

NATIONAL QUALITY FORUM

Resource Use Measure Evaluation 1.0 January 2011

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

Resource Use Definition:

- Resource use measures are broadly applicable and comparable measures of input counts—(in terms of units or dollars)-- applied to a population or population sample
- Resource use measures count the frequency of specific resources; these resource units may be monetized, as appropriate.
- The approach to monetizing resource use varies and often depends on the perspective of the measurer and those being measured. Monetizing resource use allows for the aggregation across resources.

NQF Staff: NQF staff will complete a preliminary review of the measure to ensure conditions are met and the form has been completed according to the developer's intent. Staff comments have been **highlighted in green.**

TAP/Workgroup (if utilized): Complete all **yellow highlighted** areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: If there is no TAP or workgroup, the SC also evaluates the subcriteria (**yellow highlighted areas**).

Steering Committee: Complete all **pink** highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the subcriteria are met (TAP or Steering Committee)

High (H) - based on the information submitted, there is high confidence (or certainty) that the criterion is met

Moderate (M) - based on the information submitted, there is moderate confidence (or certainty) that the criterion is met

Low (L) - based on the information submitted, there is low confidence (or certainty) that the criterion is met

Insufficient (I) - there is insufficient information submitted to evaluate whether the criterion is met, e.g., blank, incomplete, or information is not relevant, responsive, or specific to the particular question (unacceptable)

Not Applicable (NA) - Not applicable (only an option for a few subcriteria as indicated)

Evaluation ratings of whether the measure met the overall criterion (Steering Committee)

Yes (Y)- The overall criteria has been met

No (N)-The overall criterion has NOT been met

High (H) - There is high confidence (or certainty) that the criterion is met

Moderate (M) - There is moderate confidence (or certainty) that the criterion is met

Low (L) - There is low confidence (or certainty) that the criterion is met

Recommendations for endorsement (Steering Committee)

Yes (Y) - The measure should be recommended for endorsement

No (N)-The measure should NOT be recommended for endorsement

Abstain (A)- Abstain from voting to recommend the measure

TAP/Workgroup Reviewer Name:
Steering Committee Reviewer Name:
Staff Reviewer Name(s):
NQF Review #: 1598 NQF Project: Endorsing Resource Use Standards- Phase II

BRIEF MEASURE INFORMATION
Measure Title: Total Resource Use Population-based PMPM Index
Measure Steward (IP Owner): HealthPartners, 8170 33rd Avenue South, PO Box 1309, Bloomington, Minnesota, 55425
Brief description of measure: The Resource Use Index (RUI) is a risk adjusted measure of the frequency and intensity of services utilized to manage a provider group's patients. Resource use includes all resources associated with treating members including professional, facility inpatient and outpatient, pharmacy, lab, radiology, ancillary and behavioral health services.
Resource use service categories: Inpatient services: Inpatient facility services Inpatient services: Evaluation and management Inpatient services: Procedures and surgeries Inpatient services: Imaging and diagnostic Inpatient services: Lab services Inpatient services: Admissions/discharges Inpatient services: Labor (hours, FTE, etc.) Ambulatory services: Outpatient facility services Ambulatory services: Emergency Department Ambulatory services: Pharmacy Ambulatory services: Evaluation and management Ambulatory services: Procedures and surgeries Ambulatory services: Imaging and diagnostic Ambulatory services: Lab services Ambulatory services: Labor (hours, FTE, etc.) Durable Medical Equipment (DME)
Brief description of measure clinical logic: Not applicable. This is a population-based measure that applies to all service categories, care settings and conditions.
<i>If included in a composite or paired with another measure, please identify composite or paired measure:</i>
Subject/ Topic Areas:
Type of resource use measure: Cost/Resource Use
Data Type: Administrative claims Other

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. Measure Steward Agreement. <i>The measure is in the public domain or an intellectual property (<u>measure steward agreement</u>) is signed. Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.</i> A.1. Do you attest that the measure steward holds intellectual property rights to the measure? (If no, do not submit) Yes	A Y <input type="checkbox"/> N <input type="checkbox"/>

<p>A.2. Please check if either of the following apply:</p> <p>A.3. Measure Steward Agreement.</p> <p>Agreement signed and submitted</p> <p>A.4. Measure Steward Agreement attached:</p> <p>NQF Agreement0002-634345826118917524.pdf</p>	
<p>B. Maintenance.</p> <p><i>The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. (If no, do not submit)</i></p> <p>Yes, information provided in contact section</p>	<p>B</p> <p>Y <input type="checkbox"/></p> <p>N <input type="checkbox"/></p>
<p>C. Purpose/ Use (All the purposes and/or uses for which the measure is specified and tested:</p> <p>Payment Program</p> <p>Professional Certification or Recognition Program</p> <p>Public Reporting</p> <p>Quality Improvement (Internal to the specific organization)</p> <p>Quality Improvement with Benchmarking (external benchmarking to multiple organizations)</p>	<p>C</p> <p>Y <input type="checkbox"/></p> <p>N <input type="checkbox"/></p>
<p>D. Testing.</p> <p><i>The measure is fully specified and tested for reliability <u>and</u> validity (See guidance on measure testing).</i></p> <p>Yes, reliability and validity testing completed</p>	<p>D</p> <p>Y <input type="checkbox"/></p> <p>N <input type="checkbox"/></p>
<p>E. Harmonization and Competing Measures.</p> <p><i>Have NQF-endorsed measures been reviewed to identify if there are related or competing measures? (List the NQF # and title in the section on related and competing measures)</i></p> <p>Yes</p> <p>E.1.Do you attest that measure harmonization issues with related measure (either the same measure focus or the same target population) have been considered and addresses as appropriate? (List the NQF # and title in the section on related and competing measures)</p> <p>Yes</p> <p>E.2.Do you attest that competing measures (both the same measure focus and the same target population) have been considered and addressed where appropriate? Yes</p>	<p>E</p> <p>Y <input type="checkbox"/></p> <p>N <input type="checkbox"/></p>
<p>F. Submission Complete.</p> <p><i>The requested measure submission information is complete and responsive to the questions so that all the information needed to evaluate all criteria is provided.</i></p>	<p>F</p> <p>Y <input type="checkbox"/></p> <p>N <input type="checkbox"/></p>
<p>Have all conditions for consideration been met?</p> <p>Staff Notes to Steward (if submission returned):</p>	<p>Y <input type="checkbox"/></p> <p>N <input type="checkbox"/></p>
<p>Staff Notes to Reviewers (issues or questions regarding any criteria):</p>	
<p>File Attachments Related to Measure/Criteria:</p> <p>Attachment:</p>	

Attachment:
Attachment:
Attachment:
Attachment:
Attachment:
Attachment:
Attachment:
Attachment:
S12_Sample Score Report-634364116508944844.pdf
Attachment:

IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in performance.	
Importance to Measure and Report is a threshold criterion that must be met in order to recommend a measure for endorsement. All subcriteria must be met to pass this criterion.	Eval Rating
<p>High Impact</p> <p>IM1. Demonstrated high impact aspect of healthcare:</p> <p>Affects large numbers High resource use Patient/societal consequences of poor quality Severity of illness</p> <p>IM1.1. Summary of evidence of high impact:</p> <p>In 2007, health care spending represented 16 percent of US gross domestic product (GDP); this is the largest percentage of any developed nation in the world.¹ Rising costs prohibit many from being able to afford insurance coverage and contribute to personal bankruptcies. Consequently, affordability of care has become an increasingly discussed issue but in spite of this, few publically available cost measures exist.² Aware of this issue, HealthPartners has developed a total cost of care index (TCI) to make providers and patients more aware of the cost of care and healthcare spending. However, total cost reflects a mix of complicated factors including market-related discrepancies, service utilization, and negotiated prices.² By separating out and also reporting the relative resource use index (RUI) HealthPartners creates a more complete picture of the drivers of health care costs.</p> <p>Non-condition specific resource use measures can provide valuable information on how to make health care more affordable because health plans and providers can use the data to identify areas where they can lower cost by improving resource use or a shift to less expensive resources (for example, use of a surgery center instead of a hospital where medically appropriate). Evidence supports the idea that improving use of resources can lead to lower costs with no loss in quality. Turbyville, et al (2011) found that medical resource use has no relationship with quality of care for diabetes.³ Fisher, et al (2004) performed a study that showed a similar result for resource use and quality of care in Academic Medical Centers.⁴ The Medicare Payment Advisory Commission in a report to congress in 2006 also reported that they found no correlation between higher resource use and higher quality of care across six metropolitan statistical areas (MSAs).⁵ Similarly, in February 2011, Kralewski, et al showed that quality of care in provider group practices in Minnesota does not improve as costs increase.⁶</p> <p>Several resource use measures have been developed by various health plans and national organizations. NCQA has created condition-specific relative resource use (RRU) measures which they use to complement their HEDIS quality measurements and report on the value of dollars spent in health care. They measure RRU for six chronic conditions - diabetes, COPD, asthma, cardiovascular conditions, hypertension, and low back pain - and the scores are reported as a ratio of observed resource use relative to average use.² Lake, Colby, and Peterson compiled a report of physician-level resource use measures used by various commercial health plans in 2007.⁷ These plans agreed that resource use</p>	<p>1a</p> <p>H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> I <input type="checkbox"/></p>

measures provide valuable data on the cost of health care but note the importance of providing actionable feedback to the physicians.⁷ One problem this study found with physician-level resource use measures was that there were not enough volume at the individual physician level.

The advancement of the Accountable Care Organization (ACO) in the market place may drive higher clout in provider practices as articulated by Berenson, et al. Total Cost of Care and Resource Use measurements are tools that can be used to optimize resource use.⁸ These measures can be used to support a comprehensive measurement system.⁹ Glass, et al call for reporting of resource use in ACO models as a recommended tool to improve value, they also suggest the use of resources measurement to set targets for payment incentives, by tying payments to quality and resource use improvements.^{10,11}

Overuse of health care services has led to wide variation in health care cost and use across geographies. Studies suggest that Medicare spending would decrease by almost 30 percent if medium and high spending geographies consumed health care services comparable to that of lower spending regions.⁴ Experts agree that reducing overuse can make care safer and more efficient.^{12,13} The Resource Use Index, which controls for both cost and illness burden, can be used to identify areas of overuse in health care as well as measure targeted improvement efforts.

IM1.2. Citations for evidence of high impact cited in IM1.1.:

- 1.Partnership to Fight Chronic Disease, Almanac of Chronic Disease 2009 Edition, 2009, http://www.fightchronicdisease.org/pdfs/2009_PFCDAIManac.pdf.
- 2.National Committee for Quality Assurance, Insights for Improvement - Measuring Health Care Value: Relative Resource Use, 2010, http://www.ncqa.org/portals/0/hedisqm/RRU/BI%20NCQA_RRU_Publication_FINAL.pdf (February 15, 2011).
- 3.Turbyville, Sally E., Meredith B. Rosenthal, L. Gregory Pawlson, and Sarah Hudson Scholle, Health Plan Resource Use – Bringing Us Closer to Value-Based Decision Making, The American Journal of Managed Care, 2011. Vol. 1, no. 1, p. 68-74. http://www.ajmc.com/issue/managed-care/2011/2011-1-vol17-n1/AJMC_2011jan_Turbyville_68to74
- 4.Fisher, Elliot S., David E. Wennberg, Therese A. Stukel, and Daniel J. Gottlieb, Variations in the Longitudinal Efficiency of Academic Medical Centers, Health Affairs, 2004. doi:10.1377/hlthaff.var.19.
- 5.Medicare Payment Advisory Committee, Report to the Congress: Increasing the Value of Medicare, 2006. http://www.medpac.gov/documents/jun06_entirereport.pdf
- 6.Kralewski, John E, Dowd, Bryan E, Xu, Yi (Wendy). Differences in the Cost of Health Care Provided by Group Practices in Minnesota. February 2011. Minnesota Medicine. <http://www.minnesotamedicine.com/tabid/3678/Default.aspx>
- 7.Lake, Timothy, Margaret Colby, and Stephanie Peterson, Health Plans' Use of Physician Resource Use and Quality Measures, Mathematica Policy Research Institute, 2007, <http://www.medpac.gov/documents/6355%20MedPAC%20Final%20Report%20with%20Appendices%201-24-08.pdf>
- 8.Berenson, Robert A., Ginsburg, Paul B., Kemper, Nicole. Unchecked Provider Clout in California Foreshadows Challenges to Health Reform. Health Affairs, April 2010. doi: 10.1377/hlthaff.2009.0715. <http://content.healthaffairs.org/content/29/4/699.full?sid=f53c960e-8ad4-41d5-8921-00274d44919e>
- 9.Fisher, Elliot S.; Shortell, Stephen M. Accountable Care Organizations: Accountable for What, to Whom and How. Journal of American Medical Association. October 20, 2010. <http://jama.ama-assn.org/content/304/15/1715.full>
- 10.Glass, David; Stensland, Jeff. Accountable Care Organizations. April 9, 2008. http://www.medpac.gov/transcripts/0408_ACO_public_pres.pdf
- 11.Glass, David; Stensland, Jeff. Accountable Care Organizations. March 12, 2009. <http://www.medpac.gov/transcripts/ACO%203%2009.pdf>
- 12.National Quality Forum Issue Brief. Waste Not, Want Not: The Right Care for Every Patient. June 2009
- 13.National Priorities and Goals. National Priorities Partnership convened by the National Quality Forum. November 2008. [http://www.nationalprioritiespartnership.org/uploadedFiles/NPP/08-253-NQF%20ReportLo\[6\].pdf](http://www.nationalprioritiespartnership.org/uploadedFiles/NPP/08-253-NQF%20ReportLo[6].pdf)

Last Accessed 2/24/2011

<p>IM2. Opportunity for Improvement</p> <p>IM2.1. Briefly explain the benefits envisioned by use of this measure:</p> <p>By measuring population based relative resource use, health plans and providers can improve the affordability of health care without sacrificing quality. HealthPartners' RUI gives provider groups valuable information on resource use and, when viewed in conjunction with quality metrics, information on the efficiency of care. The HealthPartners RUI measure is a population-based, patient-centered, total resource use measure, created with Total Care Relative Resource Values that cross all categories of health services. This is in contrast to the many, episodic based resource use measures available in the market today. Both population based and episodic based resource use measures are important and complimentary but a key benefit of population based measures is helping to better understand potential overuse & underuse (e.g., although efficient at spine surgery, may be performing too many).</p> <p>IM2.2. Summary of data demonstrating variation across providers or entities:</p> <p>The Dartmouth Atlas has been an eye-opening look at the variation in health care spending and resource use across regions for the Medicare population. The measurement of resource use is as widely varied in the commercial population across geographies.¹ While HealthPartners has applied the measure on the commercial population, the measure could as easily be applied across all populations.</p> <p>A recent study of the Minnesota market further highlighted the significant variation in cost and efficiency ranging from \$2,400 to \$4,700 PMPY. Additional findings found no relation to quality or type of practice (large, small, integrated, etc).² These findings are further confirmed based on HealthPartners own experience and analyses.</p> <p>Existing resource use measures are largely condition or episode specific measures. There is not an existing total population resource use measure in the market today that crosses all care services.³ A Total Cost of Care measure is being implemented by the Integrated Healthcare Association in California for 2010 measurement of the Pay for Performance Program.⁴ HealthPartners uses Total Care Relative Resource Values, which plots all health care services, regardless of service category on a grand linear scale. Therefore, resource use can be compared across service categories where services are relative to each other. Resource use indices can be drilled down to the service category or condition to help identify areas of opportunity, especially when paired with utilization data.</p> <p>IM2.3. Citations for data on variation:</p> <p>1.Dartmouth Atlas. http://www.dartmouthatlas.org/ 2.Kralewski, John E, Dowd, Bryan E, Xu, Yi (Wendy). Differences in the Cost of Health Care Provided by Group Practices in Minnesota. February 2011. Minnesota Medicine. http://www.minnesotamedicine.com/tabid/3678/Default.aspx 3.Berwick, Donald M., Nolan, Thomas W., Whittington, John, The Triple Aim: Care, Health and Cost. Health Affairs, May/June 2008. doi: 10.1377/hlthaff.27.3.759. http://content.healthaffairs.org/content/27/3/759.full?sid=f3d381e8-76ef-415f-9080-de97c1273fa6 4.Integrated Healthcare Association (IHA) California Pay for Performance Program Draft Year 2011 P4P Manual, December 30, 2010. http://www.ihc.org/pdfs_documents/p4p_california/DraftMY2011P4PManual123010.pdf</p> <p>IM2.4. Summary of data on disparities by population group:</p> <p>Not Applicable</p> <p>IM2.5. Citations for data on disparities cited in IM2.4:</p> <p>Not Applicable</p>	<p>1b</p> <p>H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> I <input type="checkbox"/></p>
<p>IM3. Measure Intent</p> <p>IM3.1. Describe intent of the measure and its components/ Rationale (including any citations) for analyzing variation in resource use in this way</p> <p>As noted by Berwick, et al, the Institute for Healthcare Improvement (IHI) Triple Aim, improving quality of care can raise costs as new technologies are used, however, reducing waste (overuse) in healthcare can reduce costs and improve</p>	<p>1c</p> <p>H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> I <input type="checkbox"/></p>

<p>outcomes.1</p> <p>Key considerations when constructing the measure:</p> <ul style="list-style-type: none"> • The purpose of population-based measurement is to better understand overuse, underuse, and person-centered management and accountability • Population based-measurement nicely complements condition and episode-base measures, combined they depict a complete picture of a provider's total cost and resource use • Risk adjustment is a critical component to the measure to allow for fair comparisons • Use these measures as part of a Triple-aim approach where Total Cost of Care and Resource Use measures are complements to quality and patient experience. • Removing price via Total Care Relative Resource Values (TCRRVs) allows for a clear picture of resource use opportunities. • Total Cost Index and Resource Use Index measures when used together help to better understand cost and resource use opportunities. <p>1. Berwick, Donald M., Nolan, Thomas W., Whittington, John, The Triple Aim: Care, Health and Cost. Health Affairs, May/June 2008. doi: 10.1377/hlthaff.27.3.759. http://content.healthaffairs.org/content/27/3/759.full?sid=f3d381e8-76ef-415f-9080-de97c1273fa6</p>	
<p>IM4. Resource use service categories are consistent with measure construct</p> <p><i>Refer to IM3.1. & all S9 items to evaluate this criteria.</i></p>	<p>1d</p> <p>H <input type="checkbox"/></p> <p>M <input type="checkbox"/></p> <p>L <input type="checkbox"/></p> <p>I <input type="checkbox"/></p>
<p>TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for <i>Importance to Measure and Report</i>?</p>	
<p>Steering Committee: Was the threshold criterion, <i>Importance to Measure and Report</i>, met? Rationale:</p>	<p>Y <input type="checkbox"/></p> <p>N <input type="checkbox"/></p>

SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented.

