Comagine Health
Formerly Qualis Health and HealthInsight

Total Cost of Care Technical Appendix

Calendar Year 2018 Commercial Results

This technical appendix supplements the 2018 adult and pediatric Total Cost of Care Clinic Comparison Reports released by Comagine Health.

Table of Contents

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. Of these, the Oregon Data Collaborative has agreements to report quality and utilization data from nine commercial plans and to report cost data from five commercial health plans[1]. For more general information on Oregon Data Collaborative data, see the separate document Technical Appendix: Comagine Health Reporting Portal.

Providers

The Oregon Data Collaborative works with provider organizations to maintain a comprehensive provider directory for Oregon. The provider directory links practicing primary care providers with the practices and medical groups where they work. This provider organization-supplied information is used to attribute patients from claims data to the appropriate primary care provider and practice 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 5,529 primary care providers. These providers work at 809 unique practices throughout the state.

Practices

For the Clinic Comparison Reports, a practice is defined as a place with a physical address where patients go to receive care. Practices with at least 600 attributed adult patients or 600 attributed pediatric 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 3.4 million patients who were members of at least one participating health plan. More than 571,000 members or around 40% of the commercial population are included in the Total Cost of Care measures.

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 Oregon Data Collaborative's aggregated and cross-walked enrollment allows more patients to meet the continuous enrollment criteria than would any single insurance

[1] The data suppliers contributing quality data to the Clinic Comparison Reports include: BridgeSpan, CareOregon, Health Net of Oregon, Kaiser Permanente, Moda Health Plans, PacificSource Health Plans, Providence Health Plans, Regence BlueCross BlueShield and Tuality Health Alliance. The suppliers who contributed cost and utilization data are: BridgeSpan, Moda Health Plans, PacificSource Health Plans, Providence Health Plans, Regence BlueCross BlueShield, and Tuality Health Alliance.

company; however, around 11% of members covered by participating health plans included in the Total Cost of Care analyses in our data database do not meet the requirement.

Additionally, the Total Cost of Care methodology is limited to individuals ages 1 to 64 years old. Approximately 3% of commercial patients do not meet this criterion.

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 is based on 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.
    - 2018: January 1, 2017-December 31, 2018.
- 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 (Adult Measures) and Table 2 (Pediatric Measures). Measures are calculated for attributed commercial patients. For more information on these measures, see the separate document Technical Appendix: Comagine Health Reporting Portal.

Table 1: Adult quality and utilization measures included in the Clinic Comparison Reports

HEDIS®	Area of Care / Measure
Women's Preventive Care	
	– Breast Cancer Screening (age 50-74)
✓	– Cervical Cancer Screening (age 21-64)
✓	– Chlamydia Screening (age 16-24)
Outpatient Utilization	
	– Potentially Avoidable ED Visits (18+)
Chronic Disease Care	
✓	– Comprehensive Diabetes Care: Eye Exam (age 18-75)

HEDIS®	Area of Care / Measure
✓	– Comprehensive Diabetes Care: HbA1c Test (age 18-75)
✓	– Appropriate Low Back Pain Imaging (age 18-50)
Prescription Utilization	
	– Generic Prescription Fills: SSRIs, SNRIs & DNRIs – Generic Prescription Fills: Statins – Generic Prescription Fills: Anti-hypertensives
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

Table 2: Pediatric quality and utilization measures included in the Clinic Comparison Reports

HEDIS®	Area of Care / Measure
Pediatric Care	
✓	– Well-Child Visits 0-15 Months, 6 or More
✓	– Well-Child Visits 3-6 Years
(NCQA)	– Developmental Screenings in the First 36 Months of Life
✓	– Adolescent Well-Care Visits (age 12-21)
	– Appropriate Use of Antibiotics for Sore Throats (2-18)
Outpatient Utilization	
	– Potentially Avoidable ED Visits (1-17)
Chronic Disease Care	
✓	– Appropriate Asthma Medications (5-18)

Cost and resource use information

Comagine Health has selected the National Quality Forum (NQF)-endorsed Total Cost of Care measures developed by HealthPartners, Inc.® (Bloomington, MN, 2018 version). The methodology includes two measures:

- **Total Cost Index (TCI):** a risk-adjusted measure of the *cost effectiveness* of managing patient health
- **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[2] which weights individuals based on disease patterns, age and gender. The measures are calculated as a score out of 1.00. Practices with scores above 1.00 indicate that the practice has higher cost (TCI) or resource use (RUI) compared to the average, in this case, all practices in Oregon receiving these reports.

The methodology contains several conditions to ensure scores are comparable:

- Patients are enrolled in a commercial insurance plan for at least 9 months.
- Adult (18-64) and pediatric (1-17) patients are reported separately. Patients over 65 and those under 1 year old are excluded.
- Practices meet a minimum patient threshold of 600 attributed commercial patients with cost data available for either the adult or pediatric reporting group.
- Costs over $125,000 for any individual member are excluded.
- The calculation includes all medical and pharmacy 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 3 (Adult measures) and Table 4 (Pediatric measures). All utilization statistics are shown per 1,000 patients for the commercial population shown in the report: Adult ages 18-64 and Pediatric ages 1-17. Utilization statistics are calculated for the same population included in the cost measures.

[2] Version 11 for commercially insured population, version 12 for Medicare FFS population

Table 3: Adult 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

Table 4: Pediatric 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) + (Total Pharmacy Cost/Pharmacy 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

Practice 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) + (Total Pharmacy TCRRV/Pharmacy Member Months)

Denominator: Risk score

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

Index calculation:

- *For service components (Inpatient, Outpatient, Professional and Pharmacy)*= Risk Adjusted Resource PMPM/Peer Group Risk Adjusted Resource PMPM
- *Overall RUI =* RUI for each service component multiplied by that component's proportion of Peer Group total cost. (This Makes service type units comparable between clinics with a higher proportion of their services in one category or another)

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

Oregon Average

In the above calculations, practice 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 practices with 600 or more attributed patients by applicable line of business (commercial or Medicare FFS). 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 Health Data, Comagine Health'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 Health Data and each data supplier. Once validated, the data is aggregated across data suppliers prior to measure calculation. This allows the Oregon 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.

Practices 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 Oregon.

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