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# HMA

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HEALTH MANAGEMENT ASSOCIATES

## *Total Cost of Care Regional Initiative Phase 1 Evaluation*

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**Health Management Associates (HMA)** is a consulting and health policy research firm specializing in health system restructuring, health care program development, health economics and finance, program evaluation, and data analysis. HMA is widely regarded as a leader in providing technical and analytical services to health care purchasers, payers, providers, and foundations, with a special concentration on those who address the needs of the medically indigent and underserved. Founded in 1985, HMA has offices in Atlanta, Georgia; Austin, Texas; Boston, Massachusetts; Chicago, Illinois; Columbus, Ohio; Denver, Colorado; Harrisburg, Pennsylvania; Indianapolis, Indiana; Lansing, Michigan; New York, New York; the Pacific Northwest; Sacramento, San Francisco, and Southern California; Tallahassee, Florida; and Washington, DC.

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## I. Abstract

The Robert Wood Johnson Foundation (RWJF) funded five regional health care improvement collaboratives (RHICs) to implement the Total Cost of Care and Resource Use (TCOC) framework<sup>1</sup>, engage stakeholders, and publicly report TCOC measures using multi-payer commercial data. RWJF also funded the Network for Regional Healthcare Improvement (NRHI) to lead and coordinate this work and to establish national benchmarks for cross-regional analysis. With RWJF support, Health Management Associates (HMA) conducted a qualitative evaluation of Phase 1 of the TCOC pilot (11/1/2013 - 4/30/2015).<sup>2</sup> A key accomplishment of Phase 1 was the beginning of serious conversations among stakeholders about the potential benefits of cost transparency. With strong project management by NRHI and valuable technical assistance from one of the RHICs with prior experience using TCOC, by mid-2015 the five RHICs produced and shared TCOC measures with physician groups or practices. One RHIC had reported TCOC ratings publicly, while the others are planning to do so and/or considering how to publicly report in light of stakeholder skepticism about the data or their value for consumers. Each RHIC's specific approaches and progress varied according to pre-existing data collection infrastructure, stakeholder dynamics and the local health care environment. All of the RHICs experienced challenges related to data quality issues, physician concerns, and questions about how best to make the reporting actionable for physicians and other audiences. The evaluation identified successful strategies such as use of a data quality checklist and inviting physicians to help design and plan the project. Also, the evaluation highlights the importance of: allowing sufficient time for planning and stakeholder engagement; incorporating technical assistance to assure data quality; seeking physician input and feedback for making TCOC reports actionable; and collaborating with other RHICs to accelerate progress. These lessons may be applied to expanding TCOC efforts as well as to other regionally-based health care transparency and reform initiatives.

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<sup>1</sup> The Total Cost of Care and Resource Use (TCOC) framework was developed by HealthPartners and endorsed by the National Quality Forum (NQF); it is an analytical tool that measures cost and resource use for virtually all care used by individuals, and is intended to identify overuse and inefficiencies.

<sup>2</sup> In Spring 2015, RWJF awarded these grantees and up to three additional regions Phase 2 funding to continue and expand their efforts, supporting broader implementation of the collaborative approach toward identifying regional cost drivers and benchmarking total cost across regions.

## II. Overview

### Background

The Total Cost of Care and Resource Use (TCOC) framework developed by HealthPartners and endorsed by the National Quality Forum (NQF) is an analytical tool that measures cost and resource use for virtually all care used by individuals. According to HealthPartners, TCOC is designed to “support affordability initiatives, to identify instances of overuse and inefficiency, and to highlight cost-saving opportunities.”<sup>3</sup> In 2013 the Robert Wood Johnson Foundation (RWJF) funded five regional health care improvement collaboratives (RHICs) to measure TCOC using multi-payer commercial data, engage stakeholders, publicly report the measures associated with primary care physician practices or groups by December 2014, and work collaboratively with each other. RWJF also funded the Network for Regional Healthcare Improvement (NRHI) to lead and coordinate this effort to test a standardized TCOC approach in multiple regions and establish national benchmarks for cross-regional analysis. The Foundation’s principal objective was to use “multipayer data to identify drivers of regional health care costs to inform targeted strategies to reduce spending at the community level.”<sup>4</sup> The initial 18-month grants (11/1/2013 - 4/30/2015) constituted Phase 1 of the pilot; in Spring 2015, RWJF awarded these grantees and up to three additional regions Phase 2 funding to continue and expand their efforts.<sup>5</sup>

### Objective

With RWJF support, Health Management Associates (HMA) conducted a qualitative evaluation of Phase 1 of the TCOC pilot. The objectives were to assess the RHICs’ early experiences with a collaborative approach to a standardized TCOC framework, and to identify promising practices and critical lessons for other community collaboratives, policymakers, funders, and stakeholders.

### Methodology

The HMA evaluation team reviewed background materials about RHIC activities and NRHI reports and memos, and attended two NRHI meetings featuring presentations from RHIC leaders. We conducted in-depth, semi-structured interviews via telephone and two site visits with key informants at the five RHICs and NRHI. The interviews focused on the collaboratives’ and stakeholders’ experiences planning and implementing the pilot. We interviewed TCOC project directors, data analysts, physicians, health plan representatives, employers, consumer advocates, and other stakeholders involved in the initiatives. We shared site-specific draft summaries with TCOC project leaders to obtain updates and help ensure accuracy.

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<sup>3</sup> For more information see <https://www.healthpartners.com/public/tcoc/>. White papers on the total cost and resource use methodologies are available at [https://www.healthpartners.com/ucm/groups/public/@hp/@public/documents/documents/dev\\_057649.pdf](https://www.healthpartners.com/ucm/groups/public/@hp/@public/documents/documents/dev_057649.pdf) and <https://www.healthpartners.com/public/tcoc/>, respectively.

<sup>4</sup> <http://www.rwjf.org/en/library/grants/2013/10/using-multipayer-data-to-identify-drivers-of-regional-health-care.html>

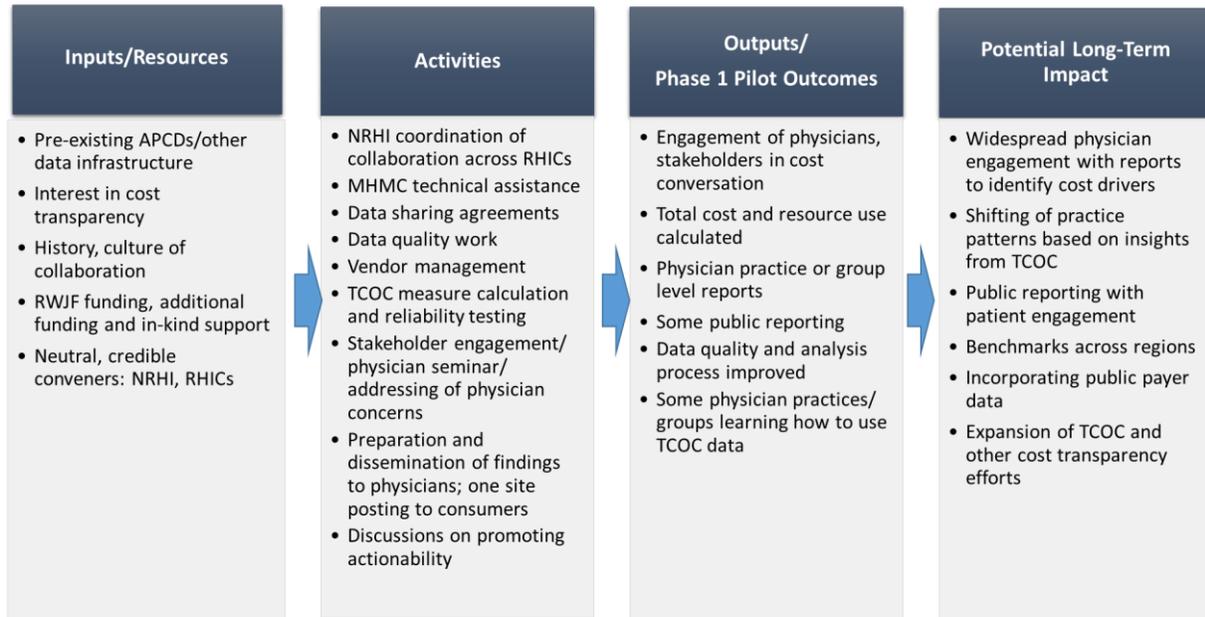
<sup>5</sup> Phase 2 funds the RHICs and up to three additional regions to: (1) continue to analyze and report commercial data in a standardized way; (2) expand measurement and analysis to noncommercial claims data; and (3) increase utilization of the data through engagement work, including with employers and providers. (<http://www.rwjf.org/en/library/grants/2015/05/identifying-drivers-of-regional-health-care-costs-to-inform-strategy.html>). NRHI grant: <http://www.rwjf.org/en/library/grants/2015/04/evolving-the-regional-total-cost-of-care-project-and-demonstrati.html>

This report summarizes the approaches, promising strategies, challenges, accomplishments, perceived impact, and lessons across the five participating RHICs. The appendices contain site-specific case studies of each RHIC's experience.

### III. Findings

While each of the RHICs had unique experiences, the evaluation team’s analysis of the key inputs or building blocks, challenges, preliminary outputs or accomplishments, and potential long term outcomes of the TCOC pilot is summarized in the Figure 1.

**Figure 1. Overview of TCOC Pilot Findings**



Each of the five participating RHICs’ key activities and accomplishments during Phase 1 and next steps planned are summarized in Table 1.

**Table 1. Summary of RHIC Phase 1 activities and accomplishments as of early Summer 2015.**

| RHIC  | Key TCOC Activities and Accomplishments  |
|---|--|
| Center for Improving Value in Health Care (CIVHC) | CIVHC administers Colorado’s statewide all-payer claims database (APCD) and is using the data to calculate total cost of care. Working with multiple vendors to ensure data quality, CIVHC reported TCOC to 50 primary care physician groups in its first release of data in April 2015. CIVHC did not commit to report publicly based on the initial pilot, but intends to develop a public reporting strategy in collaboration with stakeholders. CIVHC will use phase two funding from RWJF to continue the TCOC effort and explore other potential approaches to financial sustainability over the long term.  |
| Maine Health Management Coalition (MHMC)          | MHMC began using data from Maine’s APCD to compute total cost of care measures in 2011. Under the RWJF TCOC grant and Maine’s federal State Innovation Model (SIM) funding, MHMC has expanded this effort to provide detailed reports of TCOC and quality measures to nearly all primary care practices in the state beginning in Fall 2014, and plans public reporting of less detailed information in October 2015. MHMC played a second role, as technical advisor to all of the participating RHICs; staff developed and shared quality checklists and worked toward creating benchmarks across the RHICS despite many data challenges and comparability issues.                                   |
| Midwest Health Initiative (MHI)                   | MHI utilized its voluntary payer claims database to analyze total cost of care measures for six physician groups in the St. Louis area, which care for about 48 percent of patients in the region with a regular source of primary care. TCOC data are being presented to stakeholders at multiple community and physician group meetings and are being incorporated into MHI’s provider portal. MHI plans to move toward analyzing TCOC at the physician practice level in the future. MHI does not plan to publicly report the information until it and its partners have sufficient data points to understand normal variation.   |
| MN Community Measurement (MNCM)                   | MNCM obtained cost data from the four major commercial health plans in Minnesota, including HealthPartners which developed the TCOC methodology used in this RWJF-funded pilot. In December 2014, MNCM publicly reported TCOC information for 115 medical groups representing more than 1,000 clinics in the region. Its website allows consumers to view “below average/average/above average” ratings for each medical group, as well as numerous quality and patient experience scores at the clinic and medical group levels. MNCM also distributed more detailed reports focusing on the total cost index to the medical groups, and it plans to include resource utilization in the near future. |
| Oregon Health Care Quality Corporation (Q Corp)   | Q Corp used and expanded its voluntary, multi-payer claims database to obtain cost data from health plans in Oregon. After delays related to data use agreements, data quality, and vendor challenges, Q Corp produced and privately distributed clinic-specific reports to more than 150 primary care practices in April 2015, and plans to update the reports twice a year. It is implementing webinars to educate practices about the TCOC measures, and determining how to help physicians use the information. Q Corp, its Board, and its committees will be deciding during 2015 what and how to report TCOC publicly, potentially in the next year.   |

### Importance of State and Local Context

Participating RHICs shared common factors in their health policy environment and cultures that facilitated their progress implementing the multi-payer TCOC initiative. All had experience with quality measurement and most with public reporting of health care measures. They typically had a history of strong stakeholder collaboration and personal relationships among health care leaders; more than one noted that their health care quality and cost measurement stakeholder community was a “small world.” TCOC reporting typically aligned well with broader state priorities for payment and delivery system reform, and most RHICs highlighted active multi-stakeholder efforts to move toward value-based payment, often driven by state legislation and/or federal grants. In at least two states, payers had developed their own cost measures but saw the potential value of a standardized statewide TCOC measure.

