period July1, 2012 – June 30, 2013.