MEASURE SPECIFICATIONS

<p>S1. Measure Web Page: <i>Do you have a web page where current detailed measure specifications can be obtained?</i></p> <p>Yes www.healthpartners.com/tcoc</p> <p>S2. General Approach <i>If applicable, summarize the general approach or methodology to the measure specification. This is most relevant to measures that are part of or rely on the execution of a measure system or applies to multiple measures.</i></p> <p>1. The Resource Use measurement is a population-based, person-centered, primary care-focused measurement system that quantifies a provider's effectiveness at managing the population of patients they care for. -As an integrated health care organization, HealthPartners has thoughtfully brought together the perspectives of multiple stakeholder groups to the Resource Use measure development</p> <p>2. The measure is a comprehensive reflection of a provider's resource use, intensity, appropriateness and efficiency.</p>	<p>Eval Rating 2a1/2b1</p>
--	--------------------------------------

- Reporting the resource use index (RUI) provides a more complete picture of population based drivers of health care costs

3. The measure can be used to support comprehensive ACO evaluation and help identify improvement opportunities.
-HealthPartners is changing the payment model by establishing total cost of care agreements with providers that base payment on quality, patient experience outcomes and affordability

4. Existing resource use measures are largely condition or episode specific. This approach complements condition and episode based resource use measures.

- Partnering resource use measures with utilization, quality, cost and patient experience measures can drive greater health care value for purchasers and patients

Attachment:

S3. Type of resource use measure:

Per capita (population- or patient-based)

S4. Target Population:

Adult/Elderly Care
Children's Health

S4.1. Subject/Topic Areas:

S4.2. Cross Cutting Areas (*HHS or NPP National health goal/priority*)

Care Coordination
Overuse
Population Health

S5. Data dictionary or code table

Please provide a web page URL or attachment if exceeds 2 pages. NQF strongly prefers URLs. Attach documents only if they are not available on a web page and keep attached file to 5MB or less.

Data Dictionary:

URL:

Please supply the username and password:

Attachment:

Code Table:

URL: <http://www.healthpartners.com/files/56341.pdf> -- OR -- www.healthpartners.com/tcoc. Click "Total Care Relative Resource Values (TCRRV)" open the link at that states: "TCRRV code table"

Please supply the username and password:

Attachment:

S6. Data Protocol (Resource Use Measure Module 1)

The measure developer must determine which of the following data protocol steps: data preparation, data inclusion criteria, data exclusion criteria, and missing data, are submitted as measure specifications or as guidelines. Specifications limit user options and flexibility and must be strictly adhered to; whereas guidelines are well thought out guidance to users while allowing for user flexibility. If the measure developer determines that the requested specification approach is better suited as guidelines, please select and submit guidelines, otherwise specifications must be provided.

Data Protocol Supplemental Attachment or URL:

If needed, attach document that supplements information provided for data protocol for analysis, data inclusion criteria, data exclusion criteria, and missing data (Save file as: S6_Data Protocol). All fields of the submission form that are supplemented within the attachment must include a summary of important information included in the attachment and its intended purpose, including any references to page numbers, tables, text, etc.

URL: <http://www.healthpartners.com/files/57444.pdf>-- OR -- www.healthpartners.com/tcoc . Click “Technical Guidelines” open the link at that states: “Read more about Total Resource Use technical guidelines.

Please supply the username and password:

Attachment:

S6.1. Data preparation for analysis

Detail (specify) the data preparation steps and provide rationale for this methodology.

Guidelines : Required data sources and inputs:

- Administrative claims covering all categories of health care services: professional, facility inpatient and outpatient, pharmacy, lab, radiology and any other ancillary healthcare services
- Johns Hopkins ACG System version 9.0 for risk adjustment
- Membership eligibility, identifier and number of months during the measurement period the member was eligible (member months)
- Total Care Relative Resource Values (TCRRV) code table provided

The following should be reviewed prior to beginning implementation of the Total Resource Use measure to ensure data comparability:

- Consistent population of primary and secondary claims diagnosis. Population prevalence to ensure reasonable/completeness of disease; primary and secondary diagnosis are consistently populated (e.g., diagnosis 1 - 4)
- Data elements are populated within reasonable tolerances and thresholds (e.g., expected CPT ranges, expected allowed amount ranges, expected units ranges)
- All service categories are available and appropriately represented (e.g., inpatient, pharmacy, outpatient and professional)
- Peer group/case-mix need to be comparable
- Risk adjustment weight and application must be in sync (e.g. truncation threshold values)

It is recommended that further reliability and validity testing be conducted if the user varies from the “Technical Guidelines” provided. Examples include:

- The user implements the measure with less than 600 members attributed to a provider
- The user applies a different unit of evaluation, such as an employer group, condition or community rather than a provider
- The user employs an alternative attribution algorithm or risk adjustment tool

S6.2.Data inclusion criteria

Detail initial data inclusion criteria and rationale(related to claim-line or other data quality, data validation, e.g. truncation or removal of low or high dollar claim)

Guidelines : Paid medical and pharmacy administrative claims for the measurement year (e.g. between January 1 and December 31), allowing for three months of run out for claims lag.

S6.3. Data exclusion criteria

Detail initial data exclusion criteria and rationale (related to claim-line or other data quality, data validation, e.g. truncation or removal of low or high dollar claim)

Guidelines : Members are excluded from measures if they meet one of the following criteria:

1. Members over age 64
2. Members under age 1
3. Member enrollment less than nine months during the one year measurement time window
4. Members who are not attributed to a primary care provider

Member claims are truncated at \$100,000

1. For an individual member, when the sum of all claims for the measurement year totals more than \$100,000, claims are truncated to \$100,000 for the measurement time window. A factor reduces an individual member's claims to a total \$100,000, e.g. if member claims for an individual totaled \$125,000, the factor would be 0.80. This factor is applied to all claims for that measurement period. This preserves all claim lines to ensure claims can be proportionally allocated to the appropriate service category.

S6.4. Missing Data

Detail steps associated with missing data and rationale(e.g., any statistical techniques used)

We do not provide measure specifications or guidelines for missing data : There is no missing data, it is the health plan full population, all claims are used

S7. Data Type: Administrative claims

Other

S7.1. Data Source or Collection Instrument

Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc.)

- Users administrative claims data base
- Risk Adjustment Tool, Johns Hopkins ACG System Version 9.0,
- Standardized costing code table, Total Care Relative Resource Values (TCRRV) specification provided

S7.2. Data Source or Collection Instrument Reference

(Please provide a web page URL or attachment). NQF strongly prefers URLs. Attach documents only if they are not available on a web page and keep attached file to 5MB or less)

URL:

Please supply the username and password:

Attachment:

S8.Measure Clinical Logic (Resource Use Measure Module 2)

The measure's clinical logic includes the steps that identify the condition or event of interest and any clustering of diagnoses or procedures. For example, the diagnoses and procedures that qualifies for a cardiac heart failure episode, including any disease interaction, comorbid conditions, or hierarchical structure to the clinical logic of the model. (Some of the steps listed separately below may be embedded in the risk adjustment description, if so, please indicate NA and in the rationale space list 'see risk adjustment details.')

Clinical Logic Supplemental Attachment or URL:

If needed, provide a URL or document that supplements information provided for the clinical framework, co-morbid interactions, clinical hierarchies, clinical severity levels, and concurrency of clinical events

URL:

Please supply the username and password:

Attachment:

<p>S8.1. Brief Description of Clinical Framework <i>Briefly describe your clinical logic approach including clinical topic area, whether or not you account for comorbid and interactions, clinical hierarchies, clinical severity levels and concurrency of clinical events.</i></p> <p>Not applicable. This is a population-based measure that applies to all service categories, care settings and conditions.</p> <p>S8.2. Clinical framework <i>Detail any clustering and the assignment of codes, including the grouping methodology, the assignment algorithm, and relevant codes and rationale for these methodologies.</i></p> <p>Not applicable. This is a population-based measure that applies to all service categories, care settings and conditions.</p> <p>S8.3. Comorbid and interactions <i>Detail the treatment of co-morbidities & disease interactions and provide rationale for this methodology.</i></p> <p>We do not provide specifications for co-morbidities and disease interactions. This is accounted for in application of risk adjustment, Johns Hopkins, ACG version 9.0</p> <p>S8.4. Clinical hierarchies <i>Detail the hierarchy for codes or condition groups used and provide rationale for this methodology.</i></p> <p>We do not provide specifications for clinical hierarchies. This is accounted for in application of risk adjustment, Johns Hopkins, ACG version 9.0</p> <p>S8.5. Clinical severity levels <i>Detail the method used for assigning severity level and provide rationale for this methodology.</i></p> <p>We do not provide specifications for clinical severity levels. This is accounted for in application of risk adjustment, Johns Hopkins, ACG version 9.0</p> <p>S8.6. Concurrency of clinical events (that may lead to a distinct measure) <i>Detail the method used for identifying concurrent clinical events, how to manage them, and provide the rationale for this methodology.</i></p> <p>We do not provide specifications for concurrency of clinical events. This is a population-based measure that applies to all service categories, care settings and conditions.</p>	<p>Eval Rating 2a1</p> <p>H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> I <input type="checkbox"/></p>
<p>S9. Measure Construction Logic (Resource Use Measure Module 3) <i>The measure's construction logic includes steps used to cluster, group or assign claims beyond those associated with the measure's clinical logic. For example, any temporal or spatial (i.e., setting of care) parameters used to determine if a particular diagnosis or event qualifies for the measure of interest.</i></p>	
<p>Construction Logic Supplemental Attachment or URL: <i>If needed, attach <u>supplemental</u> documentation (Save file as: S9_Construction Logic). All fields of the submission form that are supplemented within the attachment must include a summary of important information included in the attachment and its intended purpose, including any references to page numbers, tables, text, etc.)</i></p> <p>URL: http://www.healthpartners.com/files/57444.pdf-- OR -- www.healthpartners.com/tcoc . Click "Technical Guidelines" open the link at that states: "Read more about Total Resource Use technical guidelines. Please supply the username and password: Attachment:</p>	

<p>S9.1. Brief Description of Construction Logic <i>Briefly describe the measure's construction logic.</i></p> <p>The measure examines total resource use of a commercial population between for a given measurement year (e.g. January 1 and December 31), for all members eligible for the measure</p>	<p>Eval Rating 2b1</p> <p>H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> I <input type="checkbox"/></p>
<p>S9.2. Construction Logic <i>Detail logic steps used to cluster, group or assign claims beyond those associated with the measure's clinical logic.</i></p> <ul style="list-style-type: none"> • All claims included in the measure have a date of service in the measurement year (e.g. between January 1 and December 31) • Members have a minimum 9 months enrollment in the measurement year • Commercial population only • Attribution (see section S11.1) • Costing Method – Total Care Relative Resource Values TCCRVs (section S9.7 and S10.3) • Risk Adjustment (S10.1) 	
<p>S9.3. Measure Trigger and End mechanisms <i>Detail the measure's trigger and end mechanisms and provide rationale for this methodology.</i></p> <p>All claims dates of service in the measurement year (e.g. January 1 – December 31)</p>	
<p>S9.4. Measure redundancy or overlap <i>Detail how redundancy and overlap of measures can be addressed and provide rationale for this methodology.</i></p> <p>We do not provide specifications for measure redundancy or overlap. Not applicable. This is a population-based measure that applies to all service categories, care settings and conditions.</p>	
<p>S9.5. Complementary services <i>Detail how complementary services have been linked to the measure and provide rationale for this methodology.</i></p> <p>We do not provide specifications for linking complementary services. Not applicable. This is a population-based measure that applies to all service categories, care settings and conditions.</p>	
<p>S9.6. Resource Use Service Categories</p> <p>Inpatient services: Inpatient facility services Inpatient services: Evaluation and management Inpatient services: Procedures and surgeries Inpatient services: Imaging and diagnostic Inpatient services: Lab services Inpatient services: Admissions/discharges Inpatient services: Labor (hours, FTE, etc.) Ambulatory services: Outpatient facility services Ambulatory services: Emergency Department Ambulatory services: Pharmacy Ambulatory services: Evaluation and management Ambulatory services: Procedures and surgeries Ambulatory services: Imaging and diagnostic Ambulatory services: Lab services Ambulatory services: Labor (hours, FTE, etc.) Durable Medical Equipment (DME)</p>	

S9.7. Identification of Resource Use Service Categories

For each of the resource use service categories selected above, provide the rationale for their selection and detail the method or algorithms to identify resource units, including codes, logic and definitions.

Health Care Industry

Within the health care industry the measurement of price and resource use is not readily available due to the lack of an underlying relative weighting system that crosses all medical services, procedures and places of service. Each available relative payment system is created independently and is not relative across the full spectrum of medical care (e.g.: inpatient diagnostic related groups (MSDRG), outpatient ambulatory payment classifications (APC), professional relative value units (RVU) and pharmacy).

Total Care Relative Resource Values (TCRRVs) are a grand linear scale of relative resource values designed to evaluate resource use across all types of medical services, procedures and places of service. The values are independent of price and therefore can be used to evaluate providers, hospitals, physicians and health plans against their peers on their efficiency of resource use in treating like conditions.

The methodology considers the relativity within and across places and types of service and is sourced beginning with using the Centers for Medicare & Medicaid Services (CMS) payment systems. In areas where there is no weight based payment system available (e.g.: national drug code or NDC), the methodology creates a TCRRV for each medical procedure or product that is relative to the other payment systems.

This methodology has been applied to a national database PharMetrics, Inc. Watertown, MA and a relative weight lookup table has been created that includes base unit TCRRVs and validation thresholds. The TCRRV tables can be applied directly to service level data and treated in the same fashion as any monetary field. (e.g.: allowed amount)

Since these values are independent of price and are relative across the entire spectrum of the health care industry, resource use efficiency can be measured through comparing peer groups on predetermined baskets of care. A pure price metric can also be developed with the inclusion of the paid amount with the TCRRV being the common denominator.

Methodology

The Total Care Relative Resource Values (TCRRV) measures resources consumed by medical procedures, services or substances that are independent of price. Resources are the common units of cost that are included (make up) in every service or product in the free market. The TCRRVs are relative across and within each of the components of care; inpatient, outpatient surgery & ER, scheduled outpatient & professional and pharmacy.

