Total Cost of Care Technical Appendix

Calendar Year 2015 & 2016 Medicare FFS Results

This technical appendix supplements the 2015 &2016 Medicare FFS Clinic Comparison Reports released by HealthInsight (formerly the Oregon Health Care Quality Corporation).

Data Sources for Cost of Care

Nine health plans, the Oregon Health Authority, and the Centers for Medicare & Medicaid Services (CMS) contributed administrative medical and pharmacy claims data to the Oregon Data Collaborative database. The Data Collaborative has an agreement to report quality, cost, and utilization data for Medicare Fee for Service (FFS) members. For more general information on Data Collaborative data, see the separate document Technical Appendix: Q Corp Reporting Portal.

Providers

The Data Collaborative works with medical groups to maintain a comprehensive provider directory for Oregon. The provider directory links practicing primary care providers with the clinics and medical groups where they work. This medical group supplied information is used to attribute patients from claims data to the appropriate primary care provider and clinic for reporting. Primary care providers include family medicine, internal medicine, general practice, and pediatric physicians (MDs/DOs), nurse practitioners (NPs), and physician assistants (PAs). The provider directory currently includes information for 3,765 primary care providers. These providers work in 542 medical groups at 931 clinic sites throughout the state.

Clinics

For the Clinic Comparison Reports, a *clinic* is defined as a doorway or place with a physical address that patients identify as where they receive care. Clinics with at least 600 attributed Medicare FFS patients for whom the Data Collaborative has cost data are receiving Clinic Comparison Reports.

Patient Characteristics

The data set for the current measurement period consists of aggregated administrative claims from nine of Oregon's largest health plans, Oregon's Division of Medical Assistance Programs (DMAP) and the Centers for Medicare & Medicaid Services (CMS). The data set for the current measurement period represents care for 3.0 million patients who were members of at least one participating health plan. While the data set contains 100% of Oregon's Medicare FFS population, only patients attributed to clinics with more than 600 attributed Medicare FFS members are included.

Length of Enrollment and age requirements

The Total Cost of Care measures require patients to be enrolled at least nine months of the twelve-month enrollment period. The Data Collaborative's aggregated and cross-walked enrollment allows more patients to meet the continuous enrollment criteria than would any single insurance company, however, around 4% of patients in our data database do not meet the requirement. Additionally, the Total Cost of Care methodology is limited to Medicare beneficiaries that are Aged Non-Dual.

Assigning Patients to Providers (Attribution)

Assigning the correct patients to providers is an important part of developing accurate measurement reports.

The logic model for attribution adheres to the following formula:

- Use the health plan designated Primary Care Provider (PCP) when that exists and the information is kept up to date (one plan).
- Otherwise, use the PCP that patient has seen the most across the two-year attribution period.
    - 2015: January 1, 2014-December 31, 2015.
    - 2016: January 1, 2015 – December 31, 2016
- A patient will be attributed to a single PCP.
- If there is a tie, use the most recently seen PCP.

Patients were assigned only to PCPs included in the provider directory. If a patient received care solely from specialists or other providers not included in the provider directory they were not assigned a PCP (unattributed). In addition, if there were no office visit claims for a PCP in the provider directory, the patient is not attributed.

Measure Categories

The Clinic Comparison Reports present three categories of data: quality and utilization measures, cost and resource use information, and utilization statistics.

Quality and Utilization Measures

Ambulatory quality and utilization measures are listed in Table 1 a Measures are calculated for attributed Medicare FFS patients. For more information on these measures, see the separate document Technical Appendix: Q Corp Reporting Portal

Table 1: Quality & Utilization Measures included in the Clinic Comparison Reports

HEDIS®	Area of Care / Measure
Women's Preventive Care	
	– Breast Cancer Screening (age 50-74)
Outpatient Utilization	
	– Potentially Avoidable ED visits (18+)
Chronic Disease Care	
√ √	– Eye Exam (age 18-75) – HbA1c Test (age 18-75)

Inpatient Utilization	
(AHRQ)	– Hospital Admissions for Ambulatory-Sensitive Conditions – Acute Composite
(AHRQ)	– Hospital Admissions for Ambulatory-Sensitive Conditions – Chronic Composite
(AHRQ)	– Hospital Admissions for Ambulatory-Sensitive Conditions – Overall Composite
√	– Plan 30-day All-Cause Readmissions

Cost and Resource Use Information

HealthInsight has selected the National Quality Forum (NQF) endorsed Total Cost of Care measures developed by HealthPartners, Inc.® (Bloomington, MN). The methodology includes two measures:

> (1) Total Cost Index (TCI), a risk-adjusted measure of the *cost effectiveness* of managing patient health.
> (2) Resource Use Index (RUI), a risk-adjusted measure of the *frequency and intensity* of the services used to manage patient health.