All RHICs had some type of existing infrastructure to collect the needed data, whether all-payer claims databases (APCD) (Colorado, Maine), voluntary claims databases (Midwest, Oregon), or an existing reporting partnership with payers (Minnesota). Those without APCDs relied on strong relationships with their health plans to secure the data, particularly in Minnesota, where the health plans had the most responsibility for calculating the TCOC measures internally and the most experience doing so (particularly HealthPartners which developed the TCOC measure used across this pilot).

Differences in the starting points influenced rates of project progress. For example, Maine’s MHMC already had experience using the TCOC measure at the start of the pilot, and had two roles: it was one of the five RHICs funded to implement the TCOC measure, and was also contracted as a Technical Advisor to the other RHICs. Conversely, MHI was newer to cost measurement and reporting, and therefore had further to go.

Table 2 summarizes environmental factors influencing each RHIC’s TCOC efforts.

**Table 2. State and Local Context**

| RHIC                | Environmental Factors Contributing to TCOC  |
|---------------------|---|
| CIVHC<br>(Colorado) | Colorado's policy environment laid the groundwork for TCOC reporting; in 2010 the state legislature established an APCD that began releasing cost information at the population level in late 2012. The establishing legislation clearly defines potential uses of the data for public reporting, eliminating any political or regulatory hurdles to developing TCOC reports. CIVHC viewed the TCOC project as well-timed and a valuable opportunity to use its detailed claims data to produce measures that would be meaningful and actionable for providers, part of the official purpose of the APCD.   |
| MHMC<br>(Maine)     | With an APCD since 2003, the state and MHMC have been measuring and publicly reporting health performance indicators for many years, pioneering multi-payer TCOC reporting in 2011. Providers and other stakeholders are accustomed to risk adjustment and performance reports. Maine's relatively small health care community and history of stakeholder collaboration contribute to good relationships among stakeholders, and a promising environment for TCOC and other transformation efforts. However Maine has a highly consolidated provider and payer environment and is a rural state where patient choice of physicians may be limited.            |
| MHI<br>(Midwest)    | Efforts to enhance transparency in health care quality and cost in the region have been driven largely by the employer community. To further advance the transparency effort, the business coalition including about 50 large St. Louis employers worked to build a data collaborative supported by a multi-stakeholder board, creating MHI. Three carriers, self-insured employers, and a pharmacy claims organization voluntarily provide medical and pharmacy data to MHI's claims database.   |
| MNCM<br>(Minnesota) | Both the private and public sectors in Minnesota have been leaders in health care transparency. In 2008 the state legislature passed a Health Care Reform Act to move toward value-based payments and greater transparency of cost and quality; it established an APCD and a cost-reporting project but these were suspended in 2014 because of technical difficulties. Initiated by major commercial health plans, MNCM has been developing and reporting standardized metrics since 2005. Its website allows consumers to compare numerous performance metrics across providers. Health plans use their own cost data for contracting and tiering networks. |
| Q Corp<br>(Oregon)  | Oregon has a history and culture of collaboration and interest in efficient use of resources. Collaboration is reinforced by the small stakeholder community, where no single health plan dominates the market. In 2008, Q Corp began aggregating and analyzing administrative claims information from multiple payers, and by Spring 2015, the database includes the vast majority of the commercial, Medicare, and Medicaid populations. Q Corp produces quality and utilization reports including quality measures publicly available on its website.  |

## Data Strategies and Challenges

### Data sources

The participating RHICs obtained data for the TCOC pilot either through state-wide APCDs (Maine and Colorado) or direct submissions from health plans (Oregon, Minnesota, Midwest). APCDs offered an existing data collection infrastructure and mandatory health plan participation. Colorado's TCOC efforts benefited from APCD legislation that clearly defined potential data uses for public reporting, avoiding political and regulatory hurdles. But data submission and quality issues arose regardless of whether an APCD was involved. Both CIVHC and MHMC found that extensive data quality assurance, and re-running data when results were not within expected parameters, were still necessary with APCD data. In fact, interviewees commented that states should not assume that data extracted from an APCD is ready to be used in a TCOC analysis; instead it should be seen as the raw material for the data input that the RHIC will develop (one RHIC leader called it the "lumber" for the analytical house to be built).

Ultimately, three of the five RHICs did not use state APCDs, relying instead on voluntary claims submission arrangements with health plans. This suggests that APCDs are not essential if there are alternative data collection infrastructures and/or relationships with data sources, and reflects the reality that using an APCD is not automatically the easiest approach. However, establishing data agreements with health plans could be very time consuming, so using existing infrastructure may have a strong appeal. Whether the RHICs were coordinating with health plans, an APCD, vendors or some combination of these, they each identified tradeoffs, advantages and disadvantages of their approaches. The choice of data sources and vendor arrangements affected RHICs' ability to meet interim deadlines for the TCOC project; the more vendors involved, the more deadlines needed to be set and adhered to, and the more proactive management of vendors was needed.

### RHIC access to and control over data

The RHICs' choices of data sources and vendor arrangements led to varying degrees of access to and control over the data. In Minnesota, most data work is conducted by the health plans with the rationale that plans know their data best and were willing to do the analytic work (it was not clear whether the health plans would be willing to share their raw data), and RHIC staff considered this approach faster and less expensive. Under their "distributed model," the health plans conducted the attribution, applied the ACG risk adjustment assignment, rolled up the information to the medical group level, and then submitted the data to the RHIC. While MNMCM's more limited role in data analysis was convenient, it also posed challenges if a change in methodology was needed, because the RHIC must then coordinate with all the health plans to make the change simultaneously. This arrangement also does not allow the RHIC to access patient-level data, for example to investigate a potential data quality issue or conduct more in-depth analysis.

The other four RHICs preferred greater control over the analysis, though that came with a higher data analysis workload. They typically contracted with one or more vendors for data collection, cleaning, and measure calculation -- but remained intimately involved in the methodology and quality assurance.

### Pervasive data quality and analysis challenges

All of the RHICs experienced challenges with the data. This included ensuring the quality of data received from an APCD or health plans, which involved identifying incomplete or incorrect submissions, cleaning the data to ensure that these problems were addressed, and attaining comparability across

data sources and reliability over time. The data preparation process often took much longer than expected, in both staff time and wait time for vendor turn-around of analyses. To gain stakeholder acceptance, results need to be consistent over time and variation had to be explainable; this has slowed the public reporting effort because some RHICs have needed to do additional analysis to understand unexpected variation. As part of this process, some RHICs mentioned the decision to remove high cost patient outliers in the process of “cleaning” TCOC data, though this excludes the very complex patients whose impact on spending is substantial in the health care system overall. That is, eliminating outliers may be in conflict with policy goals of identifying major cost drivers.

#### Role and management of vendors

RHICs found contracting with data vendors has been necessary given limitations in their own staff size, budgets, and analytic capabilities. However some RHICs noted challenges around inadequate vendor resources, and coordination across multiple vendors. Some RHICs felt that vendors underestimated the resources needed to produce reports on time, and frequent check-ins and detailed guidance were necessary to manage progress, consuming additional RHIC staff time. Two of the RHICs used the same company for their TCOC analysis, but different vendor staff worked for each RHIC so there were no apparent efficiencies in sharing a vendor.

#### Technical assistance from Maine’s MHMC

The RHICs considered the technical assistance provided by MHMC’s data expert to be very valuable, praising her expertise and willingness to dig into the details of other RHICs’ approaches and needs. Her support was especially useful in identifying what data are truly necessary, working on how to make information comparable for benchmarking, and developing a data quality checklist. RHIC staff emphasized the value of the data checklist and felt it would have been helpful to have from the start of the project. The RHICs did not typically require additional technical assistance beyond that from MHMC.

#### Approaches to Reporting

The RHICs developed their report structure, content and format with stakeholder input and potential impact in mind, leading to some regional variation but also some sharing of report design. Two RHICs aggregated their TCOC measures at the physician practice or clinic level (MHMC, Q Corp) while others used a larger physician group aggregation (MNCM, CIVHC, MHI). This choice was driven largely by numbers of patients, since they needed a certain sample size to support validity and reliability, and also by stakeholder preferences, which sometimes were for greater detail and ability to “drill down” and sometimes for less detail to avoid singling out individual physicians. The RHICs have distributed the reports electronically and via mail when requested, or through private presentations (MHI) to physician practices or groups. The detailed reports contain multiple tables and graphs on cost, price, and resource use (except MNCM, described below) broken down into various patient type, diagnosis, and service types, with comparisons to averages. Some reports include examples or vignettes identifying areas that should be examined further. RHICs that did not report at the practice level intend to move toward that approach to allow better identification of outliers to target improvement. The case studies in the Appendix include samples of the physician reports.

Unlike the detailed reports to physicians, reporting to consumers has been limited, with only MNCM publicly reporting on their website as of Spring 2015 and MHMC planning public release in October 2015. The other RHICs are developing public reporting strategies with stakeholders or waiting until data

variation is better understood. So far, MNCM and MHMC public reporting is based on simple word scales, intended to be understandable for consumers and to encourage providers to improve. The MNCM website offers Below Average, Average, or Above Average ratings, with the vast majority in the Average range. MHMC planned to use a four-level rating system, but their board decided to combine two levels to ensure meaningful differences across the ratings; practices will receive a Low, Good, or Best rating. Some physicians expressed a preference for a concrete threshold for good performance that they could strive to achieve, rather than a relative scale whose range is unclear, shifts as average performance changes, and does not necessarily capture a practice's improvement over time. One interviewee suggested displaying arrows showing the direction of a practice or group's performance. Table 3 summarizes the level of analysis included in each report, as well as the format and approach to reporting.

**Table 3. Summary of TCOC report content and format**

| RHIC             | Physician Report:<br>Level of Analysis | Physician Report<br>Content/Format                       | Consumer Report<br>Status/Approach   |
|------------------|--|--|--|
| CIVHC (Colorado) | 50 physician groups                    | Basic reports on total cost, price, resource use indices | Developing public reporting strategy in collaboration with stakeholders  |
| MHMC (Maine)     | 422 primary care practices             | Detailed reports on total cost, price, resource use      | Planned for July 2015 but postponed until October 2015; will rate at least 72 practices as Low, Good, or Best                                    |
| MHI (Midwest)    | 6 physician groups                     | Private presentations                                    | Not planned in short term; will make information available publicly only after it better understands normal variation over multiple time periods |
| MNCM (Minnesota) | 115 medical groups                     | Detailed reports on total cost                           | Listed on website: groups rated as Below Average, Average, or Above Average  |
| Q Corp (Oregon)  | 150+ primary care practices            | Detailed reports on total cost, price, resource use      | Board and committees deciding in 2015 what and how to report TCOC publicly   |

### Stakeholder Engagement

Engaging and involving stakeholders in the planning, design, implementation, and dissemination of TCOC measures has been and will continue to be perhaps the most critical part of the TCOC efforts. RHICs conducted stakeholder engagement within their own governance structure as well as with those in the broader community. Outreach and engagement focused primarily on physicians in this initial phase of the project, and RHICs emphasized the value of early and frequent collaboration with stakeholders.

### Board and committee structure

RHICs highlighted the value of their multi-stakeholder boards and existing or new committees, with members taking proposed TCOC analysis and reporting concepts back to their constituencies for discussion. For example, Q Corp established a multi-stakeholder TCOC Steering committee comprised of physicians, health plan leaders, consumer advocates, and clinic administrators. RHICs also used smaller committees to hold workshops devoted to specific elements of the TCOC process, gaining consensus there and taking their results to the next level of governance for approval. This process progressively built buy-in within the organization and among participating stakeholders.

### Early and ongoing engagement of stakeholders

The RHICs' experiences strongly suggest that early and continuing engagement with stakeholders was the most effective way to build interest in TCOC reporting. Repeated communication about the initiative's goals and opportunities for improvement, and willingness to discuss the methodology and planned implementation in detail, particularly with skeptical providers, were necessary to address concerns and build support.