CMS has developed 3 sets of relative weight systems that are independent of each other and each covers a different practice setting: inpatient (MSDRG weights using MSDRG grouper version number 25), outpatient (APC weights using 2008 weights), and professional office based care (RBRVS weights using 2008 CMS RVU weights, supplemented with Ingenix RBRVS). However, CMS does not include all types of services in its weighting systems – it has focused on the prospective pricing payment methodologies covered by Medicare. For instance, pharmacy is excluded.

Provider payments vary dramatically in price. Provider payments are often applied at a case rate – and not connected to the discrete services (inpatient care, MH, outpatient care). Utilization patterns and methods of treatment also vary dramatically between providers. The aforementioned factors make it difficult to accurately distinguish utilization from price, place of service and type of service cost drivers.

All available weights, MSDRGs, APCs & RVUs, will be utilized to determine the resource use consumed within each of their respective payment components. The aggregated billed amount for each payment component will achieve relativity across components. An adjustment will be made to the TCRRVs to calibrate the values to a total paid relativity between payment components.

If a relative weight scale does not exist for medical procedures or medical items within a cost component, a common billed amount for each medical procedures or medical items is leveraged to create a relative weight scale.

The billed amount (versus paid amount) is utilized at the medical procedure or medical item level as it is most

representative of resource use at that specific level. The billed amount is not affected by contract rates, payment discounts, or payment methodologies. The final adjustment of the values creates a paid relationship between the respective payment components (Inpatient MSDRGs – Outpatient APCs – Professional RVUs – Pharmacy NDCs)

Application

The TCRRVs are a set of tables that are applied to each of the components of care (inpatient, outpatient, professional and pharmacy) through a unique key; MS DRG for inpatient, revenue CPT and modifier if applicable for outpatient; place of service, CPT and modifier for professional; NDC for pharmacy. An upper and lower range is created for each MS DRG, CPT or NDC that is used as a check to make sure that the resources assigned to the service is in-line with what was actually billed. This can be viewed as a test of the resources assigned to the service and should not be considered an outlier identification process for claims analysis.

Billed to Paid Adjustment

Since the TCRRVs are developed using the billed amount, the billed amount relationship between the components of care will be reflected in the TCRRVs. The billed to paid adjustment factors are applied to the TCRRVs at the components of care level to create the desired paid relativities between the components.

Individual Component Specifics

Inpatient

The CMS MS DRG weight scale is based on a case rate payment methodology. The MS DRG grouper version 25 was used. This values an inpatient stay at a standard rate for a common MS DRG. In terms of resources consumed a hospital will expend additional resources on a patient depending on the number of days spent at the hospital. It is for this reason that the CMS MS DRG weights are recalibrated to a day one weight and an all subsequent days weight (day one, day two plus weight scale). This allows for the TCRRV to measure hospitals efficiency at treating a selected MS DRG. At the aggregated MS DRG level the Day One, Day Two Plus weight scale has the same relativity as the CMS MS DRG weight scale.

The TCRRV value is determined by creating an aggregate billed per weight conversion factor. This conversion factor is then multiplied by each of the MS DRGs in the Day One, Day Two Plus weight scale.

The normal range of resource consumption is calibrated for each of the MS DRGs, these ranges measure if the resources assigned via the TCRRV weight tables are in-line with what actually transpired in the inpatient admission. If an admission has an abnormally high or low billed amount, then the billed amount on the admission is used as a substitute for the TCRRV. This allows for the number of resources consumed to stay in-line with the reality of the “real world”.

Outpatient

The CMS Outpatient Prospective Payment System combines the APC and RVU weight scales. The services that have an APC weight or are determined to be incidental to the primary APC weighted service have their relative resources assigned through the APC weight scale. The 2008 CMS OP Addendum B file was used for the APC weighted services. The laboratory, radiology and all RVU services (as defined by the Addendum B) are reclassified as professional and follow the professional TCRRV assignment process. These services are reclassified as professional as the actual service performed is the same regardless of place of service and moreover the same amount of resources is consumed for these services. The underlying reasoning for combining these services with the professional data is the number of resources assigned to a service should not be dependent upon the place of service. The services that are not included in the APC or RVU weighting scales have a weight imputed through the billed per unit relativity.

All services associated to the APC weight scale are calibrated to the other components of care through the APC aggregate billed amount conversion factor. The services associated to RVUs are calibrated in the same fashion. The services not assigned to a weight scale are calibrated to the other components of care through the imputed weight development billed per unit process.

Professional

The CMS RVUs weight scale creates relativities between the varying types of services within the spectrum of professional services using CPT and HCPCS codes that come in on both CMS 1450 and CMS 1500 claim forms. The RVU weights are dependent upon the type of service as well as where the service was performed.

The professional TCRRVs are calibrated to the other component of care through the aggregate billed amount conversion factor being applied to each of the RBRVS service weights. The services that are not included in the RBRVS weight scale have a weight imputed through the billed per unit relativity.

Pharmacy

Since there is no relative weighting scale for prescription drugs the median billed amount per day for each NDC is leveraged to create the relativities between NDCs. The pharmacy component's relativity to the other components of care is created through the use of the billed amount per unit.

If needed, provide specifications URL (preferred) or as an attachment:

URL: <http://www.healthpartners.com/files/56500.pdf> -- OR -- www.healthpartners.com/tcoc. Click "Total Care Relative Resource Values (TCRRV)" open the link at that states "TCRRV methodology and application" on page 1
Please supply the username and password:
Attachment:

S9.8. Care Setting; provides information on which care settings the measure encompasses.

Ambulatory Care : Ambulatory Surgery Center (ASC)
Ambulatory Care : Clinic/Urgent Care
Ambulatory Care : Clinician Office
Behavioral Health/Psychiatric : Inpatient
Behavioral Health/Psychiatric : Outpatient
Dialysis Facility
Emergency Medical Services/Ambulance
Home Health
Hospice
Hospital/Acute Care Facility
Imaging Facility
Laboratory
Pharmacy
Post Acute/Long Term Care Facility : Nursing Home/Skilled Nursing Facility
Post Acute/Long Term Care Facility : Rehabilitation

S10.Adjustments for Comparability (Resource Use Measure Module 4)

External factors can mingle and affect or confound a measure's result. Confounding occurs if an extraneous factor causes or influences the outcome (e.g., higher resource use) and is associated with the exposure of interest (e.g., episode of diabetes with multiple co-morbidities). Measure developers often include steps to adjust the measure to increase comparability of results among providers, employers, and health plans.

S10.1. Risk adjustment method

Define risk adjustment variables and describe the conceptual, statistical, or other relevant aspects of the model and provide rationale for this methodology.

For Total Resource Use measurement, risk adjustment is performed using Adjusted Clinical Groups (ACG) developed by Johns Hopkins University. The Johns Hopkins ACG® System has the distinction of being developed, tested and supported by a world-renowned academic and medical research institution, The Johns Hopkins University. The academic home of the ACG System allows for an unparalleled openness to the method. Each component of the system is exposed to the user which allows the system to be easily adapted to unique local circumstances and applications. The ACG methodology is subject to continuous critical review and testing by a team of distinguished health services researchers led by Dr. Jonathan Weiner. This transparency and academic credibility is critical when trying to

disseminate risk information to providers and purchasers of healthcare. To read an excerpt from the ACG System Technical Reference Guide, please paste the following url into your browser.
<http://www.healthpartners.com/files/57460.pdf>

Attributed members are assigned a risk score based on diagnoses on claims from the performance measurement period, as well as member age and gender. The Society of Actuaries Comparative Analysis of Claims-Based Tools for Health Risk Assessment (2007) suggests any commercially available risk adjustment tool could be effectively employed in the Total Resource Use measure.

To account for a member's illness burden, Resource Use measures require the use of a Society of Actuaries tested risk adjustment tool. Tools evaluated by the Society of Actuaries Comparative Analysis of Claims-Based tools for Health Risk Assessment (2007) of include (<http://www.soa.org/files/pdf/risk-assessmenttc.pdf>):

Johns Hopkins ACG
 DxCG RxGroups
 Ingenix ERG
 Kronick / UCSD CDPS
 Ingenix PRG
 ACG w/Prior Cost
 3M Clinical Risk Groups (CRG)
 Gilmer/UCSD Medicaid Rx
 DxCG UW Model
 DxCG DCG
 Ingenix Impact Pro
 MEDai

The measure has been tested using the Johns Hopkins University developed Adjusted Clinical Groups (ACG System).
<http://www.acg.jhsph.org>

ACG Grouper:

- Adjusted Clinical Groups (ACG System) were developed by Johns Hopkins University and allow comparisons between populations with varying illness burdens based on all diagnoses, age and gender.
- Measure validity and reliability was tested on ACG System version 9.0
- Each unique member is assigned an ACG cell\code, which has a corresponding weight that reflects relative illness burden (e.g. relative expected resource consumption).
- Follow the Installation and Usage Guide Version 9.0 published in December 2009
- Members that are considered non-healthcare service users by the ACG grouper are assigned ACG cell 5200 (e.g.: have no claims experience within the measurement period that were submitted to the ACG grouper). These members need to be separated into true non-users vs. users that have medical or pharmacy claims, but who's claims were excluded as per the ACG grouper criteria (e.g.: Laboratory or pharmacy claims only).
 - o For members that have total paid greater than zero (medical and pharmacy combined), assign ACG cell code 5110
 - o For members that have zero total paid assign ACG cell 5200

ACG Weights:

- The ACG weights measure relative resource variation between ACG cells/codes.
 - o National weights are available within the ACG tool.
 - o The measure was tested using weights calibrated to the Minnesota Market
- Multiply each member's ACG weight by their eligible member months creating a total member ACG weight.

ACG Score:

- Each provider's attributed member ACG weights are summed to the provider level and divided by the sum of the attributed member months creating an ACG score for the provider.
- The provider's average ACG score is indexed to all attributed member's plan average ACG score.
- A member's total member ACG weight is updated to correspond with each year the Total Cost of Care and Resource Use measures are measured.

If needed, provide supplemental information via a web URL (preferred) or attachment with the risk

adjustment specifications.

URL: <http://www.healthpartners.com/files/56499.pdf> -- OR -- www.healthpartners.com/tcoc. Click "Risk Adjustment" link

Please supply the username and password:

Attachment:

S10.2. Stratification Method

Detail the stratification method including all variables, codes, logic or definitions required to stratify the measure and rationale for this methodology

This method is not stratified.

This is a population-based measure that is fully inclusive.

S10.3. Costing Method

Detail the costing method including the source of cost information, steps to capture, apply or estimate cost information, and provide rationale for this methodology.

Description:

The Total Care Relative Resource Values (TCRRVs) are a grand linear scale of relative values designed to evaluate resource use across all types of medical services, procedures and places of service. The values are independent of price and can be used to evaluate providers, hospitals, physicians and health plans against their peers on their efficiency of resource use in treating like conditions.

General Overview of Application:

The TCRRVs are applied at the procedure level for each component of care with the exception of inpatient, which is applied at the full admission level. There is a TCRRV lookup table for each component of care where each claim's procedure is matched with the corresponding value. The TCRRV weights that are applied to the claim is tested for accuracy and a total TCRRV is calculated. The final step is to calibrate the total TCRRVs to the paid ratio between components of care using the paid adjustment factor.

<http://www.healthpartners.com/files/56500.pdf>

or
www.healthpartners.com/tcoc. Click "Total Care Relative Resource Values (TCRRV)" open the link at that states "TCRRV methodology and application" starting on page 4

Definitions:

Region (Developed by PharMetrics, Inc. tested on 18.4 million lives) Regional TCRRVs available (Mid-West, South, West, East, All)

A region must be selected before application

Regional Definitions

East – 5.4 million lives: ME, NH, VT, NY, CT, RI, NJ, PA

South – 4.4 million lives: MD, WV, DC, VA, KY, TN, NC, SC, GA, AL, MS, FL, LA, AR, OK, TX

Mid-West – 5.6 million lives: OH, MI, IN, WI, IL, MN, IA, MO, ND, SD, NE, KS

West – 3.0 million lives: MT, WY, CO, NM, ID, UT, AZ, WA, OR, NV, CA

Component of care

Inpatient – overnight stay in the hospital

- Claims submitted on CMS 1450 claim form
- Inpatient claims are identified at the header record (e.g.: all service lines) by one of the following criteria on any one line of the claim.

- o Room and Board Revenue codes 100-189, 200-219, 650, 655, 1000-1005
- Or Bill Type code 21, 28, 66, 86
- Or Bill Type code of 11 and a revenue code of 190

All Inpatient claims that meet the following criteria are considered Non Acute the remainder are considered Acute

- Bill type code in (21, 28, 66, 86) or
- Revenue code in (115, 125, 135, 145, 155, 118, 128, 138, 148, 158, 650, 655, 1000, 1001, 1002, 1003, 1004, 1005) or
- Bill type code of 11 and revenue code = 190

Outpatient

- All other claims submitted on CMS 1450 forms (without a room and board revenue code)

Professional

- Claims submitted on a CMS 1500 form

Pharmacy

- Pharmacy claims

Professional Data Place of Service:

-Place of service code from the claim form.

-Non-Facility ("NON") = 3,4,11,12,53,54,71,72,81,A,D,49,17

-Facility "FAC" = all other place of service codes

Modifiers

-CPT modifiers other than those included in the TCRRV file should either be set to a global modifier. (Listed below)

Units

-Unit field from the claim or LOS for inpatient

-Inpatient Acute LOS = on the final cycle bill of the inpatient admission subtract the admission date from the discharge date

-Professional/Outpatient Units field on the claim form

Application

Step by step instructions on how to apply the TCRRVs to each component of care:

Inpatient:

Unique Key –Region, MSDRG

1. Group the inpatient data using the appropriate MSDRG grouper
2. Exclude non-acute admissions (see definitions above)
3. Merge on the TCRRVs by desired region & MSDRG code
4. If there is no corresponding MSDRG code on the TCRRV lookup table set the TCRRV to inpatient billed amount (should represent no more than 2% of admissions)
5. For non acute admissions set the TCRRVs to billed amount
6. When there is a match, compare the billed amount to the upper and lower thresholds provided on the TCRRV lookup table
 - a. The upper and lower thresholds need to be adjusted for the length of stay on each admission.
 - i. Upper threshold = upper day 1 wgt + (upper day 2 wgt * (LOS -1))
 - ii. Lower threshold = lower day 1 wgt + (lower day 2 wgt * (LOS -1))
 - b. If the billed amount is between the upper and lower thresholds, the admission is consider normal and the TCRRV can be calculated using the TCRRV weights provided on the lookup table
 - i. TCRRV = TCRRV day 1 wgt + (TCRRV day 2 wgt * (LOS -1))
 - c. If the billed amount is outside the thresholds set the TCRRV to actual billed amount on the admission
7. Merge to the paid adjustment factor dataset by region and appropriate component of care. Multiply the TCRRV by PD_ADJ_FACTOR

Outpatient:

Unique Key – Region, CPT

1. Extract outpatient data as per the outpatient definition.
2. Merge with Hospital Outpatient TCRRV file by CPT code
3. Create a flag to determine if a match exists between claims and OP TCRRV file – (MATCH=Y/N) and a separate flag to indicate TCRRV file source (SOURCE=OP)
4. For procedure codes that do not match to Hospital Outpatient TCRRV file
 - a. Set POS = 'NON'.
 - b. If there is a CPT that has a TC modifier available, force the hospital outpatient data to TC.
 - c. Combine with the professional file.
5. Determine if billed amount is within range
 - a. if adj_lower <= billed amount <= adj_upper then range=Normal
 - b. else if billed amount > adj_upper then range=High
 - c. else if billed amount < adj_lower then range=Low
6. If Range is Normal then set HPPRV to TCRRV_WGT*units
 - a. if Units are 0 or if Range is Low or High then set HPPRV to the billed amount
7. Set TCRRV to billed amount if there were no units, no match or no procedure code
8. Merge to the paid adjustment factor dataset by region and appropriate component of care. Multiply the TCRRV by PD_ADJ_FACTOR
9. Usually <3% of the service lines are in either high or low

Professional:

Unique Key – Region, Place of Service, CPT, CPT Modifier

1. Check the available modifiers in the lookup table against the claims data, for any modifier not available in the look up table set the modifier in the claims data to global (blank)
2. Map Place of Service Codes, if POS in (3 , 4 , 11 , 12 , 53 , 54 , 71 , 72 , 81 , A , D) Then POS=NON, Else POS=FAC
3. Merge with professional TCRRV file by place of service, procedure code, and modifier
4. Create a flag to determine if a match exists between claims and TCRRV file (MATCH=Y/N)
5. For records where a match exists (MATCH=Y); adjust TCRRV Upper and Lower Limits by Units
 - a. Adj_Upper=UPPER* units
 - b. Adj_Lower=LOWER* units
6. For all records that are outpatient from outpatient step 4 adjust the TCRRV Upper and Lower Limits by Units. Make sure to use the UPPER_OP limit for the outpatient data.
 - a. Adj_Upper=UPPER_OP* units
 - b. Adj_Lower=LOWER* units
7. Determine if billed amount is within range
 - a. if adj_lower <= billed amount <= adj_upper then range=Normal
 - b. else if billed amount > adj_upper then range=High
 - c. else if billed amount < adj_lower then range=Low
8. If Range is Normal then set HPPRV to TCRRV_WGT*units
 - a. if Units are 0 or if Range is Low or High then set HPPRV to the billed amount
9. Set TCRRV to billed amount if there were no units, no match or no procedure code
10. Merge to the paid adjustment factor dataset by region and appropriate component of care. Multiply the TCRRV by PD_ADJ_FACTOR.
11. Usually <3% of the service lines are in either high or low

Pharmacy:

Unique Key – Region, NDC Code

1. Merge on TCRRV values by NDC code
2. Calculate a pills per day metric.
3. Evaluate each claim line by applying the following formula: lower limit < (pills/day) < upper limit to see if it is within the normal range and flag as normal, high or low
4. If no match exists, populate TCRRV with billed and flag.
5. If a match exists calculate a TCRRV using the formula:

- a. Normal - TCRRV = days x TCRRV_WGT
 b. High and Low = billed amount
 6. Merge to the paid adjustment factor dataset by region and appropriate component of care. Multiply the TCRRV by PD_ADJ_FACTOR

S11. Measure Reporting (Resource Use Measure Module 5)

The measure developer must determine which of the following Measure Reporting functions: attribution approach, peer group, outliers and thresholds, sample size, and benchmarking and comparative estimates, are submitted as measure specifications or as guidelines. Specifications limit user options and flexibility and must be strictly adhered to; whereas guidelines are well thought out guidance to users while allowing for user flexibility. If the measure developer determines that the requested specification approach is better suited as guidelines, please select and submit guidelines, otherwise specifications must be provided.