The measures are calculated using a risk-adjusted population average cost per member per month (PMPM) compared to an average. Costs are risk-adjusted at the member level using the Johns Hopkins ACG system which weights individuals based on disease patterns, age and gender. The measures are calculated as a score out of 1.00. Clinics with scores above 1.00 indicate that the clinic has higher cost (TCI) or resource use (RUI) compared to the average, in this case, all clinics in Oregon receiving these reports.

The methodology contains several conditions to ensure scores are comparable:

- Patients are enrolled in Medicare FFS coverage for at least 9 months.
- Patients who are dual-eligible, ESRD, or have other benefit categories are excluded.
- Clinics meet a minimum patient threshold of 600 attributed Medicare FFS patients.
- Costs over $100,000 for any individual member are excluded.
- The calculation includes all medical claims attributed to patients, however alcohol and substance abuse claims are excluded.

Utilization Statistics

The utilization statistics that are included in the reports are listed in Table 2. All utilization statistics are shown per 1,000 patients for the Medicare FFS population shown in the report.

Table 2: Utilization Statistics Included in the Clinic Comparison Report

Area of Care / Utilization Statistic
Primary and Specialty Care Utilization Statistics

– Evaluation & Management Visits, PCP vs Specialist – Top Specialist Professional Services
Outpatient Utilization Statistics
– Outpatient Facility Visits by Clinical Classification (CCS) – Emergency Department Utilization
Inpatient Utilization Statistics
– Total Admits for Acute and Non-Acute – Acute Admits – Acute Days – Non-Acute Admits – Non-Acute Days

Calculation of Total Cost of Care and Total Resource Use Indices

The two cost of care indices are:

Total Cost Index (TCI)
Numerator: Total PMPM = (Total Medical Cost/Medical Member Months)

Denominator: Risk Score

Rate Calculation: Risk Adjusted PMPM = Total PMPM/Risk Score

Index Calculation: TCI = Risk Adjusted PMPM/Peer Group Risk Adjusted PMPM

Clinic scores for TCI are compared to the Oregon Average of 1.00

Resource Use Index (RUI)
Numerator: Resource PMPM = (Total Medical TCRRV/Medical Member Months)

Denominator: Risk Score

Rate Calculations: Risk Adjusted Resource PMPM = Resource PMPM/Risk Score

Index Calculation: RUI = Risk Adjusted Resource PMPM/Peer Group Risk Adjusted Resource PMPM

Clinic scores for RUI are compared to the Oregon Average of 1.00.

Oregon Average

In the above calculations, clinic Total Cost and Resource Use rates are compared to a Peer Group Risk Adjusted PMPM and a Peer Group Risk Adjusted Resource PMPM. The Peer Group Risk Adjusted PMPMs are the average PMPM for all patients at all clinics receiving these reports. The Peer Group Risk Adjusted PMPM is labeled as the OR Average PMPM in the report itself.

Administrative Claims Data

Validation

Claims data are submitted by health plans to Onpoint, the Data Collaborative's data services vendor. Onpoint works with each data supplier to validate the submitted data. Two distinct levels of validation are performed – one that ensures the correct transmission of the data and another that ensures measure results are consistent between Onpoint and each data supplier. Once validated, the data is aggregated across data suppliers prior to measure calculation. This allows the Data Collaborative to track members whose coverage changed among the participating health plans, Medicaid and Medicare during the measurement period, which results in a greater number of members that meet continuous enrollment criteria for the measures.

Clinics may request a list of their attributed patients that are included in the Clinic Comparison reports.

Advantages and Limitations of Administrative Claims Data

Claims data reflect information submitted by providers to payers as part of the billing process. While not all medical care shows up in billing data, it does include useful information about diagnoses and services provided. Using claims data, for example, one can measure care processes such as "What percentage of patients with diabetes were given an HbA1c test at least once during the measurement year?" However, one cannot measure actual control/outcomes such as "What is a patient's HbA1c level?"

While administrative claims data may have limitations for quality improvement, they provide basic information for a very large segment of the Oregon health care delivery network. For accurate measurement and comparison across the state, large data sets are essential, like the one used to produce these reports. The data include information for patients that receive care across settings (outpatient, inpatient, ED, etc.) and throughout the regions of Oregon.

The limitations of claims data include timeliness and completeness. For example, data in this report does not include a clinic's entire patient population, such as uninsured patients, patients covered by Medicaid or commercial health plans, patients who pay for their own health care services, or patients served by a plan that does not participate in the initiative.

Claims may also be missing information that would exclude patients from the denominator for clinical reasons (e.g. hysterectomies performed before the start of the claims capture period, which should exclude women from the cervical cancer screening measure) and billing workarounds on the part of clinics that prevent accurate data capture. Billing workarounds sometimes include billing from a provider who was different than the person who provided care. With help from medical groups, the data will become more timely, accurate and useful for future reports. Despite these limitations, the initiative provides the most comprehensive quality reports available in Oregon because data suppliers have come together to pool data for quality improvement.