### Primary focus on physicians

The RHICs viewed physicians as the primary audience and users of TCOC information (at least during Phase 1), and therefore devoted significant effort to engaging physician leaders and creating "champions." The RHICs found it particularly important to seek input from physicians in the planning stages, and in designing the physician-level reports to be easier to understand and more actionable. Best practices for promoting physician involvement included:

- recruiting physicians for TCOC planning committees (including leadership positions on those committees) and to serve as information conduits and champions in the community;
- visiting physician practices and groups around the state (one site stressed bringing physician champions with them when they talk to clinics);
- making presentations to physician associations, physician group leadership and practice managers; and
- building on relationships with medical societies, and placing articles in physician association newsletters.

In one case, the medical society sent physicians an email explaining and promoting TCOC in advance of the first report release, endorsing the measure and encouraging them to review and use the information. A couple of stakeholders in one state felt the RHIC could have involved physician groups more, particularly about attribution, risk adjustment and the way the information would be presented on the consumer website.

A 1½ day National Physician Leadership Seminar in August 2014, developed and facilitated by NRHI, promoted engagement in the TCOC initiative among physicians from each participating region. The RHICs had either informal or formal processes for selecting attendees, generally seeking physicians who were young, energetic, and viewed as future leaders in payment and delivery system reform. All physician attendees interviewed for this evaluation reported that the seminar helped to reinforce their values regarding transparency, relay the importance of the project, convey the other regions'

experience to date, and suggest ways to push the effort forward in their communities.<sup>6</sup> MNMCM, partnering with NRHI and the Institute for Clinical Systems Improvement, held a similar regionally-focused seminar for physicians in Minnesota in June 2015.

#### *Addressing physician concerns*

RHICS identified varying levels of physician concern about elements of TCOC measurement and reporting. These typically centered on attribution, risk adjustment, use of claims data, and potential “misuse” of the information. All of the RHICs had some success at addressing concerns or resistance, primarily through open and detailed discussions, and inviting physicians (particularly skeptics) to help design and plan the project. Table 4 presents common concerns among providers about the TCOC initiative, and some successful strategies by RHICs to address or reduce those concerns.

**Table 4. Physician concerns and RHIC strategies to reduce concerns**

| Common Concerns Among Physicians/Providers  |
|---|
| Whether all costs should be attributed to PCPs given their limited influence on prices and perceived low cost compared to specialists; this was of particular concern in rural and other areas where referral options are limited |
| Whether the TCOC risk adjustment approach adequately accounts for variation in the populations served   |
| Whether claims data are current and accurate enough to be actionable  |
| The lack of public payer data in the project, given that Medicare covers a large segment of most providers’ caseloads, and Medicaid is the major payer among health centers and many safety net providers                         |
| Perceived importance of pairing cost data with quality data, particularly in public reporting   |
| Whether health plans might use the information to manipulate contracts and reduce reimbursement rates   |
| Concern that relative rankings may not provide a good measure of whether practices/groups are meeting a reasonable benchmark  |
| Concern that consumers will not understand, or have an incentive to use, the measures   |
| Successful Strategies by RHICs to Address Concerns  |
| Eliciting and having in-depth discussions about concerns, and inviting groups likely to have legitimate concerns into the early testing stage   |
| Acknowledging the imperfections of the measure and framing it as a starting point that will be refined through collaboration  |
| Identifying aspects of the methodology that can be changed and inviting physicians to help design those elements  |
| Agreeing to share results privately before any public reporting, with a period and process for physicians to review and appeal the findings   |
| Beginning to explore addition of Medicare and/or Medicaid data for the next phase of the pilot  |

<sup>6</sup> An NRHI survey found that the seminar increased attendees’ understanding of TCI and RUI terms, concepts, and usefulness in identifying cost and utilization variation (NRHI, National Physician Leadership Seminar, Survey Results August 2014.)

### Health plan engagement

Engaging health plans is essential when they are the source of claims data. Some health plan stakeholders reported that they already calculate total cost measures for their own members, and health plan leaders interviewed valued the opportunity to see results across commercial (and potentially other) payers through the RWJF-funded TCOC pilot. However, some health plans were concerned about sharing pricing and other proprietary information in ways that could benefit competitors. RHICs needed to make agreements to keep information confidential and restrict how health plans can use each other's data, e.g. commitments not to try to "back out" information on other plans' performance or business intelligence from the findings. In line with physician concerns about potential uses of TCOC, health plans did show interest in using the information for tiering (tying member cost-sharing to provider performance) but some emphasized that they are already using similar approaches based on more limited data, and that they recognized the disadvantages of tiering in rural areas with few providers.

### Employer and consumer engagement

The RHICs generally found employer and consumer engagement more challenging than physician and health plan collaboration, or had not made it a priority at this stage. There was often limited awareness of TCOC beyond the employer and consumer representatives on a RHIC board or TCOC committee. In states where the employer landscape is dominated by a few large, national employers, corporate interest in local health care initiatives was lacking; similarly, small employers generally do not have the bandwidth to engage in local health care efforts. For consumers, the information may be confusing, hard to interpret, or lack relevance when health plan cost-sharing does not distinguish between lower- and higher-cost providers (discussed further below). The RHICs have conducted or plan to conduct focus groups with consumers to test the format and appropriate level of detail in public reporting.

### Experience with TCOC Measure and NRHI-led Collaborative

All of the participating RHICs were satisfied with the TCOC methodology, and found the NQF endorsement very helpful to promote buy-in from stakeholders. RHIC staff and stakeholders appreciate the fact that the TCOC methodology evaluates the contribution of both price and resource utilization toward total cost. One RHIC (MNCM) did not include resource use in the Phase 1 reporting, but is working with the health plans to run companion reports on resource utilization in the near future. Despite significant, unexpected challenges and delays, RHIC staff remain energized and dedicated to continuing and expanding the TCOC effort.

RHIC staff had mixed attitudes, however, about the ACG risk adjuster used for the TCOC pilot. The RHICs in Maine and Colorado had been using alternate risk adjusters for prior analyses, and MHMC continues to use its original adjuster for TCOC reporting within the state, while using the ACG for cross-regional comparisons and analyses under the RWJF-funded TCOC collaboration. Risk adjustment has been a major area of physician questions and criticism, requiring in-depth explanations of the methodology. One stakeholder viewed the risk adjustment mechanism as "evolving" and expects it to improve as TCOC is analyzed over time.

All five TCOC project managers expressed that being part of the multi-RHIC collaboration has been extremely beneficial, allowing them to share challenges and strategies, and providing "an instant peer group for both technical and moral support." The RHICs praised both NRHI's project management and the technical assistance from Maine's RHIC. Staff from all of the sites expressed that NRHI has played

valuable roles in troubleshooting, facilitating, and coordinating across the RHICs. They emphasized that the collaboration accelerated and added credibility to their cost measurement activities. One interviewee noted that being part of a national collaborative gives the RHICs a good rationale to retain their approach when physicians who do not score well complain or want to change the model. A MNMCM leader said the collaboration brought “legitimacy to people in Minnesota that we’re not just winging this – others are working on it too.” Though some aspects of MNMCM’s model differed from the other RHICs, MNMCM nonetheless learned, for example, a better method for age banding through the group.

### Perceived and Potential Impact

All of the RHICs had produced and shared physician practice or group level results with their provider communities by the end of Phase 1. In fact, the focus of Phase 1 was less on public reporting to consumers and more on providing valid and reliable TCOC information to the *physician* community. Just one of the participating RHICs (MNMCM) achieved public reporting to consumers by Dec 2014, with others citing the unexpected and myriad data challenges as the key reason for delays. Maine’s RHIC (MHMC) scheduled public release of TCOC information in early July 2015 but postponed the release until October 2015, while the other RHICs are not ready to commit to a timetable as public reporting remains a sensitive issue with physicians, and they understand the importance of “getting it right”.

### Potential Impact among Physicians

While the long term goal among participating RHICs is for TCOC to identify and reduce variation in costs (and thereby reduce costs), it is too early to see changes in costs at this stage. Instead, the most significant impact to date is that the project is **starting conversations** about cost, resource use, variation, and transparency – a critical first step. One RHIC leader expressed that a “million conversations a million times” are necessary to change thinking and behavior, and this project has helped spur those discussions, particularly among physicians who are generally aware of the trend toward value-based payments and view TCOC as a potential tool to better understand and improve their “value.” A physician interviewee speculated that the TCOC reports will also enable physicians to “start conversations” about high value care with patients, specialists, and insurers. Further, RHICs report that TCOC is starting to be incorporated into discussions in their states around broader health care payment and delivery reforms such as value-based purchasing and accountable care arrangements.

The next challenge and focus is on “**actionability**”. All five RHICs are talking with stakeholders and with each other about how best to encourage audiences – particularly physician practices or groups – to use the TCOC information to make improvements that will eventually lower total cost. TCOC data can identify, for example, specific diagnoses at particular clinics with high risk-adjusted resource utilization, which can be “drilled down” further to identify over-use of tests, procedures, hospital admissions, ED use, or referrals to specialists whose prices or resource use are higher than average. So far there are some anecdotal reports of physician practices or medical groups planning to examine and take action on TCOC reports. However, such drilling down to make the information actionable is challenging for smaller, independent, or rural physician groups and practices that generally have limited capacity for data analysis. Mechanisms for making TCOC data actionable and some limitations suggested by stakeholders are presented in Table 5. Physician stakeholders interviewed for this evaluation typically viewed TCOC as a worthwhile metric, even when they identified its limitations and tradeoffs.

**Table 5. Physician Actionability Mechanisms and Limitations**

| Potential Mechanism   | Limitations   |
|---|---|
| Data identifies areas of high resource utilization to re-educate physicians about unnecessary tests, referrals                    | Referral options are limited in some areas, especially rural; also, there are often pressures to refer within one's health care system                                |
| Data identifies areas of high prices, for re-examination of charges and referral patterns to high-priced specialists and services | In larger groups/health systems, price decisions are made at higher executive level; again, referral options may be limited for certain specialties or in rural areas |
| Data identifies successful practices/groups for sharing of "best practices"   | Requires resources to identify and confirm best practices and disseminate information   |
| "Competitive nature" of physicians will drive them to want to improve their scores  | Lack of financial incentives to reduce utilization or prices  |

The RHICs' experiences and our discussions with stakeholders suggest that future actionability of the TCOC reports will depend on a number of factors; these should be carefully considered and planned:

- **Messaging:** The "roll out" of the TCOC information and accompanying framing;
- **Report content and format:** The content, level of detail, and format of the reports; for example, MHMC's and Q Corp's detailed reports are based on a long design effort involving multiple iterations and rounds of physician feedback; CIVHC ran into data and analytic challenges so its initial physician report is more barebones, with plans to expand in future iterations;
- **Level of analysis:** Practice-level TCOC information (Maine, Oregon) can more easily identify clinic and physician-specific behaviors amenable to change than larger medical group-level analysis;
- **Education and support:** Physicians need guidance on how to identify practice improvement opportunities. Without resources to assist physician practices individually, RHICs are conducting webinars, inserting into the reports examples of identifying outliers and potential actions; and considering partnering with other entities to provide analytical and delivery reform support;
- **Multiple data points:** Stakeholders want to see consistency across time periods in order to feel confident in TCOC results; thus, buy-in will likely increase over time. However, RHICs should make clear that performance is expected to improve over time;
- **Addition of Medicare population:** Limiting the TCOC analysis to commercial data has been a barrier to engagement for many providers whose largest group and highest cost patients are enrolled in Medicare. The Medicare Access and CHIP Reauthorization Act of 2015<sup>7</sup> will allow use of fee-for-service Medicare data by "qualified entities," which include the participating RHICs.
- **Addition of Medicaid data:** Health centers and other providers serving Medicaid and the uninsured do not view TCOC measures as relevant to their practices. One RHIC (Q Corp) has

<sup>7</sup> See H.R.2 - Medicare Access and CHIP Reauthorization Act of 2015 at <https://www.congress.gov/bill/114th-congress/house-bill/2/text>.

state permission to use Medicaid data but has not yet developed the methodology, and other RHICs/regions will be examining inclusion of Medicaid data in Phase 2.

#### Potential Use by Health Plans, Employers, and Consumers

There is potential for health plans to use TCOC to negotiate contracts with physician groups, to “tier” networks (incentivizing members to select certain providers through lower cost-sharing) to reward lower cost/higher quality providers, and to identify and encourage reduction in variation of price and utilization among physicians. Our interviews revealed that health plans are already calculating TCOC based on their own claims data, and they acknowledge that multi-payer analyses could bring stronger and more standardized results. However, expectations about health plan use of the RWJF-funded TCOC findings vary across regions. In Minnesota, health plans have been using internal TCOC data for tiering networks, and a dominant health plan in Maine is planning to use the RHIC’s TCOC results to develop tiered networks for a couple of member groups that have shown interest. Other health plans in Maine and in other regions, however, are reluctant to use TCOC for tiering, noting that lack of excess capacity in primary care and shortages of many types of specialists constrain them from steering patients away from practices in their communities.