S11.1. Detail attribution approach

Detail the attribution rule(s) used for attributing costs to providers and rationale for this methodology (e.g., a proportion of total measure cost or frequency of visits during the measure's measurement period) and provide rationale for this methodology.

To determine which members to include in the Total Resource Use measure, there are several options available depending upon your business purpose and unit of measure. If the unit of measure is an entire health plan or employer group, all members will be included in the Total Resource Use measure. If the unit of measure is a provider and members are required to select a primary care provider, we recommend using the member selected provider.

When the member is not required to select a primary care provider, we recommend the use of an attribution algorithm to identify the member's primary care provider. The measure was tested using this methodology. The primary care attribution uses only primary care provider claims for the same period as the Total Resource Use measurement year (e.g. January 1 – December 31). The attributed provider is determined by the primary care provider for which the member has the most primary care office based services during the measurement period. In the event of a tie the provider with the most recent visit is attributed the member. Members who do not have a primary care office visit during the measurement time period are not attributed to a primary care provider and are not included in the Total Resource Use measure.

Attribution Algorithm:

- Include twelve months based on first date of service for the measurement year (e.g. January 1 – December 31) of professional claims experience, with three months of paid claims run out to allow for claims lag.
- Exclude all services that are not office based (place of service code not equal to 11)
- Exclude convenience care clinic visits and hospice services
- Exclude providers that are not a physician, physician assistant or nurse practitioner
- Assign each service line a specialty based on the servicing physician's practicing specialty or credential specialty if practicing specialty is not available.
- Include only the following specialties:
 - Family Medicine - Internal Medicine
 - Pediatrics - Geriatrics
 - OB/GYN

<http://www.healthpartners.com/files/57444.pdf>-- OR -- www.healthpartners.com/tcoc . Click "Technical Guidelines" open the link at that states: "Read more about Total Resource Use technical guidelines.

Attribution is addressed on page 2

S11.2. Identify and define peer group

Identify the peer group and detail how peer group is identified and provide rationale for this methodology

Guidelines : The peer group can be applied by market, region or national with the following criteria:

- Provider Specialties include: Internal Medicine, Family Medicine, Pediatrics, Geriatrics and OB/GYN
- Provider Types include: Physician, Physician Assistant, Nurse Practitioner

S11.3. Level of Analysis:

Clinician : Group/Practice
Population : Community

S11.4.Detail measure outliers or thresholds

Detail any threshold or outlier rules and decisions based on measure resource use and provide rationale for this methodology

Guidelines : Resource Use Index (RUI) values that are three standard deviations away from the resource use mean should be evaluated.

S11.5.Detail sample size requirements

Detail the sample size requirement including rules associated with the type of measure

We do not provide specifications or guidelines for sample size requirements : This measure has been tested for a minimum attributed member population of 600 members, this number is aligned with over 80+ community-based quality and patient experience measures in the market tested. We recommend further reliability and validity testing if a threshold less than 600 attributed members is used.

S11.6.Define benchmarking or comparative estimates

Detail steps to produce benchmarking and comparative estimates and provide rationale for this methodology

Guidelines : The peer group average is set as the benchmark and a provider's Total Resource Use ACG Adjusted PMPM is indexed against the peer group average. The Peer Group average is calculated in the same manner as an individual provider:

Resource Use (RUI):

Numerator: Peer Group Total Resource Use PMPM = (Peer Group Total Medical TCRRV/ Peer Group Medical Member Months) + (Peer Group Total Pharmacy TCRRV / Peer Group Pharmacy Member Months)

Denominator: Peer Group ACG Risk Score

Peer Group ACG Adjusted Total Resource Use PMPM = Peer Group Total Resource Use PMPM / Peer Group ACG Risk Score

Resource Use Index: RUI = Provider ACG Adjusted Total Resource Use PMPM / Peer Group ACG Adjusted Total Resource Use PMPM

S12.Type of Score:

Ratio

If available, please provide a sample report:

[S12_Sample Score Report-634364116508944844.pdf](#)

S12.1. Interpretation of Score.

(Classifies interpretation of score (s) according to whether higher or lower resource use amounts is associated with a higher or lower score, a score falling within a defined interval, or a passing score, etc)

A provider Resource Use Index (RUI) of 1.10 equates to 10% higher resource use risk adjusted PMPM than the peer group average. Similarly, a provider RUI score of 0.90 equates to 10% less resource use risk adjusted PMPM than the peer group average.

A score of 1.0 is equivalent to the peer group average.

S12.2. Detail Score Estimation*Detail steps to estimate measure score.*

Data sources and inputs:

- All claims included in the measure have a date of service in the measurement year (e.g. between January 1 and December 31)
- Members have a minimum 9 months enrollment in the measurement year
- Commercial population only
- Attribution (see section S11.1)
- Costing Method – Total Care Relative Resource Values TCCRVs (section S9.7 and S10.3)
- Risk Adjustment (S10.1)

Resource Use Index (RUI):

Numerator: Total Resource PMPM = (Total Medical TCRRV / Medical Member Months) + (Total Pharmacy TCRRV / Pharmacy Member Months)

Denominator: ACG Risk Score

ACG Adjusted Total Resource Use PMPM = Total Resource Use PMPM / ACG Risk Score

Resource Use Index = Provider ACG Adjusted Total Resource Use PMPM / Peer Group ACG Adjusted Total Resource Use PMPM

S12.3. Describe discriminating results approach*Detail methods for discriminating differences (reporting with descriptive statistics--e.g., distribution, confidence intervals)*

This is a full population-based measure, therefore, confidence intervals are not applicable. The results can be analyzed by minimum, maximum, mean, standard deviation and percentile ranks, this is dependent upon the business application of the measure.

A provider Resource Use Index (RUI) score of 1.10 equates to 10% more resource use than the peer group average. Similarly, a provider TCI or RUI score of 0.90 equates to 10% less resource use than the peer group average.

A score of 1.0 is equivalent to the peer group average.

TESTING/ANALYSIS

Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. See guidance on measure testing.

TESTING ATTACHMENT (5MB or less) or URL:

If needed, attach supplemental documentation (Save file as: SA_Reliability_VValidity Testing) All fields of the submission form that are supplemented within the attachment must include a summary of important information included in the attachment and its intended purpose, including any references to page numbers, tables, text, etc.

URL: <http://www.healthpartners.com/files/57442.pdf>-- OR -- www.healthpartners.com/tcoc . Click "Reliability" open the link at that states: "Learn more about HealthPartners Total Resource Use reliability testing"
Please supply the username and password:
Attachment:

SA1. Reliability Testing**Eval
Rating****2a2**

For each module tested or for the overall measure score:

SA1.1. Data/sample

(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)

The Total Resource Use measure was applied to HealthPartners' primary care Twin Cities metro area providers as per the specifications of the measure for the calendar years of 2007, 2008 and 2009. HealthPartners primary care metro network consists of 19 individual providers that have 223 (2007) 232 (2008) and 229 (2009) clinic sites. The total membership of the primary care attributed metro network membership grew slightly over the three year period: 268,912 (2007), 272,491 (2008) 303,638 (2009).

Resource Use (RUI) is a measure of a provider's effectiveness at managing their primary care attributed population across the care continuum. The RUI measure was applied to HealthPartners' primary care metro providers as per the measure specifications and results were calculated for 2007, 2008, and 2009.

The reliability testing demonstrates the repeatability of producing the same results a high proportion of the time. To measure the reliability of the RUI measure a 90% random sample and a bootstrapping technique were employed. In these methods, reliability is measured as the mean of the variance between sampling iterations and the actual results.

In addition, the RUI measure was analyzed over time to demonstrate stability and sensitivity to provider changes or improvement initiatives.

These methods were chosen as they represent the measure intent, which is that the RUI measure represents providers' average resource use across their population. Since the measure is aggregated to the provider group level there is no need to quantify the variability at the member level into the evaluation.

In the 90% random sample method, the members that were attributed to a provider group were randomly sampled at the 90% membership level without replacement. This technique was employed to simulate variation within a provider group by leveraging their own population and case-mix. This method gives an indication as to the repeatability of the measure by comparing how closely the actual total resource use measure is to the 90% sampled average and simulates any potential member selection bias.

In the bootstrapping method members that were attributed to a provider group were randomly selected with replacement. This method maximizes variation around a provider group's total resource use as each randomly selected iteration (sample populations) does not truly represent the provider's case mix of patients. This method was performed in the same fashion as above to support and validate the results found in the 90% sample method.

SA1.2. Analytic Methods

(Describe method of reliability testing and rationale)

In the 90% sample method, 90% of attributed provider group members were randomly selected, without replacement. A 90% sample was used despite having the full health plan provider population, to simulate any potential member selection bias. The sampling process was performed using the SAS PROC SURVEYSELECT procedure with the Simple Random Sample (SRS) option. This method allows for each attributed member to be selected only one time until 90% of the total provider population has been reached. The 90% sampling process was repeated 500 times for each provider group and year analyzed. Attributed members' resource use was aggregated in each sample to produce 500 RUI results for each provider group for each year (see figure 1 in the definitions section for more information). Once the 500 samples were created for each provider group, the total resource use of each sample for each provider group was compared to the metro average to produce a risk adjusted index. The Resource Use Index from each of the sampling iterations for each provider group/year was then compared to the actual RUI for each provider group/year and the mean variance was computed.

To perform the bootstrap, the SAS PROC SURVEYSELECT procedure with the Unrestricted Random Sample option for full replacement utilized to create a series of random samples for each provider group being measured. Full replacement means that one observation is drawn at random, recorded, and then placed back into the data pool so that it can be drawn again if randomly selected. The numbers of records sampled are drawn such that the samples created are the same size as the original number of attributed members for the provider group. In this way, it is theoretically

H ☐
M ☐
L ☐
I ☐

possible (although virtually improbable) to produce a sample of size n that could consist of the same record drawn n times in a row. This was done to artificially maximize the variance within the defined populations. This sample process was performed 500 times for each year and provider group being analyzed, to produce 500 sets of risk adjusted Total Resource Use results for each provider for each year (see figure 2 in the definitions section for more information). The Resource Use Index from each of the sampling iterations for each provider group/year was then compared to the actual RUI for each provider group/year and the mean variance was computed.

SA1.3. Testing Results

(reliability statistics, assessment of adequacy in the context of norms for the test conducted)

Bootstrap results and 90% random sample results are located on pages 2 – 4 starting at “Bootstrap and 90% Random Sample”. Provider performance consistency results are located on page 4.

<http://www.healthpartners.com/files/57442.pdf>

or
www.healthpartners.com/tcoc . Click “Reliability” open the link at that states: “Learn more about HealthPartners Total Resource Use reliability testing.

SA1.4. Finding statement(s)—(i.e., is the measure deemed reliable, limitations identified)

- The differences between provider Actual RUI results and both the 90% sample and bootstrap mean results are very small. (pages 2-4)
 - o Ranging from -0.00449 to 0.00125 in the 90% sample in 2009.
 - o Ranging from -0.00473 to 0.00105 in the bootstrap in 2009.
 - o These results indicate that the RUIs for each provider group are repeatable and consistent.
- A provider’s performance is relatively consistent across all three years with an average difference in RUI between 2008 and 2009 of 0.0125. (page 4)
 - o These differences in provider performance over time occur because of known changes in fee schedules, collaborating provider usage and resource use saving initiatives can account for the differences.
 - o Since the measure is designed to capture and reflect changes in these areas, we expect to see some explainable variability within a provider group over time.

SA2. Validity Testing

For each module tested or for the overall measure score:

SA2.1. Data/Sample

(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)

The Total Resource Use measure was applied to HealthPartners’ primary care Twin Cities metro area providers as per the specifications of the measure for the calendar years of 2007, 2008 and 2009. HealthPartners primary care metro network consists of 19 individual providers that have 223 (2007) 232 (2008) and 229 (2009) clinic sites. The total membership of the primary care attributed metro network membership grew slightly over the three year period: 268,912 (2007), 272,491 (2008) 303,638 (2009).

Construct validity was evaluated through standard utilization metrics that were also applied to the underlying data in the Actual and risk adjusted forms. The total resource use index (RUI) findings are compared by provider to the Actual and risk adjusted utilization metrics to determine the correctness of conclusions.

SA2.2. Analytic Method

(Describe method of validity testing and rationale; if face validity, describe systematic assessment)

The Total Resource Use measure findings are compared by provider to known utilization metrics to determine the correctness of conclusions. Correlation analysis was completed for the entire network comparing the overall Total Resource Use measure to known utilization markers/metrics and ACG Scores. The analysis performs the correlations on a risk adjusted and non risk adjusted basis. The rationale for this approach is that the underlying utilization metrics give

2b2

H ☐
 M ☐
 L ☐
 I ☐

a strong signal as to the performance of a provider.

The Pearson correlation coefficients are calculated at the network level between providers. In general, the correlation coefficient is an indicator of the level of connection or influence two measures have on each another.

- The correlation coefficient scores range from negative one to positive one, with the closer to either value indicating the more influence or connection and the close to zero indicating no influence.
- When the correlation is positive both values move in the same direction and when the correlation is negative the values move in the opposite direction.
- o Positive correlation example: the more admits that are incurred, the more total spend is accumulated. In this case the correlation coefficient would be close to 1.0.

A large provider in the market has implemented changes in their practice over the last six years using the Total Resource Use measure. Their guiding principle is that unit cost and appropriate use are both essential components of total cost of care. Driving down unit cost by generating unnecessary services is not acceptable. To date, the practice addressed the following areas of appropriate use, which they define as “how many services we provide to achieve the best outcome.”

- Transforming primary care – Goal is improved outcomes in all aspects of triple aim: health, experience, affordability
- Using cost effective providers of hospital and specialty care
- Generic prescribing
- Standardized lab intervals
- Pap and colonoscopy intervals
- Diagnostic imaging
- Personal decision support
- Spine Care Model
- Reducing readmissions

The provider has also addressed unit cost/price which they define as “what it costs to produce each unit of service.” They have had strong success on this front, the following results over a six year period:

- The provider has tightly managed expenses. Their compound annual growth rate on cost/unit of service has increased 1.1% over 6 years.
- These improvements have been reflected in their price: commercial fee schedule with plan increased only 1% over the past 6 years.

SA2.3. Testing Results

(statistical results, assessment of adequacy in the context of norms for the test conducted; if face validity, describe results of systematic assessment)

<http://www.healthpartners.com/files/56340.pdf>

or

www.healthpartners.com/tcoc . Click “Validity” open the link at that states: “Access information about validity testing.”

SA2.4. Finding statement(s)—(i.e., is the measure deemed reliable, limitations identified)

The Total Resource Use measure accurately and consistently identified providers that are low or high performers as the measure was able to evaluate a provider’s cost and resource effectiveness as supported by known utilization measures.

- There is a high correlation between ACG score and the unadjusted PMPM and TCRRVs which indicates that the Actual PMPM and the Actual TCRRVs are a good measure of the consumption of resources. (Correlation Overview, page 4)
- The ACGs, Actual PMPMs and Actual TCRRVs have similar correlation scores to all utilization metrics which indicate the TCRRVs are performing as expected and are a solid measure of resource consumption. (Non-Risk Adjusted Correlations, page 4).
- The Total Resource Use measure has a high correlation (0.77) to a composite utilization index, which was developed

as a proxy to measure total resource consumption (Primary Care Provider Network Overview, RUI vs. Risk Adjusted Composite Utilization Index, page 8).

- The Total Resource Use measure differentiates between providers accurately and correctly as supported by a wide array of utilization metrics (Provider to Provider Analysis, pages 7-11).

SA3. Testing for Measure Exclusions

SA3.1. Describe how the impact of exclusions (if specified) is transparent as required in the criteria

Measure exclusions are fully documented in the report. Measure exclusions include:

- Members over age 64
- Members under age 1
- Member enrollment less than nine months during the one year measurement time window
- Members who are not attributed to a primary care provider
- Truncation of dollars to \$100,000

SA3.2. Data/sample for analysis of exclusions

(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)

Exclusions were analyzed across the entire HealthPartners commercial population

SA3.3. Analytic Method

(Describe type of analysis and rationale for examining exclusions, including exclusion related to patient preference)

R-squared. R-squared measures the percentage of variation in medical claims costs explained by the risk adjustment tool.

SA3.4. Results

(statistical results for analysis of exclusions, e.g., frequency, variability, sensitivity analyses)

- Nine month continuous enrollment – A nine month continuous enrollment was selected to balance business operations. Nine months allows for partial year enrollee. There was very little statistical difference in R-squared between six and twelve months.

	PMPM	
	Members	R-squared
>=6 months enrolled	509,681	0.4353
>=7	483,607	0.4367
>=8	469,132	0.4369
>=9	453,869	0.4374
>=10	441,153	0.4373
>=11	428,774	0.4361
>=12	417,729	0.4360

- Truncation at \$100,000 maximizes the R-squared of the risk adjustment model and reduces exposure to large cost claimants due to how risk adjustment models under-predict high cost cases (SOA Study 2007 p. 49, Table A-5.3).

	PMPM	
	R-squared	
Trunc 100k	0.4374	
Trunc 150K	0.4149	
Trunc 200K	0.3955	

2b3

H ☐
M ☐
L ☐
I ☐

<p>•Infants, under age one are excluded due to slightly higher R-squared of the population without newborns, the required nine months enrollment criteria and variability in newborn costs, newborns under age one were excluded from the total cost of care and resource use measures</p> <p style="text-align: center;">PMPM R-squared</p> <p>With newborns 0.4367 Without Newborns 0.4374</p> <p>• Members over age 64 due are excluded due to potential incomplete claims data of Medicare eligible beneficiary</p> <p>SA3.5. Finding statement(s)-- <i>(i.e., is the measure deemed reliable, limitations identified)</i></p> <p>The measure is deemed reliable. The measure exclusions optimized the R-squared or there was insignificant difference in R-squared. Members over age 64 were excluded due to possible incomplete claims data of Medicare eligible members.</p> <p>SA4. Testing Population <i>Which populations were included in the testing data? (Check all that apply)</i></p> <p>Commercial</p>	
<p>SA5. Risk adjustment strategy</p> <p><i>Refer to items S10.1 and S10.2 to rate this criterion.</i></p>	<p>2b4</p> <p>H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> I <input type="checkbox"/></p>
<p>SA6. Data analysis and scoring methods</p> <p><i>Refer to items S12-S12.3 to rate this criterion.</i></p>	<p>2b5</p> <p>H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> I <input type="checkbox"/></p>
<p>SA7. Multiple data sources</p> <p><i>Refer to S7 & all SA1 items to evaluate this criterion.</i></p>	<p>2b6</p> <p>H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> I <input type="checkbox"/> NA <input type="checkbox"/></p>
<p>SA6. Stratification of Disparities (if applicable)</p> <p><i>Refer to item S10.2 to rate this criterion.</i></p>	<p>2c</p> <p>H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> I <input type="checkbox"/></p>
<p>TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for <i>Scientific Acceptability of Measure Properties?</i></p>	
<p>Steering Committee: Overall, was the criterion, <i>Scientific Acceptability of Measure Properties</i>, met? Rationale:</p>	<p>Y <input type="checkbox"/> N <input type="checkbox"/></p>

USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making.	Eval Rating
<p>Meaningful, Understandable, and Useful Information</p> <p>U1. Current Use:</p> <p>Internal quality improvement Payment Public reporting (disclosure to performance results to the public at large) Quality improvement with external benchmarking</p> <p>U1.1. Use in Public Reporting Initiative Use in Public Reporting. <i>Disclosure of performance results to the public at large (If used in a public reporting program, provide name of program(s), locations, Web page URL(s). If not publicly reported in a national or community program, state the plans to achieve public reporting, potential reporting programs or commitments, and timeline, e.g., within 3 years of endorsement)</i></p> <p>HealthPartners is publicly reporting results.</p> <p>U1.2. Use in QI <i>(If used in improvement programs, provide name of program(s), locations, Web page URL(s)).</i></p> <p>Total cost of care support provided to provider with share savings or total cost of care contracts. HealthPartners provides consultative support to providers, which include the ability to drill down to the service category (inpatient, outpatient, professional and pharmacy) as well as at a condition level. These data are augmented with risk adjusted utilization data.</p> <p>HealthPartners is also planning to rollout publicly reported performance on the Triple Aim as well as provider incentive programs to recognize cost and resource use improvements by providers.</p> <p>U1.3. Use for other Accountability Functions (payment, certification, accreditation) <i>(If used in a public accountability program, provide name of program(s), locations, Web page URL(s)).</i></p> <p>This measure is currently used in shared savings/total cost of care agreements, provider group tiering, network design, benefit design and member steerage</p>	<p>3a</p> <p>H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> I <input type="checkbox"/></p>
<p>U2. Testing of Interpretability <i>(Provide a rationale for why the measure performance results are meaningful, understandable, and useful to the intended audience(s) for both public reporting and quality improvement).</i></p> <p>U2.1. If understanding or usefulness was demonstrated <i>(e.g., through systematic feedback from users, focus group, cognitive testing, analysis of quality improvement initiatives) describe the data, methods, and results.</i></p> <p>Pilot tested with key provider stakeholders. Each year the measure is open for a 45 day comment period prior to public release. Measures are highlighted and discussed directly with providers through numerous Medical Director site visits and total cost of care/share savings agreement discussions. In addition, measure is familiar to the providers and has been in the market for several years, over which time it has remained stable from a method point of view.</p>	<p>3b</p> <p>H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> NA <input type="checkbox"/></p>

<p>U2.2. Resource use data and result can be decomposed for transparency and understanding.</p> <p><i>Refer to items S11 -S12.3.</i></p>	<p>3c</p> <p>H <input type="checkbox"/></p> <p>M <input type="checkbox"/></p> <p>L <input type="checkbox"/></p> <p>I <input type="checkbox"/></p>
<p>U3. If there are similar or related measures (either same measure focus or target population) measures (both the same measure focus and same target population), list the NQF # and title of all related and/or similar measures.</p> <p>U3.1. If this measure has EITHER the same measure focus OR the same target population as NQF-endorsed measure(s): Are the measure specifications completely harmonized?</p> <p>U3.2. If the measure specifications are not completely harmonized identify the differences, rationale, and impact on interpretability and data collection burden. <i>Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)</i></p>	<p>3d</p> <p>H <input type="checkbox"/></p> <p>M <input type="checkbox"/></p> <p>L <input type="checkbox"/></p> <p>I <input type="checkbox"/></p> <p>NA <input type="checkbox"/></p>
<p>TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for <i>Usability</i>?</p>	
<p>Steering Committee: Overall, to what extent was the criterion, <i>Usability</i>, met? Rationale:</p>	<p>H <input type="checkbox"/></p> <p>M <input type="checkbox"/></p> <p>L <input type="checkbox"/></p>
<p>FEASIBILITY</p>	
<p>Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement.</p>	<p>Eval Rating</p>
<p>F1. Data Elements Generated as Byproduct of Care Processes <i>How are the data elements needed to compute measure scores generated? Data used in the measure are:</i></p> <p>Other Health Plan Claims data system</p>	<p>4a</p> <p>H <input type="checkbox"/></p> <p>M <input type="checkbox"/></p> <p>L <input type="checkbox"/></p> <p>I <input type="checkbox"/></p>
<p>F2. Electronic Sources <i>Are the data elements needed for the measure as specified available electronically? (Elements that are needed to compute measure scores are in defined, computer-readable fields)</i></p> <p>ALL data elements are in a combination of electronic sources</p> <p>F2.1. If ALL data elements are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources.</p>	<p>4b</p> <p>H <input type="checkbox"/></p> <p>M <input type="checkbox"/></p> <p>L <input type="checkbox"/></p> <p>I <input type="checkbox"/></p>

F3. Susceptibility to Inaccuracies, Errors, or Unintended Consequences <i>Identify susceptibility to inaccuracies, errors, or unintended consequences of the measurement identified during testing and/or operational use and strategies to minimize or prevent. If audited, provide results.</i> HealthPartners mitigates risk through the following steps: •Claims data integrity procedures prior to loading data warehouse through HealthPartners Data Integrity Dept •Internal Audit Dept review of processes & procedures for generating measure •Provider contracts allow ability to request external audit •HealthPartners Provider Measurement Policy allows for a 45-day comment period before results are used in any business applications (incentive, public display, etc). Any identified errors ore issues are resolved & corrected	4c H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> I <input type="checkbox"/>
F4. Data Collection Strategy <i>Describe what you have learned/modified as a result of testing regarding barriers to operational use of the measure (e.g., availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, cost of proprietary measures).</i> Not applicable	4d H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> I <input type="checkbox"/>
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for <i>Feasibility</i>?	
Steering Committee: Overall, to what extent was the criterion, <i>Feasibility</i> , met? Rationale:	H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/>
RECOMMENDATION	
Steering Committee: Do you recommend for endorsement? Comments:	Y <input type="checkbox"/> N <input type="checkbox"/> A <input type="checkbox"/>
CONTACT INFORMATION	
Co.1 Measure Steward (Intellectual Property Owner) Co.1 Organization HealthPartners, 8170 33rd Avenue South, PO Box 1309, Bloomington, Minnesota, 55425 Co.2 Point of Contact Sue, Knudson, Susan.M.Knudson@healthpartners.com, 952-883-6185-	
Measure Developer If different from Measure Steward Co.3 Organization HealthPartners, 8170 33rd Avenue South, PO Box 1309, Bloomington, Minnesota, 55425 Co.4 Point of Contact Sue, Knudson, Susan.M.Knudson@healthpartners.com, 952-883-6185-	
Co.5 Submitter If different from Measure Steward POC	

Chad, Heim, chad.c.heim@healthpartners.com, 952-883-5103-, HealthPartners

Co.6 Additional organizations that sponsored/participated in measure development

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development

Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released:

2003

Ad.3 Month and Year of most recent revision:

04, 2010

Ad.4 What is your frequency for review/update of this measure?

Annual

Ad.5 When is the next scheduled review/update for this measure?

04, 2011

Ad.6 Copyright statement:

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

Ad.7 Disclaimers:

Ad. 7 Date of Submission (MM/DD/YY):

03/01/2011



HealthPartners Plan Level Total Cost of Care

Member Attributed ACG Adjusted Total Reimbursement PMPM

Total Spend including Clinics, Hospitals, Rx and Referral Providers

Commercial, Continuously Enrolled, Excluding Babies and 65+

Total Reimbursement Capped at \$100,000

January thru December: 2007, 2008 & 2009

Provider Groups with less than 600 members excluded

11 County Metro Primary Care Network

Provider Group	Average ACG Score			TCI			Resource Use Index		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
Provider O	0.98	0.96	0.96	0.83	0.86	0.84	0.91	0.95	0.91
Provider G	1.03	1.16	1.09	0.92	0.95	0.89	0.96	0.98	0.93
Provider M	1.07	1.04	1.09	0.94	0.95	0.92	1.03	1.05	1.01
Provider D	1.02	1.03	1.03	0.99	0.88	0.93	1.00	0.92	0.95
Provider N	1.04	1.05	1.04	0.92	0.98	0.94	0.99	1.07	1.03
Provider F	1.06	1.06	1.05	0.95	0.96	0.94	1.00	1.02	1.01
Provider S	0.94	0.92	0.92	0.91	0.93	0.95	0.97	0.99	1.01
Provider I	1.01	1.02	1.02	0.99	0.98	0.97	0.99	0.98	0.97
Provider Q	0.90	0.92	0.97	0.94	0.99	0.98	0.97	1.02	1.00
Provider K	0.77	0.79	0.79	1.03	1.01	0.98	1.06	1.03	1.00
Provider L	0.95	0.94	0.95	0.90	0.94	0.98	0.92	0.97	1.02
Provider B	0.93	0.94	1.00	0.95	0.90	0.99	0.98	0.94	1.04
Provider E	1.03	1.00	0.99	1.00	1.00	1.01	0.98	0.98	1.00
Provider R	1.07	1.05	1.03	0.89	0.96	1.01	0.97	1.03	1.07
Provider H	1.01	0.96	1.00	1.02	1.05	1.04	1.04	1.07	1.06
Provider A	1.01	1.03	1.02	1.03	1.02	1.04	1.01	1.01	1.02
Provider C	0.75	0.76	0.73	1.08	1.07	1.04	1.08	1.07	1.06
Provider P	0.96	0.95	0.94	1.07	1.05	1.04	1.03	1.01	0.99
Provider J	1.64	1.61	1.59	1.03	1.09	1.04	1.00	1.05	1.01
Metro Total	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00



HealthPartners Plan Level Total Cost of Care

Member Attributed ACG Adjusted Total Reimbursement PMPM
 Total Spend including Clinics, Hospitals, Rx and Referral Providers
 Commercial, Continuously Enrolled, Excluding Babies and 65+
 Total Reimbursement Capped at \$100,000
 January thru December: 2008 & 2009
 Provider Groups with less than 600 members excluded

11 County Metro Primary Care Network

Provider Group	Utilization Index Metrics (actual to expected units counts)													
	Admit Cnt		ER Cnt		E&M Cnt		Rad Svcs Cnt		LabPath Cnt		OP Surg Encs		HighTech Rad	
	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009
Provider O	1.03	0.93	0.90	0.86	0.99	0.95	0.89	0.87	0.87	0.91	0.67	0.80	0.92	0.88
Provider G	0.86	0.51	1.12	0.82	1.13	1.05	0.84	0.90	1.21	1.08	0.93	0.96	1.09	1.02
Provider M	1.06	1.05	0.99	0.82	1.00	0.98	1.05	1.03	0.90	0.92	1.12	1.05	1.00	0.95
Provider D	0.75	0.77	0.75	0.75	1.03	1.03	0.88	0.95	0.83	0.89	1.04	1.08	0.93	0.88
Provider N	1.02	0.97	0.92	0.90	1.01	0.99	0.94	0.93	1.03	1.00	1.13	1.03	1.10	1.03
Provider F	0.94	0.92	0.90	0.87	1.00	1.02	0.90	0.85	0.85	0.87	1.09	1.00	1.06	0.97
Provider S	0.98	1.03	0.99	1.04	0.95	0.96	1.01	1.04	0.77	0.78	1.12	1.13	1.13	1.14
Provider I	0.99	0.99	0.91	0.91	0.98	0.98	1.01	1.00	1.08	1.07	0.93	0.94	0.95	0.93
Provider Q	1.04	1.00	1.24	1.27	1.01	1.01	0.90	0.85	0.87	0.92	1.00	1.12	1.09	0.98
Provider K	1.24	1.19	1.34	1.23	1.01	1.00	0.90	0.85	0.83	0.86	1.10	1.17	0.95	1.07
Provider L	0.84	1.05	0.79	0.89	1.03	1.04	1.00	1.11	0.97	1.09	0.91	0.86	1.29	1.41
Provider B	0.90	1.01	0.67	0.58	1.05	1.07	1.04	1.14	1.04	0.98	0.95	1.09	1.04	1.01
Provider E	0.99	1.01	1.16	1.17	0.99	0.99	1.04	1.08	0.93	0.95	1.02	1.01	0.91	0.96
Provider R	0.98	1.10	0.78	0.75	0.96	0.98	0.89	0.94	1.00	1.07	1.00	1.02	1.03	0.94
Provider H	0.99	0.98	1.17	1.10	1.02	1.02	1.16	1.14	0.96	0.95	1.10	1.09	1.18	1.15
Provider A	1.03	1.03	1.07	1.10	1.01	1.01	1.01	1.01	0.92	0.93	0.95	0.97	1.01	1.03
Provider C	1.23	1.16	1.54	1.42	1.02	1.01	1.18	1.22	0.93	0.94	1.04	0.99	0.95	1.09
Provider P	0.98	0.97	1.00	0.95	1.04	1.03	0.96	0.94	1.10	1.10	1.15	1.14	1.06	1.06
Provider J	0.91	0.78	1.23	1.45	0.95	0.98	1.05	0.97	0.89	0.95	0.93	0.98	0.85	0.80
Metro Total	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