Our interviews indicated that employers are cautious about using TCOC data to drive employees to particular providers. Even in a region with an active employer health coalition (MHI), a large employer representative expressed that his company will likely use TCOC information to educate employees around purchasing decisions, but that the data are unlikely to directly impact the company’s purchasing of health care in the near future. While employers are “very excited to see numbers, the data isn’t ready for employers to use for payment design.”

As noted above, consumers are generally not yet engaged in the TCOC initiatives except as members of the RHICs’ boards of directors that are briefed on the project’s activities. Most other stakeholders (providers, health plans, employers) are skeptical about the usefulness of TCOC data for consumers, arguing that: consumers will not care unless results are tied to their cost-sharing; consumers do not currently pay much attention to publicly-available quality information and they will not find the TCOC concept intuitive; and consumers may associate high cost with high quality (and therefore providing TCOC may “backfire”). These concerns underscore the importance of effective messaging and education through a public campaign. One consumer advocate emphasized the importance of cost transparency but anticipated that it will take 1½ to 2½ years to figure out how to present and disseminate the information for consumers. “It won’t help to just post numbers. You need to educate the news media and consumers to have a conversation with their doctor,” according to an advocate.

As noted above, RHICs are conducting focus groups to test how the information should be displayed to be best understood on public websites. Most RHICs agree that simple 3-point ratings are appropriate, and a provider suggested that there should be indications of whether the practice is improving over time, even if starting below average. It will be helpful to evaluate the degree to which consumers are paying attention and acting on this information.

TCOC may gain relevance for employers and consumers with the growth of value-based payment models that incorporate financial incentives such as higher cost-sharing, tiered networks, or reference pricing. Q Corp staff noted that they are already seeing some growth in consumer interest in price

information as high-deductible plans are expanding. Release and presentation of the information are also critical.

Various stakeholders expressed that standard total cost measures with benchmarking and comparisons across regions will be beneficial for understanding drivers of variation, identifying and learning from low-cost areas, and identifying and focusing further efforts on high-cost areas. However they all expect that this is “a long way off,” and that differences in cost of living and other “uncontrollable” factors also influence health costs. Meanwhile, especially for physicians, the local landscape is of greater interest. Q Corp (Oregon) plans to incorporate the cost information into its annual statewide report that shows variation by community and provides high level analysis for policymakers.

## IV. Conclusion and Lessons

The RHICs participating in Phase 1 of the RWJF-funded TCOC pilot faced many challenges but also achieved significant progress. Their experiences reveal a number of lessons for other organizations pursuing total cost of care analysis and reporting, as well as to stakeholders, policymakers, and funders seeking to participate in or support collaborative health care cost transparency efforts. Following are some lessons and promising practices that emerged across the five RHICs from the TCOC Phase 1 experience. The case studies in the Appendix provide further detail on the RHICs' activities, achievements, challenges and best practices.

**A lengthy planning stage should be expected and scheduled.** The TCOC public reporting goals and timeline shifted during Phase 1, but it appears the extra planning, engagement, and data cleaning efforts were necessary to build stakeholder confidence and resolve data issues. RHIC staff emphasized the importance of the process -- identifying and engaging the right people at the right level, presenting the initiative around the region, facilitating multi-stakeholder discussions and committees in a neutral space, and taking concerns seriously and thoroughly addressing them. More time and resources should be built into future efforts. At the same time, a balance must be struck between taking a cautious, deliberate approach and moving forward despite an imperfect measure.

**Technical assistance is vital to address ongoing data challenges.** All of the RHICs found that data quality requires relentless scrutiny. Claims data face time lags and may not be complete or meet specifications when first submitted, and merging data from multiple sources exacerbates the challenges of the cleaning process. To improve reliability and validity of the findings and credibility with providers, the RHICs found it critical to examine the TCOC results from more than one time period and look for unexplained variability. TCOC project staff need to continually ask, "Why does the data look the way it does?" Technical assistance from an experienced analyst is valuable, and a quality checklist can help identify and address problems early, when it is easier to request new data runs from payers and vendors.

**Initial focus should be on actionable information for physicians.** The first and perhaps most important target audience for multi-payer TCOC analysis is physicians, with practice-level reports the goal for identifying variation and opportunities for practice improvements. Bringing physician leaders into the planning process early can inform the development of the reporting, help reduce skepticism or resistance, and promote buy-in. Going forward, the main challenge is to disseminate the information with messaging and guidance for making it actionable. The detailed physician reports should be designed with input from the target audiences about both content and formatting (e.g., color-coding, explanation of the measure, tips for using the report). A successful roll-out will also require analytic support to some practices (particularly smaller, independent, and rural practices that lack such capacity or resources) on how to identify areas for improvement, and education or links to resources on practice improvement options. Finally, while some physicians will be interested in improving their referral and utilization patterns in order to provide better care, others -- already burdened with myriad measurement and administrative burdens -- will likely need additional incentives to engage with a new performance measure.

**Perception of public reporting benefits to consumers remains uncertain.** In all five regions piloting the TCOC measure, there was uncertainty or skepticism about the benefits of TCOC public reporting to

consumers. Without incentives tied to cost-sharing, consumers may not be interested in total cost ratings of physician practices and particularly larger physician groups. For those consumers who are interested, quality measures should be presented along with cost, to help them choose good “value” and avoid conclusions that high cost providers are automatically the best.

The roll out of TCOC public reporting – utilizing user-friendly format and content, with a media campaign educating consumers on how to interpret and use the information -- will be critical for broadening engagement in TCOC. As additional RHICs develop public reporting, this will be an important area for sharing and evaluating strategies and best practices.

**TCOC effort appears replicable under favorable conditions.** The greatest promise for replicability and scaling of the TCOC initiative is in regions with existing multi-payer claims data collection, political will, a neutral convener, and relationships among stakeholders. Barriers will be greater in regions without a history of collaboration or culture of health care measurement and reporting. RHICs or other neutral entities are important to provide a trusted, safe space for stakeholders to express views and address concerns.

Replication will require funding for start-up costs, and planning for sustainability. Most of the five RHICs had to supplement RWJF pilot funding with other sources (e.g., Q Corp used its Aligning Forces for Quality grant, while MNMCM received in-kind support from health plans). They are not certain how they will sustain the effort, and hope to identify value that providers, health plans, and others (such as accountable care organizations) will be willing to purchase. MHI reported that some physician groups expressed interest in potentially licensing the MHI data set after seeing the TCOC and related quality and utilization data.

**The collaborative model accelerates progress.** RHIC collaboration, under strong project leadership from NRHI, has propelled each RHIC’s efforts during Phase 1. The model emphasized shared learning and support, while allowing for some variation in design and stakeholder engagement based on local dynamics. The RHICs’ support for this approach suggests that expansion of this collaborative model to additional RHICs will allow new organizations to learn from the early innovators. In fact, the collaborative model should be considered for other health care transparency and transformation projects as well.

**TCOC is a tool that can complement other cost-reduction efforts.** Analyzing and reporting TCOC alone will not reduce health care costs. All stakeholders agreed that other factors are necessary to make any real dent in the cost curve. However, they agreed that TCOC is a useful tool (in fact better than other cost measures that represent only one portion of health care costs) and could help inform and support efforts such as state-level payment and delivery system reforms that involve value-based health care or ACO development. Further, the impact of TCOC reporting would be strengthened by incorporating claims from other populations (Medicare, Medicaid, dual eligible population), and by tying TCOC performance to incentives – initially at the physician level, and eventually at the consumer level.

It will be important to study the continuing and expanding TCOC efforts in order to further identify and replicate successful implementation and dissemination approaches, avoid unsuccessful strategies, and begin to assess the impact of cost transparency on care delivery decisions, referral patterns, health plan contracting and network design, and selection of providers by consumers, employers, and other stakeholders. The next phase will be critical for evaluating the potential for multi-payer TCOC

information to inform targeted strategies to improve value and reduce health care spending at the community level.

## V. Appendices

### Appendix A: TCOC in Colorado

#### Overview

The Center for Improving Value in Health Care (CIVHC) is the TCOC grant recipient in Colorado. As the administrator of the state's all-payer claims database (APCD), CIVHC already had access to the needed data and clear legislative parameters for how it could be used, easing any regulatory or political hurdles and limiting the need for direct agreements with health plans. The challenge CIVHC faced was in coordinating multiple vendors to ensure data quality and timely and robust analysis. CIVHC engaged in ongoing communication and collaboration with the state and local medical societies, academy of family physicians, and individual physicians.

CIVHC reported TCOC measures to 50 primary care physician groups in its first release of data in April 2015. CIVHC did not commit to report publicly based on the initial pilot. However, CIVHC does intend to develop a public reporting strategy in collaboration with stakeholders. CIVHC will use phase two funding from RWJF to continue the TCOC effort and explore other potential approaches to financial sustainability over the long term.

#### State and Local Context

Colorado's policy environment laid the groundwork for TCOC reporting in recent years. The state established an all-payer claims database (APCD) through legislation in 2010. It began releasing cost information at the population level in late 2012 and is building experience. The establishing legislation clearly defines potential uses of the data for public reporting, so developing TCOC reports did not face political or regulatory hurdles. Colorado's Physician Designation Disclosure Act<sup>8</sup> requires any publicly reported cost information for physicians to be accompanied by quality information (TCOC reports have not been released publicly so are not subject to this requirement).

CIVHC viewed the TCOC project as well-timed and a valuable opportunity to use its detailed claims data to produce measures that would be meaningful and actionable for providers—part of the official purpose of the APCD to facilitate “reporting of health care and health quality data that results in transparent and public reporting of safety, quality, cost, and efficiency information at all levels of health care.”<sup>9</sup> Multiple interviewees felt it is important that five regions have come together to generate a standard measure for the first time.

#### Program Design

##### *Implementation*

Because CIVHC already had the infrastructure to collect the data, its TCOC effort focused on engaging physicians to get their input, data analysis, and report development. The data release was delayed from the December 2014 target date to address problems obtaining complete and correct data from one of

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<sup>8</sup> For additional information about this law see Cartwright-Smith L. and Rosenbaum S., Fair Process in Physician Performance Rating Systems: Overview and Analysis of Colorado's Physician Designation Disclosure Act, Robert Wood Johnson Foundation, 2009. <http://www.rwjf.org/en/library/research/2009/09/fair-process-in-physician-performance-rating-systems.html>.

<sup>9</sup> HB10-1330, 2010. See [http://www.leg.state.co.us/clics/clics2010a/csl.nsf/fsbillcont3/7772EFE1E998E627872576B700617FA4?open&file=1330\\_enr.pdf](http://www.leg.state.co.us/clics/clics2010a/csl.nsf/fsbillcont3/7772EFE1E998E627872576B700617FA4?open&file=1330_enr.pdf)

the data suppliers to the APCD. Once the issues were resolved, CIVHC re-calculated its 2012 measures and produced the 2013 measures. CIVHC distributed TCOC reports to 50 primary care groups at the end of April 2015. The reports included practice-level TCI and RUI as well as state benchmarks.

To help providers better understand and use the reports, CIVHC planned to develop specific examples of how different types of variation could be interpreted, and what steps providers could consider to address them. CIVHC will produce an annual report on the cost of care in order to engage stakeholders and spread the word about the measure and its efforts. CIVHC also plans to add TCOC examples to a “gallery of success stories” on its website as experience with the measure accumulates in an effort to demonstrate the measure’s value to physicians and other stakeholders and maintain momentum for further work.

Under the second phase of RWJF TCOC funding, activities are expected to include trending analysis with multiple years of data, testing alternative risk adjusters and attribution methods, exploring the application of TCOC to Medicare and Medicaid data, expanding the report content, reporting to additional physician groups, continuing outreach to physician groups, and expanding outreach to include employers. If CIVHC’s project is expanded to additional payers or continues past a second phase, CIVHC may explore alternate funding arrangements to sustain TCOC analysis and reporting in the future. Potential funders would include medical societies, stakeholder associations or possibly physician practices, if fees were spread over a large number of participants. While CIVHC does not plan to publicly report TCOC immediately, public reporting of price and quality information at the physician group level has been a topic of discussion between CIVHC and physician associations for several years, and TCOC is part of those conversations.