HealthPartners Plan Level TCOC - Service Category Index

Member Attributed ACG Adjusted Total Reimbursement PMPM

Total Spend including Clinics, Hospitals, Rx and Referral Providers

Commercial, Continuously Enrolled, Excluding Babies and 65+

Total Reimbursement Capped at \$100,000

January thru December: 2008 & 2009

Provider Groups with less than 600 members excluded

11 County Metro Primary Care Network

Provider Group	Service Category TCI								Resource Use Index					
	IP TCI		OP TCI		Prof TCI		RX TCI		IP RUI		OP RUI		Prof RUI	
	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009
Provider O	1.04	0.87	0.75	0.81	0.83	0.81	0.82	0.89	1.13	0.91	0.84	0.84	0.96	0.92
Provider G	0.84	0.48	1.06	0.83	0.88	0.86	1.16	1.37	0.74	0.53	1.09	0.87	0.95	0.95
Provider M	1.07	1.01	0.90	0.89	0.92	0.90	1.00	0.96	1.14	1.13	1.01	0.96	1.05	1.01
Provider D	0.77	0.86	0.79	1.03	0.92	0.89	1.02	0.96	0.77	0.83	0.83	1.00	1.00	0.97
Provider N	0.94	0.92	1.01	0.94	0.94	0.89	1.09	1.12	1.05	1.00	1.09	1.02	1.06	1.01
Provider F	0.99	0.99	0.89	0.83	0.92	0.92	1.09	1.09	0.96	0.94	0.95	0.91	1.05	1.05
Provider S	0.94	0.93	1.07	1.09	0.84	0.88	0.94	0.95	1.00	1.05	1.11	1.12	0.95	0.96
Provider I	0.98	0.98	0.91	0.92	1.04	1.02	0.93	0.92	1.01	1.01	0.99	0.98	0.99	0.97
Provider Q	1.19	1.03	1.16	1.22	0.86	0.84	0.99	0.99	1.19	1.10	1.06	1.15	0.97	0.91
Provider K	1.17	1.07	1.22	1.17	0.91	0.90	0.90	0.87	1.17	1.16	1.14	1.07	0.97	0.96
Provider L	1.00	1.20	0.90	0.81	0.92	1.00	0.97	0.92	0.96	1.13	0.87	0.80	1.04	1.10
Provider B	0.73	0.98	0.92	0.89	0.92	1.01	0.98	1.04	0.80	0.99	0.86	0.91	1.01	1.11
Provider E	1.01	1.03	1.23	1.17	0.86	0.90	1.03	1.06	0.95	1.01	1.06	1.06	0.93	0.95
Provider R	1.09	1.26	0.84	0.84	0.96	1.00	1.03	1.04	1.15	1.24	0.83	0.85	1.09	1.13
Provider H	1.05	1.05	1.16	1.13	0.96	0.96	1.10	1.07	0.94	0.98	1.17	1.15	1.06	1.06
Provider A	1.03	1.05	1.11	1.10	0.97	1.01	1.06	1.04	1.02	1.00	0.98	1.02	1.00	1.02
Provider C	1.37	1.06	1.46	1.49	0.86	0.87	0.92	0.94	1.23	1.05	1.22	1.30	1.01	1.01
Provider P	0.98	0.95	0.89	0.90	1.17	1.15	1.01	1.00	0.96	0.94	0.96	0.93	1.05	1.04
Provider J	1.02	0.87	1.47	1.41	0.81	0.81	1.37	1.37	1.02	0.87	1.22	1.25	0.85	0.83
Metro Total	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

The following is provided to demonstrate the usability of the Total Cost of Care and Resource Use Population-based PMPM Index measures:

HealthPartners has developed a Total Cost of Care Suite of Reports that is shared with providers participating in Total Cost of Care / Shared Savings contractual arrangements. The reports depict the various ways the Total Cost of Care and Resource Use measures are used in conjunction with utilization measures. The reports enable providers to identify improvement opportunities by service categories, conditions, high cost utilization, patient management utilization, etc. In addition, these measures are complimented by episode-based, quality and patient experience measures to fulfill the three arms of the Triple Aim.

Confidential

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

The Total Cost of Care Report suite provides total care performance information for a provider's attributed members/patients and compares it to that of the metropolitan area average on a variety of metrics on a risk adjusted basis.

The standard suite consists of six reports:

- The **Total Cost of Care Report** provides comparison of a provider's overall performance.
- The **Total Cost of Care by Chronic Condition Report** provides comparison of a provider's performance for each of eleven specific chronic conditions and for those with none of the specified conditions.
- The **Hospital Services Provider Report** details which hospitals a provider's members used.
- The **Professional Services Provider Report** provides details on which provider groups provided professional services to a provider's members.
- The **Percent Generic Report** provides details on generic drug use for a provider.
- The **Top 25 Drugs by Cost Report** gives details on the 25 highest spend drugs as well as total, brand, and generic costs.

There are several concepts that are constant throughout the reports...

Indices - Most of the metrics contained in the reports are indices that measure the ratio of actual to expected values for the given measurement. For example Total Cost Index (TCI) measures actual to expected costs. If a provider's PMPM was \$400 and their expected PMPM was \$420 their TCI would be .95 – indicating that they perform 5% better than average.

Expected Values- are calculated based on the total of all metro area attributed members.

Risk Adjustment – Expected values are created for the various measures by Ambulatory Clinical Groups (ACG) risk cell to adjust for variances in illness burden.

The remainder of this document will explain how to read each of the various reports.

Confidential

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

The Total Cost of Care Report



Provider A Total Cost of Care

Rolling 12 Months: October thru September - 2008, 2009 & 2010

Member Attributed ACG Adjusted Total Reimbursement PMPM

Total Spend including Clinics, Hospitals, Rx and Referral Providers

Commercial, Continuously Enrolled, Excluding Babies and 65+

Total Reimbursement Capped at \$100,000

The reports are run quarterly use rolling 12 month study periods.

The Average ACG score section shows the relative health of the population. In this case in 2010 Provider A's population has a 7% higher illness burden than average and the metro attributed population has a 5% higher illness burden than the entire network average.

Cell highlighting is used to indicate where there are areas of opportunity. The colors indicate the specific area where the opportunity exists. This pattern recurs in many of the reports.

	= Potential Opportunity (TCI)
	= Potential Opportunity (Pricing)
	= Potential Opportunity (RU)
	= Potential Opportunity (Patient Mgmt Utilization)
	= Potential Opportunity (High Cost Utilization)

Highlighted cells indicate indices >= 1.01

Provider Group	Members			Average ACG Score			TCI			Price Indexed to 2010			Resource Use Indexed to 2010		
	2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010
Provider A	25,000	25,500	26,000	1.06	1.08	1.07	0.99	0.96	0.96	0.93	0.96	1.00	0.99	0.98	0.96
Metro Total	270,000	300,000	306,000	1.04	1.05	1.05	1.00	1.00	1.00	0.93	0.96	1.00	1.00	1.02	1.00

The Total Cost Index (total cost of care) measures relative resource use, intensity, and price compared to the metro average. A .96 indicates 4% lower total cost of care than average. Each year is indexed against that year's metro average. Note that these numbers are ACG risk adjusted.

The Price Index measures the relative price of services managed by the report's selected provider compared to the metro average.

The Resource Use Index measures the relative utilization/intensity of services managed by the report's selected provider compared to the metro average.

The Patient Management Utilization section measures the volume of specific services like E&M visits, and some percentage of total measures like the Percent Generic Rx measure. Note that unlike the resource use measures these metrics only consider volume and do not account for the intensity of the services.

Note that these two measures are both indexed to the 2010 metro averages. That is why the Metro Total in 2008 and 2009 is not 1.00. These are the only two measures where each year is indexed to the most recent year. This allows a provider to note changes over time.

Patient Management Utilization Measures															
E&M Count Index (Total)		E&M Count Index (Primary Care)		E&M Count Index (Specialty Care)		Percent Primary Care E&M		Lab/Path Count Index		Standard Radiology		RX Count Index		Percent Generic Rx	
2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
0.97	0.97	0.94	0.92	1.00	1.01	49%	48%	1.07	1.07	1.00	1.00	0.97	0.97	76%	78%
1.00	1.00	1.00	1.00	1.00	1.00	51%	50%	1.00	1.00	1.00	1.00	1.00	1.00	74%	77%

The Green highlighting indicates there is a potential patient management opportunity. This provider had 7% more lab/path services than the metro average.

Standard Radiology services exclude CTs, MRIs, PET scans, and nuclear medicine. Those services are in the high-tech radiology services category in the next section.

Confidential

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

The High Cost Utilization section measures the volume of specific high cost services like inpatient hospital admissions, ER visits, outpatient hospital surgeries, and high tech radiology services (MRI's, CT's, PET scans and nuclear medicine). Note that unlike the resource use measures these metrics only consider volume and do not account for the intensity of the services.

High tech radiology services are split into those provided in the ER and those provided outside the ER.

High Cost Utilization Measures													
Admit Count Index		IP Surgery Count Index		ER Count Index		OP Surgery Count Index		HighTech Rad Svcs Count Index (ER)		HighTech Rad Svcs Count Index (non-ER)		Percent ER Hightech	
2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
0.98	1.00	0.97	0.99	0.90	0.92	0.91	0.93	0.92	0.91	1.07	1.07	17%	18%
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	17%	18%

The rose colored highlighting indicates there is high cost utilization opportunity. This provider had 7% more high tech radiology services, provided outside the ER, than the metro average.

The last section of the report has total cost index, price index, and resource use index measures provided by place of service. See the TCI, price, and resource use sections on page 2 of this document for more information on these metrics.

Note that unlike the price and resource use sections on the first panel (page 2 of this document) the previous year numbers are **not** indexed to the most recent year, rather they are indexed and relative within each year.

Service Category TCI								Price Index						Resource Use Index					
IP TCI		OP TCI		Prof TCI		RX TCI		IP Price		OP Price		Prof Price		IP RUI		OP RUI		Prof RUI	
2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
0.97	0.96	0.92	0.90	1.03	1.01	0.93	0.94	0.97	0.96	0.93	0.94	1.05	1.04	1.00	1.00	0.99	0.95	0.98	0.97
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

The orange highlighting indicates the group had total cost opportunity for professional services.

The light blue highlighting indicates the group had price opportunity for professional services. They were 5% higher than metro in 2009 and 4% higher in 2010.

Note that this provider had better than average resource use. This mitigates some of the impact of the 4% higher than average price, resulting in the professional TCI being only 1% higher than average for 2010.

Even with better than average resource use at the macro level, micro level opportunities may still exist.

Confidential

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

The Total Cost of Care by Chronic Condition

Provider X

Total Cost of Care by Chronic Condition - Third Quarter Report

Rolling 12 Months: October thru September - 2010

Member Attributed ACG Adjusted Total Reimbursement PMPM

Total Spend including Clinics, Hospitals, Rx and Referral Providers

Commercial, Continuously Enrolled, Excluding Babies and 65+

Total Reimbursement Capped at \$100,000

Members Can Have More Than One Condition (Except for those in All Other)

Conditions Determined using EDCs (Expanded Diagnosis Clusters)

Indexed to Metro Average

Cell highlighting is used to indicate where there are areas of opportunity. The colors indicate the specific area where the opportunity exists. This pattern recurs in many of the reports.

	= Potential Opportunity (TCI)
	= Potential Opportunity (Pricing)
	= Potential Opportunity (RUI)
	= Potential Opportunity (Patient Mgmt Utilization)
	= Potential Opportunity (High Cost Utilization)

Highlighted cells indicate indices >= 1.01

Members are identified as having one of the specific conditions listed by EDC (expanded diagnosis clusters) from the ACG grouper.

The conditions are **not** exclusive to each other, i.e. the same member could be included in the condition categories for both Arthritis and Diabetes.

Includes all claims experience for a member identified as having a specific condition.

There is an all other conditions category that contains all members that do not have any of the identified conditions. Each member can only be counted once in this category.

Condition	Overall Indices			
	Members	TCI	Price Index	RUI
ARTHRITIS	400	1.05	1.02	1.03
ASTHMA	900	1.06	1.02	1.04
BACK PAIN	2,100	1.04	1.00	1.04
CHF	30	1.03	1.00	1.03
CHRONIC RENAL FAILURE	60	0.91	1.03	0.89
COPD	100	0.91	1.08	0.85
DEPRESSION	1,400	1.04	1.02	1.02
DIABETES	760	1.05	1.00	1.05
HYPERLIPIDEMIA	2,100	1.05	1.02	1.03
HYPERTENSION	2,000	1.06	1.02	1.04
ISCHEMIC HEART DISEASE	200	1.00	0.99	1.00
ALL OTHER CONDITIONS	8,600	1.07	1.02	1.05
Provider X	14,700	1.04	1.02	1.03

The provider total line is included for reference. It is the provider's score for their overall population with each member included only once.

Risk Adjustment for Condition Metrics

Risk adjustment is still done by the overall ACG risk cell regardless of condition.

Each metric is then indexed to the metro average within each condition.

For example if the provider's risk adjusted PMPM for members with Asthma was \$210 and the metro average risk adjusted PMPM for members with Asthma was \$200 the final Asthma TCI for the provider would be 1.05 (210/200).

Confidential

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

The patient management utilization and high cost utilization sections show how the provider compared to the metro average on utilization in specific categories of care. Note that unlike the resource use measures these metrics only consider volume and do not account for the intensity of the services

Patient Management Utilization Measures										
Condition	E&M Count Index (Total)	E&M Count Index (Primary Care)	E&M Count Index (Specialty Clinics)	Percent Primary Care E&M		Lab/Path Count Index	Standard Radiology Index	Rx Count Index	Percent Generic Rx	
				Prov	Metro				Prov	Metro
ARTHRITIS	1.02	1.00	1.03	38%	39%	0.96	1.00	1.13	78%	77%
ASTHMA	1.09	1.13	1.04	51%	48%	0.95	1.00	1.09	65%	65%
BACK PAIN	1.04	1.04	1.03	43%	43%	0.95	1.05	1.07	78%	77%
CHF	1.20	1.11	1.23	28%	31%	0.94	1.38	1.10	76%	77%
CHRONIC RENAL FAILURE	1.06	1.09	1.05	32%	31%	0.86	0.92	1.07	70%	75%
COPD	1.08	1.01	1.12	35%	37%	0.86	0.78	1.02	68%	69%
DEPRESSION	1.00	1.01	0.99	45%	44%	0.95	1.02	1.07	78%	78%
DIABETES	1.02	1.06	0.99	48%	46%	0.96	0.99	1.12	73%	73%
HYPERLIPIDEMIA	1.00	1.02	0.98	49%	48%	0.92	1.05	1.12	75%	76%
HYPERTENSION	1.03	1.04	1.03	47%	47%	0.92	1.01	1.07	79%	79%
ISCHEMIC HEART DISEASE	1.00	0.97	1.02	36%	36%	0.91	0.93	1.12	70%	70%
ALL OTHER CONDITIONS	1.04	1.05	1.03	57%	56%	0.92	1.01	1.09	80%	80%
Provider X	1.03	1.04	1.02	51%	50%	0.94	1.03	1.09	77%	77%

High Cost Utilization Measures								
Condition	Admit Count Index	IP Surgery Count Index	ER Count Index	OP Surgery Count Index	Hightech Rad Svcs Count Index (ER)	Hightech Rad Svcs Count Index (non-ER)	Percent ER Hightech Rad	
							Prov	Metro
ARTHRITIS	0.97	0.85	1.02	0.94	1.06	1.11	11%	12%
ASTHMA	1.02	0.97	1.15	0.88	1.17	1.24	20%	21%
BACK PAIN	1.06	0.99	1.08	0.89	1.11	1.14	17%	17%
CHF	1.00	1.05	0.68	1.69	0.22	1.52	2%	14%
CHRONIC RENAL FAILURE	0.96	0.91	0.78	1.18	0.72	1.43	7%	13%
COPD	0.92	0.89	0.92	1.12	0.86	1.10	11%	13%
DEPRESSION	1.09	0.96	1.11	0.95	1.26	1.09	24%	22%
DIABETES	1.13	1.11	0.91	1.05	1.10	1.08	17%	17%
HYPERLIPIDEMIA	1.02	0.94	0.90	0.94	0.99	1.05	16%	17%
HYPERTENSION	1.07	1.05	0.95	0.97	1.03	1.14	17%	18%
ISCHEMIC HEART DISEASE	0.96	0.91	0.80	0.97	0.50	1.00	10%	18%
ALL OTHER CONDITIONS	1.09	1.32	0.98	1.00	1.03	1.06	20%	20%
Provider X	1.04	1.04	1.03	0.97	1.06	1.08	18%	18%

The provider total line is included for reference. It is the provider's score for their overall population with each member included only once.

For the Percent Metrics, rather than provide an index, both the provider's rate and the metro average rates are displayed. These rates are not risk adjusted.

Confidential

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

The next sections of the report contain information on the effects of a one point improvement in performance of Patient Management and High Cost Utilization Measures against the metro average.

Note that the savings are not additive (members can appear in multiple conditions – except the all other category). The one point move sizing is provided for ease of use.

Patient Management Utilization Measures								
Condition	E&M Count Index (Total)	E&M Count Index (Primary Care)	E&M Count Index (Specialty Clinics)	E&M Percent Primary Care	Lab/Path Count Index	Standard Rad Index	Rx Count Index	Percent Generic Rx
ARTHRITIS	\$ 7,109	\$ 2,601	\$ 4,511	\$ 632	\$ 1,848	\$ 2,610	\$ 8,163	\$ 26,195
ASTHMA	\$ 11,244	\$ 5,066	\$ 6,305	\$ 2,304	\$ 2,660	\$ 2,860	\$ 13,204	\$ 26,839
BACK PAIN	\$ 25,960	\$ 10,498	\$ 15,471	\$ 2,579	\$ 7,562	\$ 9,276	\$ 27,007	\$ 81,573
CHF	\$ 1,201	\$ 400	\$ 945	\$ 240	\$ 339	\$ 597	\$ 1,295	\$ 4,064
CHRONIC RENAL FAILURE	\$ 1,678	\$ 571	\$ 1,254	\$ 167	\$ 780	\$ 546	\$ 2,388	\$ 7,193
COPD	\$ 2,627	\$ 897	\$ 1,730	\$ 400	\$ 681	\$ 1,107	\$ 3,574	\$ 8,450
DEPRESSION	\$ 18,415	\$ 7,454	\$ 11,115	\$ 3,350	\$ 5,264	\$ 5,208	\$ 25,452	\$ 75,694
DIABETES	\$ 9,841	\$ 4,327	\$ 5,677	\$ 1,086	\$ 3,641	\$ 3,245	\$ 19,533	\$ 58,492
HYPERLIPIDEMIA	\$ 22,585	\$ 10,081	\$ 12,514	\$ 2,856	\$ 7,827	\$ 7,813	\$ 33,502	\$ 103,362
HYPERTENSION	\$ 24,474	\$ 10,610	\$ 13,863	\$ 3,618	\$ 8,108	\$ 8,264	\$ 34,547	\$ 118,673
ISCHEMIC HEART DISEASE	\$ 4,252	\$ 1,396	\$ 2,848	\$ 834	\$ 1,198	\$ 1,813	\$ 6,097	\$ 16,312
ALL OTHER CONDITIONS	\$ 45,553	\$ 24,338	\$ 21,189	\$ 5,631	\$ 12,648	\$ 11,139	\$ 28,802	\$ 91,955
Provider X	\$ 109,478	\$ 52,037	\$ 57,354	\$ 14,841	\$ 32,496	\$ 31,494	\$ 108,744	\$ 330,921

The upper panel on each page shows the amount of total spend that could be saved by a one percent reduction in the rate for each metric.

The metro average cost per service for the condition was used to calculate the savings.

Example

To improve by 1% in their Percent Generic Rx for Asthma this provider would need to have 220 scripts written for their Asthma population change from brand to generic drugs.

If they were able to achieve that goal they would save \$26,839 in total spend as the metro average cost per script for generics was \$122 less than brand.

The lower panel on each page shows the actual number of services associated with a 1% improvement in the rate (rounded to the nearest whole number).

Patient Management Utilization Measures								
Condition	E&M Counts (Total)	E&M Counts (Primary Care)	E&M Counts (Specialty Clinics)	E&M Specialty to Primary Care	Lab/Path Counts	Standard Radiology	Rx Counts	Brand to Generic
ARTHRITIS	44	17	27	45	63	16	151	172
ASTHMA	68	34	35	74	80	15	201	220
BACK PAIN	166	71	95	172	237	44	480	513
CHF	8	3	6	10	13	2	23	25
CHRONIC RENAL FAILURE	11	4	8	12	27	2	36	38
COPD	16	6	10	17	22	4	51	52
DEPRESSION	111	50	62	111	163	24	406	436
DIABETES	60	28	33	62	141	13	336	377
HYPERLIPIDEMIA	136	65	71	135	277	34	663	741
HYPERTENSION	147	69	78	151	285	35	735	787
ISCHEMIC HEART DISEASE	24	9	15	24	42	5	107	120
ALL OTHER CONDITIONS	305	172	133	316	385	65	504	548
Provider X	700	356	344	722	1,034	161	1,970	2,148

Confidential

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

	High Cost Utilization Measures					
Condition	Admit Count Index	IP Surgery Count Index	ER Count Index	OP Surgery Count Index	Hightech Rad Svcs Count Index (ER)	Hightech Rad Svcs Count Index (non-ER)
ARTHRITIS	\$ 28,998	\$ 17,026	\$ 2,388	\$ 9,411	\$ 530	\$ 2,881
ASTHMA	\$ 21,908	\$ 16,321	\$ 2,721	\$ 5,726	\$ 525	\$ 2,108
BACK PAIN	\$ 45,857	\$ 33,818	\$ 6,180	\$ 15,058	\$ 1,555	\$ 7,976
CHF	\$ 15,829	\$ 26,563	\$ 1,119	\$ 5,353	\$ 398	\$ 671
CHRONIC RENAL FAILURE	\$ 13,167	\$ 21,734	\$ 954	\$ 2,169	\$ 381	\$ 669
COPD	\$ 12,194	\$ 19,924	\$ 1,084	\$ 2,602	\$ 485	\$ 1,326
DEPRESSION	\$ 31,797	\$ 16,679	\$ 5,190	\$ 10,144	\$ 1,049	\$ 4,338
DIABETES	\$ 25,003	\$ 18,584	\$ 2,382	\$ 4,832	\$ 519	\$ 2,092
HYPERLIPIDEMIA	\$ 38,349	\$ 35,106	\$ 5,094	\$ 14,479	\$ 1,072	\$ 5,778
HYPERTENSION	\$ 52,195	\$ 36,643	\$ 6,091	\$ 14,794	\$ 1,049	\$ 5,761
ISCHEMIC HEART DISEASE	\$ 14,415	\$ 21,783	\$ 1,570	\$ 3,057	\$ 540	\$ 1,487
ALL OTHER CONDITIONS	\$ 33,488	\$ 13,691	\$ 8,377	\$ 20,997	\$ 1,592	\$ 6,498
Provider X	\$ 118,675	\$ 65,798	\$ 22,365	\$ 53,687	\$ 3,701	\$ 20,917

The upper panel on each page shows the amount of total spend that could be saved by a one percent reduction in the rate for each metric.

The metro average cost per service for the condition was used to calculate the savings.

Example

To improve by 1 point in their High Tech Radiology services outside of the ER, this provider would need to reduce the number of scans by 11 for their patients with back pain.

If they were able to achieve that goal they would save \$7,976 in total spend as the metro average cost for a high tech scan is \$725.

The lower panel on each page shows the actual number of services associated with a 1% improvement in the rate (rounded to the nearest whole number).

	High Cost Utilization Measures					
Condition	Admit Counts	IP Surgery Counts	ER Counts	OP Surgery Counts	Hightech Rad Svcs Counts (ER)	Hightech Rad Svcs Counts (non-ER)
ARTHRITIS	2	1	2	3	1	4
ASTHMA	2	1	3	2	1	3
BACK PAIN	4	2	6	6	3	11
CHF	1	1	1	1	1	1
CHRONIC RENAL FAILURE	1	1	1	1	1	1
COPD	1	1	1	1	1	2
DEPRESSION	3	1	5	4	2	6
DIABETES	2	1	2	2	1	3
HYPERLIPIDEMIA	3	2	4	6	2	8
HYPERTENSION	4	2	5	6	2	8
ISCHEMIC HEART DISEASE	1	1	1	1	1	2
ALL OTHER CONDITIONS	4	1	11	8	3	9
Provider X	11	4	24	21	7	29

Confidential

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

The final section of the report contains information on the effects of a one point improvement in performance against the metro average by place of service. Note that the savings are not additive (members can appear in multiple conditions – except the all other category).

Cost, Price, and Resource Use Index by Place of Service

Condition	TCI by Place of Service				Price by Place of Service			RUI by Place of Service		
	IP	OP	Prof	RX	IP	OP	Prof	IP	OP	Prof
ARTHRITIS	1.08	1.02	1.09	0.98	1.04	1.07	1.01	1.03	0.95	1.08
ASTHMA	1.17	0.98	1.05	1.05	1.04	0.99	1.05	1.13	0.99	1.00
BACK PAIN	1.13	0.94	1.06	1.04	1.01	1.02	1.00	1.11	0.91	1.06
CHF	1.00	0.90	1.21	1.09	1.10	1.15	0.92	0.90	0.78	1.32
CHRONIC RENAL FAILURE	0.84	0.78	0.98	1.09	1.18	1.10	0.96	0.72	0.71	1.02
COPD	0.99	0.86	0.82	1.07	1.12	0.97	1.13	0.89	0.88	0.72
DEPRESSION	1.11	0.97	1.05	1.02	1.02	1.05	1.02	1.08	0.92	1.02
DIABETES	1.14	0.84	1.05	1.11	1.03	0.96	1.01	1.11	0.88	1.04
HYPERLIPIDEMIA	1.08	0.97	1.02	1.16	1.05	1.01	1.02	1.03	0.96	1.00
HYPERTENSION	1.10	0.94	1.08	1.08	1.06	1.01	1.00	1.04	0.93	1.07
ISCHEMIC HEART DISEASE	0.99	0.90	1.01	1.13	0.99	1.02	1.01	1.00	0.88	1.00
ALL OTHER CONDITIONS	1.16	0.99	1.09	1.02	1.04	1.03	1.03	1.12	0.95	1.06
(All)	1.10	0.96	1.06	1.05	1.05	1.02	1.02	1.05	0.94	1.04

The upper panel shows the provider's TCI, Price index, and Resource use index, by place of service.

Each category is indexed against the metro average. For example this provider used 4% more professional resources for their diabetic population than the average metro area provider.

One Point Index Reduction Impact On Total Costs by Place of Service

Condition	TCI by Place of Service				Price by Place of Service			RUI by Place of Service		
	IP	OP	Prof	RX	IP	OP	Prof	IP	OP	Prof
ARTHRITIS	\$ 17,663	\$ 12,699	\$ 25,381	\$ 8,207	\$ 20,491	\$ 12,771	\$ 28,979	\$ 18,422	\$ 13,633	\$ 25,572
ASTHMA	\$ 13,194	\$ 13,429	\$ 27,259	\$ 13,458	\$ 14,206	\$ 12,387	\$ 25,591	\$ 13,745	\$ 13,291	\$ 28,523
BACK PAIN	\$ 35,490	\$ 37,709	\$ 80,302	\$ 27,093	\$ 41,467	\$ 35,389	\$ 87,085	\$ 35,958	\$ 38,612	\$ 80,560
CHF	\$ 6,240	\$ 2,647	\$ 3,412	\$ 1,250	\$ 5,747	\$ 1,952	\$ 4,251	\$ 6,890	\$ 3,042	\$ 3,140
CHRONIC RENAL FAILURE	\$ 5,014	\$ 3,611	\$ 4,899	\$ 2,315	\$ 3,336	\$ 2,552	\$ 4,946	\$ 5,897	\$ 3,959	\$ 4,683
COPD	\$ 7,066	\$ 4,121	\$ 6,882	\$ 3,497	\$ 5,756	\$ 3,313	\$ 4,586	\$ 7,912	\$ 3,989	\$ 7,809
DEPRESSION	\$ 27,861	\$ 27,931	\$ 54,596	\$ 25,543	\$ 30,622	\$ 25,739	\$ 55,876	\$ 28,427	\$ 29,299	\$ 55,808
DIABETES	\$ 16,460	\$ 13,757	\$ 28,826	\$ 19,214	\$ 17,324	\$ 11,340	\$ 28,531	\$ 16,957	\$ 13,242	\$ 29,153
HYPERLIPIDEMIA	\$ 36,532	\$ 34,814	\$ 67,222	\$ 33,760	\$ 40,353	\$ 34,203	\$ 69,006	\$ 38,300	\$ 35,285	\$ 68,631
HYPERTENSION	\$ 45,902	\$ 38,543	\$ 71,514	\$ 34,726	\$ 49,100	\$ 36,465	\$ 77,745	\$ 48,452	\$ 38,855	\$ 71,816
ISCHEMIC HEART DISEASE	\$ 13,309	\$ 8,222	\$ 11,640	\$ 6,069	\$ 12,005	\$ 6,812	\$ 10,968	\$ 13,190	\$ 8,363	\$ 11,779
ALL OTHER CONDITIONS	\$ 25,824	\$ 47,662	\$ 114,182	\$ 28,842	\$ 30,398	\$ 46,612	\$ 124,458	\$ 26,930	\$ 49,326	\$ 117,091
(All)	\$ 114,735	\$ 141,542	\$ 302,979	\$ 109,194	\$ 120,790	\$ 132,902	\$ 314,692	\$ 120,183	\$ 144,424	\$ 308,220

The lower panel on shows the amount of total spend that could be saved by a one percent reduction in the rate for each metric.

For this panel the provider's specific information is used to calculate the potential savings.

Continuing the example from above if this provider improved their performance for professional resource use in the diabetic population from 4% above average to 3% above average, given their specific price per resource for professional services they would save \$29,153 in total spend.

Confidential

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

Hospital Services Provider Report

Provider A Hospital Services Provider Report

Rolling 12 Months: July thru June - 2008, 2009 & 2010

Member Attributed Total Reimbursement

Commercial, Continuously Enrolled, Excluding Babies and 65+

Includes Hospitals in Top 75% of Spend with All Others Grouped Together

Each hospital's percentage of spend is reported for...

Inpatient Admissions

Outpatient Services

Total Hospital Spend

Spend Distribution	
Hospital	45.8%
Professional	39.1%
Pharmacy	15.1%

Distribution of total spend by type of service is displayed to provide context for the impact of the report.

Hospital	% of Hospital Spend			Cost	Quality
	Inpatient	Outpatient	Total		
Hospital 1	23.0%	18.6%	20.5%	\$	***
Hospital 2	4.8%	15.9%	11.2%	\$	****
Hospital 3	7.8%	7.8%	7.8%	\$	***
Hospital 4	8.2%	6.9%	7.4%	\$	***
Hospital 5	2.7%	8.8%	6.2%	\$	***
Hospital 6	7.8%	4.1%	5.4%	\$	***
Hospital 7	7.2%	4.4%	5.4%	\$	****
Hospital 8	5.9%	3.1%	4.3%	\$	***
Hospital 9	5.9%	0.3%	2.7%	\$	***
Hospital 10	1.5%	2.3%	2.0%	\$	***
Hospital 11	0.0%	2.5%	1.5%	\$	***
Hospital 12	3.2%	0.0%	1.3%	\$	****
Hospital 13	2.6%	0.4%	1.3%	\$	***
Hospital 14	1.7%	0.8%	1.2%	\$	***
Hospital 15	2.3%	0.2%	1.1%	\$	***
Hospital 16	1.3%	0.9%	1.0%	\$	***
Hospital 17	1.3%	0.5%	0.8%	\$	****
Hospital 18	0.6%	0.9%	0.8%	\$	***
Hospital 19	0.6%	0.8%	0.8%	\$	***
Hospital 20	0.7%	0.7%	0.7%	\$	***
Hospital 21	0.9%	0.6%	0.7%	\$	***
Hospital 22	0.3%	0.9%	0.7%	\$	****
Hospital 23	0.5%	0.6%	0.7%	\$	***
Hospital 24	0.0%	0.9%	0.6%	\$	***
Hospital 25	0.7%	0.4%	0.5%	\$	***
Hospital 26	0.0%	0.8%	0.5%	\$	***
Hospital 27	0.9%	0.2%	0.5%	\$	****
Hospital 28	0.0%	0.8%	0.5%	\$	***
Hospital 29	0.0%	0.8%	0.5%	\$	***
Hospital 30	0.8%	0.2%	0.5%	\$	***
Hospital 31	0.3%	0.4%	0.4%	\$	****
All Other Providers	6.4%	13.4%	10.6%	\$	***
Total	100%	100%	100%		

Hospital detail is provided by facility for those in the top 75% of total spend.