#### *Data Approach*

CIVHC runs Colorado’s APCD in collaboration with a data manager with expertise collecting and managing health care claims data. The TCOC project uses commercial payer data only, which the data manager collects directly from health plans. The data manager, in collaboration with CIVHC staff, does data quality validation and produces data extracts that are provided to a second vendor that performs the risk adjustment. A third vendor provides the analytic platform where the TCOC measures are generated. This multiple vendor arrangement is unique among the RHICs, and requires a high level of coordination, including weekly meetings with the vendors to ensure that the needed data extracts are being created on time and include all the necessary information. There is limited overlap between the TCOC data analysis process and the other analytic work done by the APCD, so the TCOC process is effectively separate, though this may change in the future. The Maine Health Management Coalition provided technical assistance to establish data quality assurance processes, and reviewed the TCOC measures CIVHC generated to confirm that they were within expected parameters.

CIVHC used the “ACG” risk adjuster used by all of the TCOC project sites, but expressed interest in re-running its data with a different risk adjuster, the “CRGs,” to see how the results may differ. The CRGs are used by the APCD for other analyses. In future years, CIVHC is interested in expanding to include public payers and examining specialty and multispecialty practice costs.

#### *Physician Practice Reports*

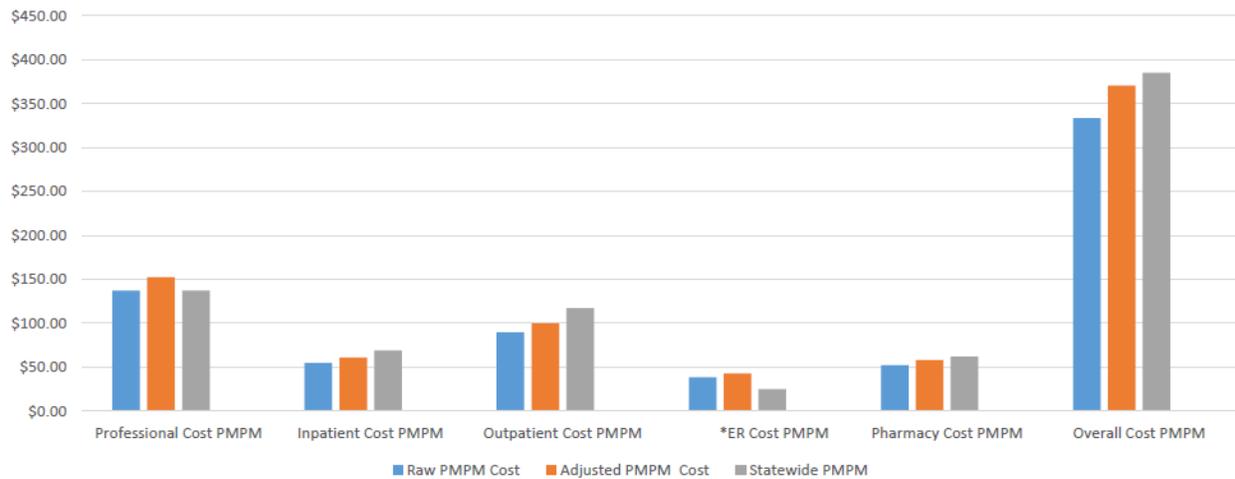
The two-page report shared with physician groups includes charts illustrating cost and resource use for all commercial patients attributed to a primary care group. It includes raw and risk-adjusted cost per

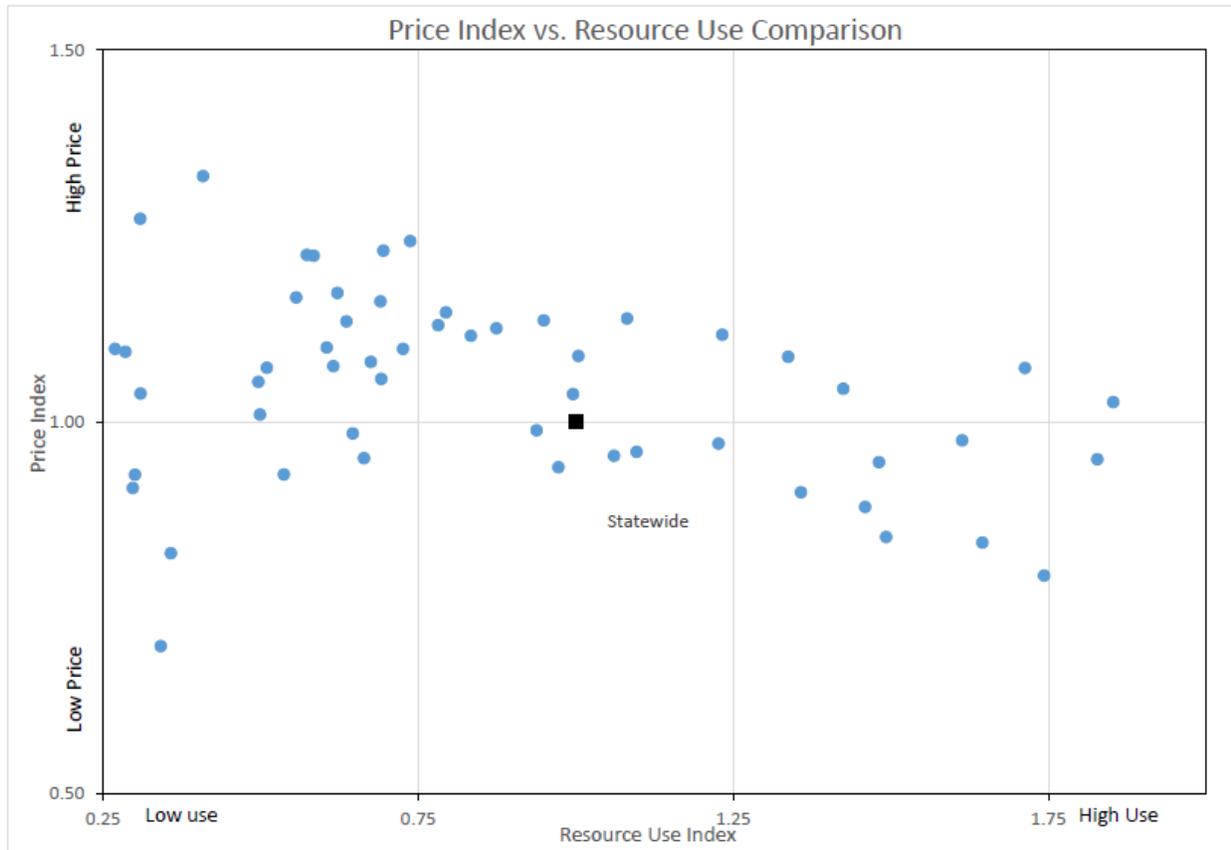
member per month, with a TCI and RUI that compares the practice with statewide averages.. It also includes a price and resource use comparison scatterplot showing all the practices that were included in TCOC, and contains brief explanations of the meaning of different types of variation, so practices could begin to identify opportunities to explore drivers of cost variation. See Figure A-1.

**Figure A-1. Sample portion of TCOC physician group report**

| Summary by Service Category | PCP Group       |                    | Colorado            | PCP Group   |             |             |
|-----------------------------|-----------------|--------------------|---------------------|-------------|-------------|-------------|
|                             | Raw PMPM Cost   | Adjusted PMPM Cost | Statewide PMPM Cost | TCI =       | Price Index | x RUI       |
| Professional Cost PMPM      | \$137.19        | \$152.43           | \$137.19            | 1.11        | 1.11        | 1.00        |
| Inpatient Cost PMPM         | \$54.65         | \$60.72            | \$68.99             | 0.88        | 0.73        | 1.20        |
| Outpatient Cost PMPM        | \$89.56         | \$99.51            | \$116.95            | 0.85        | 1.04        | 0.82        |
| <b>*ER Cost PMPM</b>        | <b>\$38.25</b>  | <b>\$42.50</b>     | <b>\$24.96</b>      | <b>1.70</b> | <b>2.00</b> | <b>0.85</b> |
| Pharmacy Cost PMPM          | \$52.11         | \$57.90            | \$61.85             | 0.94        | 0.80        | 1.17        |
| <b>Overall Cost PMPM</b>    | <b>\$333.51</b> | <b>\$370.57</b>    | <b>\$384.98</b>     | <b>0.96</b> | <b>0.93</b> | <b>1.04</b> |

|                    | Physician Group | Statewide |
|--------------------|-----------------|-----------|
| % Female           | 53              | 57        |
| % Under 18         | 18              | 25        |
| Attributed Members | 1754            | 100,164   |
| Risk Score         | 0.90            | 1.00      |





If public reports to consumers are pursued during phase two, CIVHC reports that the format and content would be much simplified, for example with a “good,” “better,” and “best” ranking system.

#### *Stakeholder Involvement*

Because Colorado’s reporting is aimed solely at physicians, outreach and engagement were focused on this stakeholder group. CIVHC staff meets monthly with the Colorado Medical Society’s Committee on Physician Practice Evolution, which was involved throughout the development of the measures. Colorado sent four physicians to the NRHI National Physician Leadership Seminar, selected with input from the Colorado Medical Society and the state chapter of the Academy of Family Physicians. Many physicians were interested in participating; four attendees were chosen for geographic diversity and their leadership capabilities, and there was a waiting list of others who wanted to attend.

CIVHC staff traveled around the state to meet with providers and address questions and concerns regarding the measures, including resistance from some providers. CIVHC’s decision not to publicly report the measure was partly intended to address physician concerns about how it might be used by other stakeholders (such as health plans), and partly related to the newness of the measure in Colorado. The medical society also sent physicians an email in advance of the release, highlighting the importance of the effort and alerting practices to the upcoming data. CIVHC planned to follow up directly with the initial wave of 50 practices that received the reports to answer questions and gather feedback about whether they were useful, and how providers interpreted and used them. CIVHC also explained the TCOC project in a public blog post in May 2015, including a scatterplot showing the range of price and

resource use among practices in the state and discussing progress and how the TCOC process can contribute to efforts to pay for value.

CIVHC plans to use sample reports to begin engaging employers in discussion about the TCOC measure, anticipating that self-funded employers will be particularly interested in its potential implications for cost control.

## Accomplishments and Challenges

### *Accomplishments*

The first TCOC reports were successfully distributed to PCP groups in April 2015. CIVHC highlighted the value of learning from the other regions participating to accomplish the data analysis. Technical assistance from MHMC helped address challenges at a high level of detail, and project management from NRHI helped move the effort along. CIVHC and the physician leaders who attended the physician seminar felt that it was a valuable opportunity to build expertise to further champion cost transparency and value efforts in the state.

CIVHC views the first release as a way to introduce the TCOC measure as an “actionable” resource for physicians, and to gather feedback to improve future reports. Before the release, some physician stakeholders reported that they expected the data to be well-received as a way to better understand costs globally, to lead to requests for greater detail, and to elicit interest by specialists regarding their own costs.

### *Challenges*

CIVHC faced significant data completeness and quality challenges, with submitted data requiring extensive “cleaning” and identification of missing data and other errors. CIVHC found that it needed to provide the vendors with much more detailed data quality specifications than originally anticipated because of quality issues with payer-submitted data from the APCD, and a lack of direct communication among the data vendors exacerbated this issue. CIVHC had to discard two payers’ data because diagnosis codes were not accurate, eliminating 600,000 to 700,000 lives from the analysis.

Coordinating tasks among three vendors has been challenging and requires extensive communication, particularly to ensure that the right information is extracted from the data warehouse and that all vendors understand required timelines. Additional quality control was typically necessary after one vendor submitted its data to another. It was sometimes difficult to distinguish data quality issues from actual variation in the data; if results of the risk adjustment did not look reasonable, further data quality checks were done, requiring additional time and effort. Problems arose around pharmacy claims and attribution, or matching patients to specific PCP groups. CIVHC is developing a set of data quality metrics to help make the analysis process smoother and more efficient, and emphasized the value of clear documentation of the analytic process and requirements.

Staffing limitations and budget constraints also proved challenging. CIVHC is a small organization, and two staff dedicating 25% of their time to the project, as planned in the grant, was insufficient.

As in other TCOC project sites, some physicians expressed concerns about the quality, completeness and representativeness of the data and how the results would be used, and that they were already aware of their performance and measurement was unnecessary. CIVHC emphasized that the data was intended for the physicians themselves, and that only they could see their own group’s data, compared to state-

wide averages. In developing the content of the report, it was a challenge to balance ease of interpretation with the level of detail needed to provide meaningful information and communicate the limitations of the measures.