All other providers are aggregated together.

The hospital's cost and quality tiering scores are displayed for tiered providers only.

\$ = most cost effective provider
\$\$\$\$ = least cost effective provider

* = lower quality provider
**** = higher quality provider

Hospital Spend by Category

41.9%

58.1%

100%

The overall split between inpatient and outpatient spend is displayed at the bottom of the report.

Confidential

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

Professional Services Provider Report
Provider A
Professional Services Provider Report

Rolling 12 Months: July thru June - 2008, 2009 & 2010

Member Attributed Total Reimbursement

Commercial, Continuously Enrolled, Excluding Babies and 65+

Includes Providers in Top 75% of Spend with All Others Grouped Together

Spend Distribution	
Hospital	45.8%
Professional	39.1%
Pharmacy	15.1%

% of Professional Spend					
Provider	Primary Care	Specialty Care	Total	Cost	Quality
Provider 1	47.3%	15.0%	24.6%	\$	★★★★
Provider 2	43.1%	7.8%	17.8%	\$	★★★
Provider 3	0.1%	7.9%	6.3%	\$	★★
Provider 4	1.1%	5.3%	4.2%	\$ \$	★★★★
Provider 5	0.1%	4.5%	3.6%	\$	★★★
Provider 6	0.3%	3.4%	2.6%	\$	★★★★
Provider 7	0.0%	2.3%	1.7%	\$ \$ \$	★★
Provider 8	0.0%	2.2%	1.6%	\$	★★★
Provider 9	1.0%	1.7%	1.5%	\$ \$	★★
Provider 10	0.1%	1.9%	1.4%	\$	★★★
Provider 11	0.3%	1.8%	1.4%	\$	★★★★
Provider 12	0.0%	1.8%	1.4%		
Provider 13	1.0%	1.2%	1.2%	\$ \$	★★★
Provider 14	0.3%	1.4%	1.1%		
Provider 15	0.0%	1.4%	1.0%		
Provider 16	0.0%	1.2%	0.9%		
Provider 17	0.0%	1.1%	0.8%		
Provider 18	0.0%	1.0%	0.7%		
Provider 19	0.0%	1.0%	0.7%		
Provider 20	0.0%	1.0%	0.7%		
All Other Providers	5.2%	35.0%	24.7%		
Total	100%	100%	100%		
Professional Spend by Category				26.7%	73.3% 100%

Confidential

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

Pharmacy Percent Generic Report

Provider XYZ

Percent Generic

Quarter over quarter, July 2009 - June 2010

Members Attributed, HealthPartners Pharmacy Benefit

Commercial, Continuously Enrolled, Excluding Babies and 65+

Prescriptions written by a primary care physician

Primary Care

Provider Group	3rd Quarter 2009			4th Quarter 2009			1st Quarter 2010			2nd Quarter 2010		
	Generic Rx	Total Rx	% Generic	Generic Rx	Total Rx	% Generic	Generic Rx	Total Rx	% Generic	Generic Rx	Total Rx	% Generic
Provider XYZ	19,450	26,610	73.1%	17,571	22,942	76.6%	18,127	23,553	77.0%	18,199	23,169	78.5%

Specialty Care

Provider Group	3rd Quarter 2009			4th Quarter 2009			1st Quarter 2010			2nd Quarter 2010		
	Generic Rx	Total Rx	% Generic	Generic Rx	Total Rx	% Generic	Generic Rx	Total Rx	% Generic	Generic Rx	Total Rx	% Generic
Provider XYZ	7,651	10,997	69.6%	6,761	9,317	72.6%	6,944	9,598	72.3%	7,026	9,525	73.8%

Confidential

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

Pharmacy Top 25 Drugs by Cost Report for Primary Care

Provider XYZ Top 25 Drugs by Cost

2nd Quarter April - June 2010

Members Attributed, HealthPartners Pharmacy Benefit

Commercial, Continuously Enrolled, Excluding Babies and 65+

Primary Care

	Drug	Ingredient Cost	Total Rx	Cost/RX	Generic Alternative	Alternative Cost/RX
Provider XYZ (Percent Generic 76%)						
	Lipitor	\$1,000	10	\$100	simvastatin	\$1
	Advair	\$1,000	10	\$100		
	Singulair	\$1,000	10	\$100		
	Actos	\$1,000	10	\$100		
	Effexor	\$1,000	10	\$100		
	Lantus	\$1,000	10	\$100		
	Lexapro	\$1,000	10	\$100	citalopram	\$1
	omeprazole	\$1,000	10	\$100		
	Novolog	\$1,000	10	\$100		
	bupropion	\$1,000	10	\$100		
	simvastatin	\$1,000	10	\$100		
	sumatriptan	\$1,000	10	\$100		
	One	\$1,000	10	\$100		
	Cymbalta	\$1,000	10	\$100		
	dextroamp-amphet	\$1,000	10	\$100		
	pantoprazole	\$1,000	10	\$100		
	Nexium	\$1,000	10	\$100	omeprazole or lansoprazole	\$1
	Nasonex	\$1,000	10	\$100	fluticasone	\$1
	Plavix	\$1,000	10	\$100		
	fexofenadine	\$1,000	10	\$100		
	Atripla	\$1,000	10	\$100		
	valacyclovir	\$1,000	10	\$100		
	Truvada	\$1,000	10	\$100		
	venlafaxine	\$1,000	10	\$100		
	Valtrex	\$1,000	10	\$100		
Total		\$100,000	1,000	\$100		
Brand		\$70,000	240	\$100		
Generic		\$30,000	760	\$100		

Top 25 drugs by ingredient cost shown

* Bold indicates Brand Drug.

Confidential

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

Pharmacy Top 25 Drugs by Cost Report for Specialty Care

Provider XYZ Top 25 Drugs by Cost

2nd Quarter April - June 2010

Members Attributed, HealthPartners Pharmacy Benefit

Commercial, Continuously Enrolled, Excluding Babies and 65+

Specialty Care

Drug	Ingredient Cost	Total Rx	Cost/RX	Generic Alternative	Alternative Cost/RX
Provider XYZ (Percent Generic 72%)					
Enbrel	\$1,000	10	\$100		
Copaxone	\$1,000	10	\$100		
Humira	\$1,000	10	\$100		
Rebif	\$1,000	10	\$100		
Abilify	\$1,000	10	\$100		
Norditropin	\$1,000	10	\$100		
Cymbalta	\$1,000	10	\$100		
Seroquel	\$1,000	10	\$100		
Effexor	\$1,000	10	\$100		
Novolog	\$1,000	10	\$100		
bupropion	\$1,000	10	\$100		
Provigil	\$1,000	10	\$100		
Avonex	\$1,000	10	\$100		
Advair	\$1,000	10	\$100		
Lexapro	\$1,000	10	\$100	citalopram	\$1
Temodar	\$1,000	10	\$100		
Asacol	\$1,000	10	\$100		
Singulair	\$1,000	10	\$100		
venlafaxine	\$1,000	10	\$100		
Plavix	\$1,000	10	\$100		
dextroamp-amphet	\$1,000	10	\$100		
One	\$1,000	10	\$100		
Revlimid	\$1,000	10	\$100		
Betaseron	\$1,000	10	\$100		
Cellcept	\$1,000	10	\$100		
Total	\$100,000	1,000	\$100		
Brand	\$80,000	280	\$100		
Generic	\$20,000	720	\$100		

Top 25 drugs by ingredient cost shown

* Bold indicates Brand Drug.

Confidential

© 2010 HealthPartners. Reprints allowed for noncommercial purposes only if this copyright notice is prominently included and HealthPartners is given clear attribution as the copyright owner.

Information from Measure Evaluation

Measure Number and Name: Total Cost of Care and Resource Use Population-Based PMPM Index (#1598)

Description:

Measure Developer: HealthPartners

Summary Assessment

Two measures are presented: Total Cost of Care and Resource Use. They are summarized in a total cost of care index (TCI) and Resource Use Index (RUI) using a risk adjustment methodology designed by John Hopkins. These are population-based measures designed to complement condition and episode based total cost and resource use measures.

The risk adjustment methodology appears to be an industry standard but its underpinnings are only available to registered users. However, the methodology is designed to accept other types of risk adjustment. Twelve methods reviewed by the Society of Actuaries are mentioned. Additional reliability and validity tested is recommended if one of the alternative risk adjustment methodologies is used. Otherwise, validity and reliability have been tested.

Reliability (2a)

2a1. Is the measure well defined and precisely specified?

- a) Measure clinical logic described? Yes ☒ No ☐
- b) Measure construction logic described? Yes ☒ No ☐
- c) Risk-adjustment methodology described? Yes ☒ No ☐
- d) Is the data derivation process described in sufficient detail for users to implement the measure?
 - i. Target population and data sources identified
 - ii. Measure specific target conditions and events identified
 - iii. Data elements and outcome variable(s) clearly defined
 - iv. Measurement windows, exclusions, risk adjustment methodology clearly defined and explained
- a) The methodology presented consists of two measures: a Total Cost of Care and Resource Use measures. They purport to evaluate two aspects of health care cost. The clinical logical is described in detail and the documentation is extensive and comprehensive.
- b) The measure construction logic is described in detail. The submissions include links to complete documentation on how to derive the data and measures.
- c) The measure developers used a risk adjustment methodology created by a third party – the Adjusted Clinical Groups developed by John Hopkins University. They referred reviewers to the risk adjustment developer website for additional details. However, the John Hopkins site requires a user id to access documentation on the logic of the risk adjustment methodology.
- d) The data derivation process is described in detail:

- i. The target population is all patients ages 1-64. The data was provided by PharMetrics and tested on 18.4 millions lives. No additional information was given.
- ii. This is a non-condition specific measure. All conditions were included.
- iii. The submission includes several links to a variety of documents explaining in detail all the variables necessary and the process to follow in order to construct the measures.
- iv. The measurement window is 1 year worth of data. The developers list a number of risk adjustment methodologies that could be used. All these were reviewed by the Society of Actuaries and their performance investigated. In the submission, only the John Hopkins ACG groupings were tested and limited to the Minnesota market. Complete access to the methodology was not possible as it requires a user ID from John Hopkins.

2a2 Reliability Testing

Data Reliability

- a) Was data reproducibility assessed?

Not directly. It is implicitly assumed that the claims data used is reproducible.

Measure Score Reliability

- a) Measure score reliability tested (signal-to-noise ratio analysis by means of ANOVA, Intra-class Correlation Coefficient or other means)

Yes. The developers used two methods to assess reliability. One was based on selecting five hundred 90% random samples without replacement from each provider group and comparing the variability of the sample means to the actual values. The second method was similar but 100% bootstrap samples (sampling with replacement) were used instead. The first method assesses potential member selection bias, while the second one estimates variation around total cost of care and resource use.

In addition, an analysis of the variability in total cost of care and resource use over time was performed by comparing the measures in the period 2007-2009. There were some differences in the total cost of care measure that the developers explained by changes in fee schedules and implementations of resource use saving initiatives.

The differences between actual TCI and the 90% sample ranged from -0.0069 to 0.00083 for 2009. For TCI values ranging approximately from 0.8 to 1.1, this represents a variation of at most 0.9%. The results for the bootstrapping method in the TCI case showed a range of -0.00067 to 0.00252. This represents an approximate maximum variability of 0.3%. Numeric ranges for RUI were not offered but the graphical displays indicate that the variability is very similar to that of TCI.

Some variability over time is expected as fee schedules change and providers implement interventions to improve efficiency. The graphs presented do not show an excess of variability.

Validity (2b)

2b1 Is there evidence presented that the measure specifications allow to demonstrate variations in resource use across providers and/ or population groups? Does the measure and risk-adjustment methodology address this variability allowing for fair comparisons?

2b2 Validity Testing

Data Elements

- a) Has the data been compared to other authoritative data sources? (Other databases, literature, etc.)

There is no comparison to similar independent claims databases. A comparison of the distribution of important variables to the literature could not be found.

- b) Data integrity checked? (e.g. Percent of missing values, missing diagnosis codes, inconsistent dates, range checks, etc.)

No evidence of checking for data integrity was found. There is no mention of any checks performed during measure development. The measure steward does recommend that data elements are populated within reasonable tolerances and thresholds.

- c) Is the data representative of the target population?

Unclear. The population is restricted to all individuals 1-64 years receiving health care services. This is reasonable since the Medicare population is not part of the database used. However, there is insufficient detail on the description of the database to ensure other types of representativeness (e.g., regional variation).

Measure Score

- a) Has the measure score validity been shown? (By correlating to another valid indicator, or showing that it produces different results when applied to subgroups known to have differences in resource use or by expert opinion or other methods)

Yes. The Total Cost of Care and resource Measures have been correlated to numerous other indicators, both risk-adjusted and non-risk adjusted. A careful and detailed analysis of all correlations and explanation of the results is presented. The correlations included comparisons to external measures of the measures with and without risk adjustment. There is also a correlation analysis of the measures restricted to specific places of services. Removal or inclusion of risk adjustment caused the correlations to move in the expected directions.

For example, the actual per-member-per-month spent has a correlation of 0.98 with the Total Care Relative Resource Values (TCRRVs), which are the basic units for measuring resource use. The TCRRVs are not risk adjusted. This high correlation is explained by the relation

between cost and resource use. After applying the ACG risk adjustment methodology, the correlations drops down to 0.15 showing that the risk adjustment does a good job (but not perfect) of reducing the dependency between cost and resource use by incorporating case-mix into the equation.

As another example, the correlation between the raw, unadjusted values for some services and the corresponding RUI for the same service is also very high; the correlation between the admit rate and the inpatient RUI is 0.92.

2b3 Are exclusions supported by clinical evidence?

- a) Has a sensitivity analysis been performed of the measure with and without the exclusions in terms of distribution of the outcome and number of patients affected?

No exclusions other than the age restrictions are listed.

- b) Are the reasons for exclusions properly addressed?

N/A

- c) Are any of the exclusions based on patient preferences?

N/A

2b4 Is the measure risk-adjusted? If not, is there a rationale that supports no risk-adjustment/risk stratification?

- a) Is the risk-adjustment methodology described completely and accurately?

No. There is only a link to the John Hopkins ACG website but the information is only available to registered users of the system.

- b) If a statistical model was used, is it appropriate for the problem at hand?

N/A

- c) Candidate and final variable selection adequately described

N/A

- d) Summary indicators of model fit, calibration and discrimination if appropriate provided

N/A

- e) Risk factors identified make clinical/practical sense

N/A

f) Missing data/imputation methodology explained.

None used.

g) The model validates when applied to a new dataset (i.e., no overfitting)

Not tested

h) How are influential observations handled?

The total paid amount (including medical and pharmacy) is truncated at \$100,000. If the total paid amount is larger than \$100,000, a truncation factor is calculated to bring the sum of the medical and pharmacy amounts paid to \$100,000. The truncation is used to limit the effect of influential observations (e.g., large claims). A sensitivity analysis of the effect of different truncation values was performed. The correlation with PMPM values was calculated for truncation levels of 100K, 200K and 250K. The results were 0.4374, 0.4149 and 0.3955 showing that a truncation at \$100,000 works best.

2b5 Risk factors identified are associated with statistically significant and clinically meaningful differences

a) Are issues of statistical vs. practical significance addressed?

N/A

2b6 Demonstration that the method produces comparable results in different data sources

a) Does the method produce expected results when applied to different databases accounting for the differences in databases (e.g., an option to use administrative **or** medical record data)?

The method performance in different data sources was not analyzed.

2c Are identified disparities in care being used as risk factors?

Factors that identify groups with differences/inequalities in care (race, socioeconomic status, gender, etc.) should not be part of the risk-adjustment methodology

No.

Other comments:

Reviewer: Carlos Alzola