### Perceived Impact

Before the first TCOC reports were distributed, both CIVHC staff and physician stakeholders felt that the TCOC information has the potential to allow physicians to think about how their practice patterns contribute to cost variation, and to enable lower-cost groups to share their best practices with others. Prior to sharing the reports, CIVHC offered physician practices webinars to explain the measures, and then sent the first reports with an explanatory packet to help providers interpret them. Initial reactions from the physician groups after receiving the reports have been “somewhat muted,” however, and CIVHC plans follow-up webinars and brown bag events to help stimulate interest. CIVHC staff admit that during phase two, more outreach and education is necessary and the reports need to be significantly expanded to be actionable. Further, CIVHC expects that as providers review and discuss the reports, interest in adding Medicare and Medicaid data and examining specialty costs may increase.

CIVHC emphasized that this effort is just starting to provide a useful product, making ongoing funding critical and valuable. Even if the reporting could continue in some form without future funding, the collaboration among the RHICs participating in the TCOC project is seen as very helpful.

### Lessons

**NQF endorsement of the TCOC measure is important, but some uncertainty about risk adjustment methodology remains.** Despite the perceived value of NQF endorsement of the measure, both physicians and CIVHC staff have concerns about whether the measure could account for physician groups with unusually large patient populations with specific chronic conditions, particularly those who are also treated by specialists. As in other RHICs, PCPs expressed concern that a variety of costs are out of their control. The complex methodology for attaining reliability and validity makes the measure harder to explain to skeptical physicians, so it can be a challenge to fully address concerns. It would also be difficult to explain to laypeople, and reports would be greatly simplified should full public reporting be planned.

**Collaboration among the RHICs was valuable.** CIVHC staff felt that this effort demonstrates that five states can implement a common measure set, and hopes the next phase of the project will demonstrate that it is replicable in additional states. It was critical to have different regions tailoring their approaches to their own states, but to have common processes and metrics for comparison across regions. Identifying variations is the next step. CIVHC staff knew it would be difficult to ensure consistency across regions in order to make benchmarking possible, and it remains to be seen whether a meaningful comparison across RHICS is possible or useful. Some stakeholders questioned whether state-level data may be too aggregated to be truly useful, although they felt it is important to have a standard measure across communities. Regional benchmarks for urban and rural area are a potential area for exploration.

**Limit the number of data vendors to reduce coordination challenges.** CIVHC emphasized the data collection and analysis challenges it experienced, urging other communities considering similar efforts not to underestimate the challenges of determining whether the data they have access to is adequate for this type of analysis, and of coordinating and carrying out the analysis. Each state has its own approach to data vendors, and each faces challenges. Greater fragmentation of tasks among vendors

leads to more communication challenges and delays in getting the right outputs. Given the RHICs' differing arrangements and different issues that emerged, it was challenging for them all to hit the same interim milestones. CIVHC found that data vendors may not be flexible about their timelines to produce data, making it a challenge to quickly address quality issues that require them to re-run data or correct reports to meet specifications. They recognized a need to provide much more detailed data specifications to vendors than they first anticipated, in order to get the right information at the right time and in the right form.

**Physician interest grew as the project progressed.** Many physician stakeholders feel the TCOC measures will be useful and actionable, and would like to see it expand to specialty and multispecialty practices, as well as Medicaid and Medicare data. Incorporating outcomes data would be a useful long-term goal.

**Don't underestimate staff time and resources needed.** As in other states, CIVHC found that "everything takes longer than you think" and is more challenging, but the support—and pressure to succeed—from the group of RHICs was helpful to keep the project moving. Financial constraints on staff time were an issue, and staff spent extra time beyond what was budgeted.

#### Acknowledgements

The evaluation team interviewed the following individuals: Jonathan Mathieu, Beth Newsom, Jay Want, MD, Center for Improving Value in Health Care (CIVHC); and Chet Seward, Division of Health Care Policy, Colorado Medical Society.

## Appendix B: TCOC in Maine

### Overview

Maine's Total Cost of Care (TCOC) program is led by the Maine Health Management Coalition (MHMC), which is a purchaser-led, multi-stakeholder organization that works to measure, report, and improve the quality and value of care. Using data from the state's all-payer claims database (APCD), MHMC laid the groundwork for the RWJF-funded effort by computing total cost of care measures starting in 2011. It reported these measures to a small number of primary care practices participating in a patient-centered medical home pilot. Using a combination of the RWJF TCOC grant and Maine's federal State Innovation Model (SIM) funding, MHMC has expanded this effort to provide detailed reports of TCOC and quality measures to 422 adult and family medicine practices in the state beginning in 2014. MHMC planned to publicly report less detailed TCOC ratings beginning in July 2015, and this was later postponed to October 2015. MHMC will continue using its original risk-adjustment methodology (chosen prior to joining the RWJF TCOC project) for its reporting within the state, while also calculating the measures using the ACG risk adjustment methodology for comparison across the five RHICs participating in the RWJF-funded project.

MHMC also plays a second role in the TCOC project: it was contracted as a Technical Advisor to provide technical guidance to all of the participating RHICs, and worked toward creating benchmarks and comparing TCOC across the RHICs despite many data challenges and comparability issues.

### State and Local Context

Maine has a highly consolidated provider and payer environment where most primary care practices are owned by or affiliated with one of the two major hospital systems that dominate the market. One health insurer has about 40% of the commercial market, with the next-largest insurer holding about 20%. Because Maine is a rural state with areas of low density of residents and providers, patients often do not have much choice of physicians, and primary care providers may have limited referral options for specialists or services. Laboratory and radiology services are often provided at hospitals.

With an APCD in place since 2003, the state and MHMC have been measuring and publicly reporting quality indicators for many years, so providers, payers, and some large purchasers are accustomed to performance reports and risk adjustment. The market is now undergoing a major shift away from fee-for-service reimbursement and toward value-based payment, involving adoption of medical homes, risk-based contracting with providers including the development of Accountable Care Organizations (ACOs), and use of value-based insurance design by the dominant insurers in the state (a strategy that appears to be popular with many purchasers and patients). Stakeholders accepted the need for cost measurement, framing it as an issue of what measures would be chosen, rather than whether costs would be measured at all.

The goals of Maine's State Innovation Model (SIM) project align with the TCOC project and include determining how to bend the cost curve using measures of cost and utilization, promoting transparency, and aligning measures across payers. MHMC is partnering with the state to implement the SIM model, making it well-positioned to link these two efforts. In fact, the distribution of primary care practice reports to all primary care practices beginning in 2014 has been supported by the SIM award. Further, the growth of ACO contracting is seen as a major potential vehicle for payment incentives tied to cost and utilization.

Insurers are already using quality measures, and in some cases their own internally developed cost measures, to tier physician practices for patient cost sharing for a small number of client groups including public employees. Insurers indicate they may prefer a standard cost measure developed, vetted, and reported by an outside organization to an internal measure they develop and maintain themselves.

Interviewees reported that the relationships among major stakeholders are generally very good, partly as a result of Maine's relatively small health care community and history of stakeholder collaboration around quality measurement and payment reform. They view this environment as a positive starting point for the TCOC and other transformation efforts.

## Program Design

### Implementation

As part of a patient-centered medical home (PCMH) pilot, MHMC began working on a TCOC measure based on the HealthPartners TCOC framework, drawing on data from the state's APCD, and applying a risk adjuster (ERG<sup>10</sup>) it had been using for other analyses. When MHMC joined the RWJF-funded TCOC project, it decided to expand this approach for reporting TCOC to more practices and to the public using the ERG, and to *also* calculate the measures using the ACG<sup>11</sup> risk adjuster used by the other RHICs for comparison across regions<sup>12</sup>. MHMC provided the practices taking part in the PCMH pilot with reports every six months detailing the total cost index (TCI) and resource use index (RUI) as well as other measures of utilization and quality with state benchmarks.

In Fall 2014, MHMC began providing these reports based on 2012 data to nearly all practices in the state that have primary care providers. It conducted regional trainings for practice managers to explain the reports and measures, respond to questions, and suggest that the information could be used for performance improvement. A second report using 2013 data was scheduled to be distributed in December 2014, but a high level of unexplained variation alerted the analysts to underlying data problems. After addressing these issues, the reports were distributed in February/ March of 2015, and updates are expected to be distributed every six months.

Public reporting of TCOC alongside quality information was scheduled to begin in July 2015 on MHMC's public reporting website, and the ratings were sent to practices 90 days in advance to provide a period for review and discussion with MHMC.<sup>13</sup> In April, however, the Board of Directors asked that the staff and "Pathways to Excellence" steering committee (described below) revisit the planned four level TCI ratings (Low, Good, Better, or Best) to ensure meaningful differences between levels. The board later decided to report three categories: Low, Good, or Best. As a result of this methodology change, MHMC

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<sup>10</sup> The Episode Risk Group (ERG) risk adjustment model combines information about beneficiaries' conditions and severity with treatments received to identify episodes of care, and uses medical and pharmacy claims information and demographic variables. (Schone, E. and Brown, R. *Risk Adjustment: What is the current state of the art, and how can it be improved?* The Robert Wood Johnson Foundation, Research Synthesis Report No. 25, July 2013. <http://www.rwjf.org/content/dam/farm/reports/reports/2013/rwjf407046> )

<sup>11</sup> Ambulatory Care Group (ACG) risk adjustment model uses demographic factors, coverage eligibility categories, and medical conditions from diagnosis codes or drugs prescribed. (Schone and Brown, 2013)

<sup>12</sup> MHMC compared risk adjustment methodologies and prefers the ERG approach but understands the need to use the same tool across the RHICs.

<sup>13</sup>[www.getbettermaine.org](http://www.getbettermaine.org).

provided another 90-day notice to practices on July 1, allowing for public reporting on October 1, 2015. Initially, the website will post ratings for 72 practices that meet minimum panel size and adequate data quality, with the number expected to grow over time as data quality improves.<sup>14</sup>

MHMC determined that cost and quality measures will always be paired, and the importance of quality data is always emphasized. “We have to lead with quality,” said Michael DeLorenzo, former Director of Health Analytics at MHMC (project director). MHMC will continue to study how to improve the measure for long-term use and possibly more detailed public reporting in the future.

#### *Data Approach and Technical Guidance to RHICs*

MHMC played a major role in developing the TCOC data approach for all five participating RHICs and designing the process for calculating benchmarks to be used across regions. Michael DeLorenzo and former Senior Researcher Judy Loren are described as having in-depth understandings of the NQF-endorsed TCOC methodology and have discussed issues with and provided feedback to HealthPartners (which was also under contract to provide technical support). Ms. Loren served as principal technical advisor for all participating RHICs as they’ve obtained and cleaned data, applied patient attribution and risk adjustment, interacted with data sources and vendors, and examined TCOC results and variability. Ms. Loren developed and shared a data quality checklist, which allows the RHICs to identify and address data problems early in the process.

Maine’s data source for the Total Cost of Care project is the state all-payer claims database, administered by the Maine Health Data Organization (MHDO), which provides MHMC with all commercial claims in de-identified form. The database includes claims data from commercial insurers, MaineCare (the state’s Medicaid program), Medicare, third party administrators, pharmacy benefit managers, and dental benefit administrators. MHMC has a close ongoing relationship with the MHDO and they have shared technical guidance over the years. MHMC does most of its data analysis internally, including patient attribution and data quality checks, which allows MHMC to quickly examine and address data questions or problems without having to go through a vendor intermediary. Once the data is deemed ready by MHMC’s data experts, it is sent to a long-standing data vendor and partner to apply the TCOC software that calculates the TCI and RUI scores.

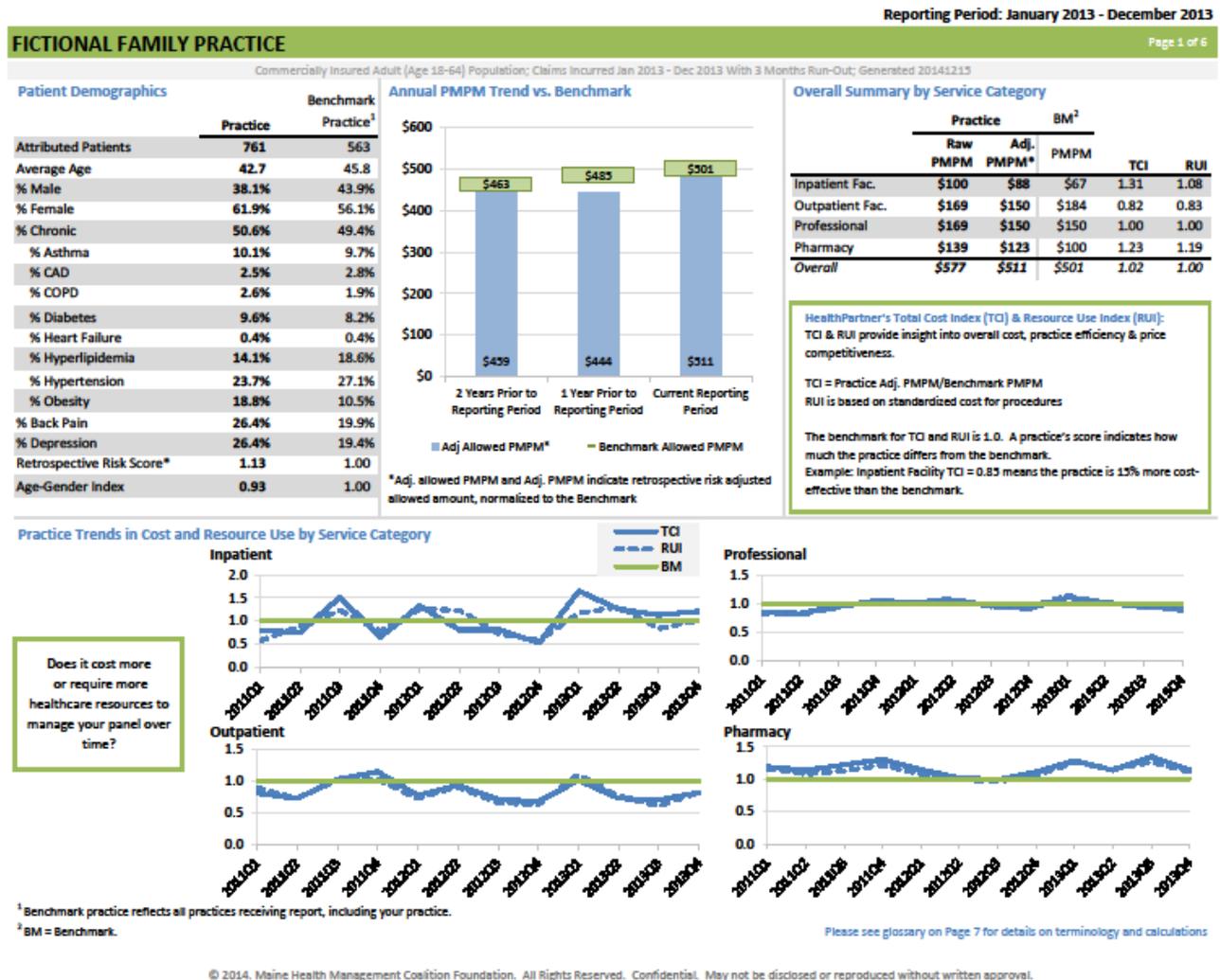
#### *Practice Level Reports*

The six-page, practice-specific reports include charts and graphs illustrating cost and resource use for all commercial patients attributed to a primary care practice. They include risk-adjusted cost per member per month, with a TCI and RUI that compares the practice with statewide averages. The reports show trends by quarter, and present detailed breakdowns across inpatient claims (e.g., by DRG), outpatient and professional claims (e.g., by specialty and tests such as number of MRIs), and pharmacy claims. They also include NQF-endorsed, quality measures, such as 30-day admission rates. The reports suggest prices as well; a TCI that is higher than RUI indicates that prices are higher than average. The various scores are intended to help the practices identify areas that are outliers in utilization, service prices, or referral costs to examine further. Figure B-1 is the first page of a sample practice report.

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<sup>14</sup> MHMC determined that public reporting will include practices with a minimum patient pane of 400 attributed commercial patients in each measurement year.

Figure B-1. Sample Primary Care Practice Report, page 1, including Total Cost and Resource Use Index



*Stakeholder Involvement*

MHMC had a strong history and infrastructure for convening and engaging stakeholders, which appeared to greatly facilitate this project's progress. The TCOC concept was introduced and explained to MHMC's Board of Directors comprised of clinicians, hospitals, private and government insurers, employers, and unions. The Board members eventually endorsed the TCOC effort and helped to inform their constituencies. MHMC's Pathways to Excellence steering committee provided input on the TCOC project and was a key vehicle for promoting stakeholder buy in. This committee includes representatives of the state's major provider entities and meets about six times per year; it had experience developing, testing, and implementing quality measures and was involved in other value-based efforts. According to interviewees, there was considerable pushback from one of the three dominant health systems when informed about the TCOC initiative. The MHMC project director educated the committee about the TCOC measure and fully engaged its members to raise questions and to help design and implement the project. MHMC sent two physician representatives to the TCOC physician summit, and both found it

valuable, though they were already familiar with the model through involvement with MHMC's earlier PCMH pilot.

The MHMC project director visited a variety of stakeholders and presented in-depth information about the TCOC measures and methodology to familiarize them with the model and address concerns as the project moved forward. MHMC also held regional meetings with practice managers around the state to educate physicians in the community about the measure. In addition, MHMC visited primary care offices to gather feedback about the early reports practices were receiving under the PCMH pilot and to learn how the reports were being used.

Providers and health plans typically agree about some of the goals of Maine's health care measurement efforts—e.g., assessing quality, paying for value rather than volume—though they may disagree about how to achieve them. MHMC found it challenging to engage employers because providers are dominant and there are few large employers in the state other than health systems themselves.

### Accomplishments and Challenges

#### *Accomplishments*

After considerable data scrutiny, analysis, and stakeholder engagement, MHMC has circulated detailed practice-level reports to all practices providing primary care in the state, and distributed practice-level ratings in advance of public reporting that was scheduled for July 2015 and postponed to October 2015.

Communication about the purpose and design of the TCOC measure was both a challenge and an accomplishment. Even with longstanding relationships with stakeholders and an effective structure for communicating with them, explaining the components and use of the measure required sustained efforts. This involved repeated presentations, thorough responsiveness to all stakeholder questions about the measure's design and validity, and a flexible timeline to ensure that all concerns about the methodology were addressed before public reporting. Stakeholder responses were generally positive, though some had concerns about how the measures would be used. Despite these outreach efforts, a physician leader at one health system was still unaware of the planned public reporting at the time of the site visit in March 2015. He also believed physicians were not paying attention to the practice-level reports and would only do so if directed by their hospital system or physician organization.

In its role as technical advisor to the other RHICs participating in the project, MHMC helped them understand and address myriad data issues and promote standardization of the methodology across sites. Other RHIC leaders report the data checklist developed by MHMC to be invaluable going forward (in fact wishing it was available at the start of the project), and they have expressed great appreciation for Maine's technical assistance and sharing of their TCOC experience. MHMC staff found collaborating with the other participating RHICs extremely useful, calling it "one of the biggest benefits" of the project.

#### *Challenges*

MHMC has found ensuring comparable and "clean" data from the health plans and from the APCD to be a greater challenge than expected. Claims data are often inaccurate, and different payers use different methods and categories. Some providers complained about the time lag around claims data, emphasizing that timeliness of data provided to practices is critical to enable rapid improvement, even if it is unlikely that practice patterns have changed significantly over time. Similarly, many stakeholders

underestimated how much data analysis is needed to produce meaningful metrics and reports, so MHMC has had to work hard to manage those expectations.

Measure reliability came into question, opening up the methodology to criticism from providers and warranting further scrutiny by MHMC staff. Stakeholder buy-in, particularly among physicians, was based on the assertion that the NQF-validated measure would not show significant variation from year to year, i.e. that it was reliable enough to provide a fair assessment of practices over time. When MHMC identified greater-than-anticipated variation between two years of data and decided to delay reporting to investigate, providers appreciated the decision but also questioned whether the measure was “ready for primetime.” Providers also expressed concern that the measures based on a commercially-insured population do not reflect the most significant and costly Medicare population.

Determining an appropriate and fair way to publicly report TCOC has also been a challenge. The planned relative scale (Low, Good, Best) will always leave some providers at the lower end, and some providers would prefer a benchmark they could exceed to be considered successful in managing costs or utilization. They note that a relative scale does not capture whether the range of performance is wide or narrow, nor provide detail on TCI and RUI for payers or the public. The ratings could, however, be periodically adjusted to encourage ongoing performance improvement.

#### Perceived Impact

MHMC leaders emphasized the importance of validity and reliability in the TCOC measure, noting that if a measure is weak and does not capture meaningful information, “something is not necessarily better than nothing.” Similarly, while provider and health plan stakeholders emphasized the need for greater transparency on costs and prices, they were divided over whether any amount of transparency (with imperfect measures) was automatically better than none. There was consensus that providers need data to better understand costs, and need reasons to change (i.e., incentives that are aligned with reducing costs), but some—particularly providers—questioned whether a TCOC measure that holds PCPs responsible for high specialist costs or for prices determined by the health systems is fair in Maine’s environment.

At the time of the site visit in March 2015, it was unclear to what extent and how practices, health systems, payers and consumers will use the TCOC data. There is anecdotal evidence of practices using the reports they have already received to identify drivers of high costs (e.g., a particularly costly provider to which they refer) or areas of high resource utilization. For some practices, TCOC reports will augment existing quality, cost, and utilization monitoring by the major health plans or by the health system that owns the practice. However, the level of detail in reports may not be sufficient to make them as actionable as some practices would like, and MHMC leaders are trying to figure out how they might help identify more specific cost drivers.

One provider noted that some practices were not paying attention to the TCOC reports they had already been receiving. Other providers, however, expect that while there will be pushback from physicians questioning data quality, attribution or the rationale for the measure, ultimately practices will use the reports to improve their scores. Some of the health systems and practices are considering incorporating TCOC into the performance metrics they use for physician compensation, but only after the measure is well-established and proven, and providers are more familiar with it. One major health plan intends to incorporate the TCOC measure into existing tiered benefit design for a large public employee client.

Another health plan leader did not know how to operationalize the measure, noting that health plans do not have much leverage to change physician behavior.

Providers are concerned that using TCOC for tiering could lead to access barriers in areas where few providers or referral options are available. Further, in Maine, where most PCP practices are owned by systems that negotiate contracts with payers and set prices, practices do not have control over the “price” component of TCOC. At the same time, the shift toward risk-based contracting and ACOs that is underway in Maine will uncover price variation, and both ACOs and practices may be able to use TCOC information in contract negotiations and to identify outliers.

Providers also raised concerns that pressure on commercial prices through TCOC reporting could threaten some health systems’ ability to subsidize unprofitable but important health services for the community. Other providers might not be available or equipped to provide those services.

Consumers are not yet engaged with TCOC and it is unclear how much they will use it when available. As consumer cost sharing continues to grow, however, they may be more likely to examine and consider publicly reported cost measures. Yet even when the measures could help practices or consumers identify high-cost providers, most interviewees questioned whether Maine’s health care markets make it possible for them to choose alternatives. They speculated that the potential impact of TCOC measures may be limited by the small number and sparse distribution of practices in this mostly rural state, and by the consolidation of providers into two to three dominant health systems.

Comparing TCI and RUI across RHICs has not been a focus so far, in part because the measure does not capture many variables that drive costs within regions, such as costs of living and labor, consolidation in health care markets and other unique state and regional characteristics. Similarly, physician practices and providers expressed that benchmarking to other local providers is the most—or only—relevant comparison. Some payers, however, thought a standard TCOC measure across states would be beneficial to compare regions and assess where to focus more efforts to address underlying factors and devise payment reforms.

### Lessons

MHMC is farther along in TCOC than most of the other participating RHICs; its experiences provide lessons for others, including the following.

**An unhurried, deliberative process to acknowledge and methodically address stakeholder concerns helps to achieve buy-in.** The time and effort invested in discussion with stakeholders were essential to obtain the confidence of stakeholders. Not rushing this early part of the project allowed MHMC to take every concern seriously and thoroughly address it. MHMC found that physician involvement in particular has been essential for the project’s credibility. The early regional meetings with practice managers helped to educate providers across the state, although it took time to identify and engage right people at the right level.

**Data quality is an ongoing issue requiring relentless scrutiny.** Claims data are prone to errors for a number of reasons and cleaning claims data is an unending task. With multiple payers and imperfect claims data, TCOC project staff need to continually ask, “Why does the data look the way it does?” A quality checklist can help identify and address problems early, when it’s easier to request new data runs from payers.

**Practice-level reports with detailed data and comparisons to benchmarks support quality improvement and appear more “actionable” than public reports.** Detailed reports specific to a practice allow those providers to identify price or utilization outliers, so they can then dig further to understand causes and potentially make changes, for example in choosing specialists and services for referrals.

**Smaller and independent practices will need analytic support to use TCOC information.** Some interviewees noted that while large practices and those part of integrated systems have analytic capabilities to study the reports, identify problem areas, drill down to find causes, and devise changes to address the deficiencies, smaller and independent practices would need assistance in order to make the TCOC information actionable.

#### Acknowledgements

The evaluation team interviewed the following individuals: Michael DeLorenzo, PhD, Judy Loren, and Frank Johnson, Maine Health Management Coalition (MHMC); Barbara Crowley, Maine General Health; Christopher Sprowl, MD, Maine Medical Partners; John Yindra, MD, Maine Community Health Options; and Andy Ellis, Anthem Blue Cross and Blue Shield In Maine. Lorrie Marquis, MHMC Pathways to Excellence Director, assisted with the review of this summary.

## Appendix C: TCOC in the Midwest

### Overview

The Midwest's Total Cost of Care (TCOC)<sup>15</sup> program is led by the Midwest Health Initiative (MHI), a multi-stakeholder organization and data warehouse that aims to improve health care in the Missouri, western Illinois, and eastern Kansas region. MHI utilized its voluntary payer claims database to analyze total cost of care measures for six physician groups in the St. Louis area, which care for about 48 percent of patients in the region with a regular source of primary care. TCOC data is being presented to stakeholders at multiple community and physician group meetings and is being incorporated into MHI's provider portal, which is in the process of being launched. The organization plans to move toward analyzing TCOC at the physician practice level in the future. MHI does not plan to publicly report the information until it and its partners have sufficient data points to understand normal variation and put appropriate context around the numbers.

### State and Local Context

Efforts to enhance transparency in health care quality and cost in this region have been driven largely by the employer community. The St. Louis Area Business Health Coalition (BHC) was founded about 30 years ago by employers concerned about rising health care costs. Approximately 50 large St. Louis employers, including Monsanto, Boeing, and local school districts, participate in the membership organization and purchase health care together. In 2010, upon realizing the coalition was not achieving its desired level of quality and cost transparency, BHC leaders worked to build a data collaborative supported by a multi-stakeholder board, creating MHI.

Three carriers, self-insured employers, and a pharmacy claims organization voluntarily provide medical and pharmacy data to MHI's claims database.<sup>16</sup> The database houses claims information on approximately one million lives, primarily in the St. Louis area (although the MHI board has voted to collect claims state-wide). Initially, MHI focused on using the data to assess quality, but the TCOC project has extended the analysis to cost.

### Program Design

#### *Implementation*

The RWJF-funded TCOC project was introduced at a time when MHI staff were trying to determine how they would use the cost data they were collecting. MHI was in the process of launching a provider portal that would report quality measures, but without a way to measure relative cost it was missing what was considered an important indicator of value. Board members felt that the TCOC project squarely fit the mission of MHI, and there was a general sense of optimism around bringing all the stakeholders together to examine cost. However, there were some initial concerns about the limited number of lives in the analysis, the risk adjustment methodology, and attribution.

Prior to applying to participate in the TCOC project, MHI staff went to all of the major hospital systems in their area and sought their input on whether the project was a good for MHI and the community. MHI also went to the three health plans that were already providing them with claims data to make sure the carriers were comfortable with the data being used in this way. The organization also conferred with its

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<sup>15</sup> MHI now refers to the TCOC project as the Healthcare Regional Cost Measurement & Transparency Project.

<sup>16</sup> Missouri does not have a state-wide all payer claims database, and the multi-state reach of MHI market suggests any one state's APCD would be insufficient.

data vendor, which confirmed that the data was of high enough quality to participate in the project. MHI and its sister organization, the St. Louis Area Business Health Coalition, held a transparency forum in March 2013 to announce the project to the community and discuss the evolution of cost and quality transparency. Approximately 120 people representing a wide range of stakeholders attended.

After developing presentations on the data for large medical groups and a provider portal (described below), MHI's renewal grant will focus on physician and employer engagement, and exploring the addition of Medicare and Medicaid data.

#### *Data Approach*

Of the approximately one million lives in MHI's claims database, a smaller portion was used for the TCOC analysis. Not all of MHI's data includes cost. After isolating the data with cost elements, MHI develops a subpopulation (approximately 100,000 lives) that more accurately reflects the market concentration of the region's health plans. MHI found the quality of the data from the three major carriers to vary. MHI shared data on the total cost of care, total resource use and complementary quality and utilization metrics with six local primary care groups comprising more than 275 practice sites. The data presented showed variation at the group level and practice site level for each group's larger practice sites.

MHI uses the same data vendor as the Oregon Health Care Quality Corporation (Q Corp), although different vendor staff members work on each coalition's TCOC project. While the vendor understood community collaboratives and this work generally, the organization appeared resource-constrained, and before the TCOC project began, MHI had to reach out to senior staff in order to get the dedication they needed.

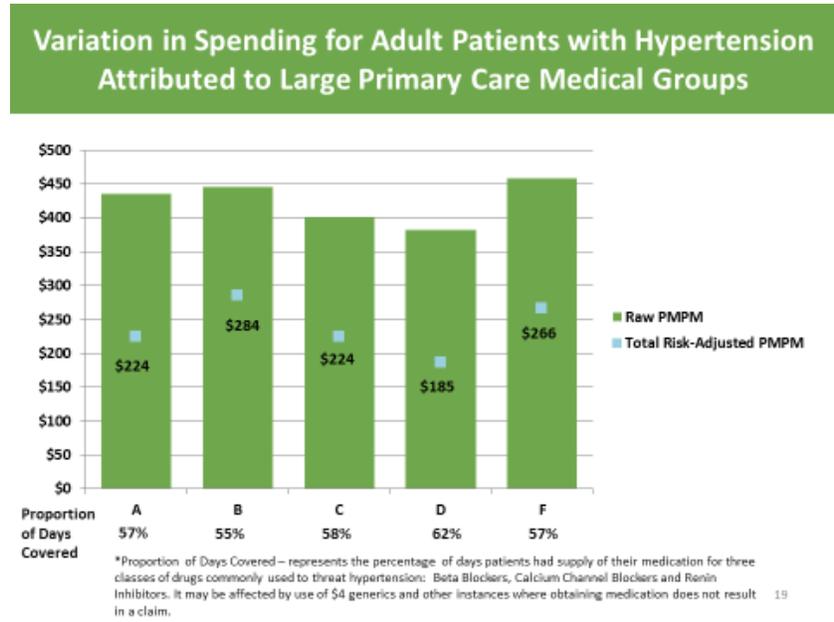
MHI has so far analyzed cost data for 2013 only, so it will not have multiple data points for the initial reporting period. Compared to the other regions studied, MHI found that its community has lower costs, but slightly higher utilization—so they see room for improvement.

#### *Physician Group Comparison Presentations & Dissemination*

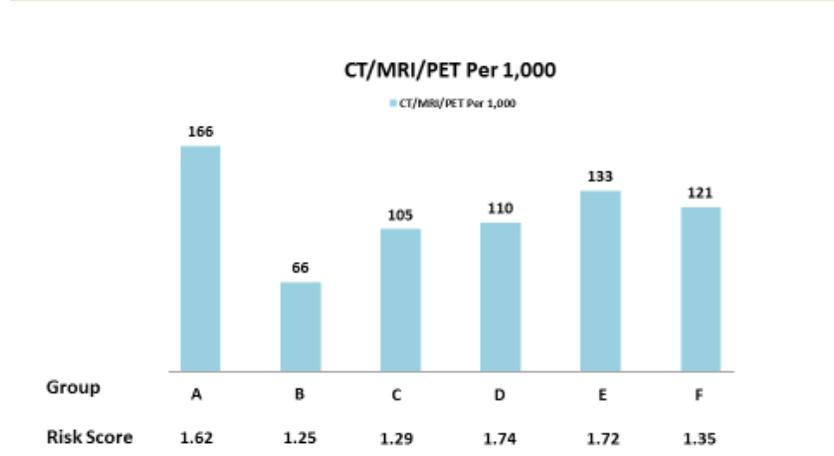
All of the six physician groups assessed are composed of more than 100 physicians with multiple practice sites. MHI staff say they would like expand MHI's practice-level reporting to share more granular data at the clinic level, which is part of its renewal application to the Robert Wood Johnson Foundation.

In late April 2015, MHI shared "blinded" results at a meeting with physician organizations. MHI then shared physician group-level and some practice-level results at private meetings with representatives of each physician group. The information was presented in-person as a PowerPoint presentation with members of each group's leadership team, which led to lively dialogue (See Figure C-1 for sample slides). MHI staff reported that the conversations during the presentations provided meaningful feedback, and the leader of one provider group noted, "This is some of the best data I've seen." All of the groups were interested in the data being shared and looked forward to being able to see additional data points.

Figure C-1. Sample Slides from MHI Presentations to Physician Groups



### Variation in Use of Imaging (2013)



25

Participants shared ideas for how future presentations could be more actionable and for framing some of the issues. MHI also licenses its data to provider organizations for quality improvement and about half of the groups expressed interest in potentially licensing the MHI data set after seeing the TCOC and related quality and utilization data. The presentations were based on and similar to reports used in Oregon and Maine, which include indices for risk and disease burden. MHI will be working with its data vendor to incorporate the TCOC measures into its provider portal and expects to complete that work during the next round of the project.

Blinded TCOC data will also be shared at an invitation-only community meeting in September 2015. Invitees will include both MHI and BHC boards, Medicaid and other purchasers, medical groups, as well

as CFOs and CEOs of all of the health systems. In addition to spreading knowledge about the findings, MHI hopes to engage community leaders in a discussion about how to provide support to providers interested in reducing costs and improving resource use.

As of late Spring 2015, MHI does not plan to post TCOC reports on a public website, and will make the information available publicly only after it better understands normal variation in results over multiple time periods. MHI staff expect to first make blinded TCOC information available to the public possibly by the end of 2015, then at the six-group level in 2016, and potentially at the practice level in 2017-2018.

### *Stakeholder Involvement*

Throughout the 18-month project period, MHI's approach was to incorporate TCOC into their conversations with partners and others in the community "whenever possible." MHI staff made presentations to employers, physicians, health plans, hospitals, and the state Medicaid organization. MHI project leaders also kept the multi-stakeholder Board members up to date on a regular basis throughout the project.

The two stakeholder groups that were most involved with the project were employers and physicians, according to MHI staff. MHI ensured they had the support of the employer community through the BHC Board's approval process.

MHI's Physician Leadership Council, which is composed of 12 physicians and local health plan medical directors, was also very engaged with this project. The Council selected four physicians to attend the TCOC National Physician Leadership Seminar in 2014, seeking individuals who were young, energetic, and future leaders. Two came from academia and two from community practice. The physicians reported positive experiences at the seminar, noting a good mix of education, dialogue, and network building. Two of the physicians have remained very engaged in the project; another is working with his system to enable physicians to see cost information in their electronic medical records, and the fourth is considering how to incorporate cost into medical education. As one MHI staff member described, "Physicians had no idea what things cost."

Despite the Council's involvement, there was some initial resistance from physicians. The main concern was that costs are attributed to PCPs who do not have control over all of their patients' utilization of services. MHI staff acknowledged to the physicians that the burden falling on PCPs "isn't fair, but there isn't another way to do it." They compared it to readmission penalties for hospitals, and that resonated with the physician group.

MHI staff also felt it was critical to have early discussions with the larger health systems and payers, to make sure they were comfortable with the project. While MHI gained the support of these constituencies, they are aware that once the data is released, these groups might not be as supportive of the project. Consumers are less involved with the project, although two consumer representatives sit on the MHI board.

### *Accomplishments and Challenges*

#### *Accomplishments*

MHI has achieved momentum and a level of consensus around a project that was very sensitive to some stakeholders. The board has been diligent in informing stakeholders that they do not want to "beat [the results] over the providers heads," but instead would like to use these results to create awareness

around health care cost and quality. With this project, as with others, getting their “hands dirty” together has developed a sense of trust among stakeholders.

The technical assistance provided by Maine’s RHIC enabled MHI to avoid multiple data problems. The data quality checks developed by Maine’s technical advisor caught errors in the data that would have likely set the initiative’s timeline back.

### *Challenges*

While MHI has been successful at building interest and excitement around this project, consensus building takes time. One payer expressed some frustration regarding how long it has taken to get to this point. However, MHI staff stressed that making sure the information is correct and stakeholders are comfortable with it is more important than expedience.

There were also some challenges with the data. There were difficulties matching pharmacy with medical data. There were also challenges after two pharmacy claim management companies merged, and they were submitting merged data in two different formats; the data analyst didn’t realize this difference until a quality check caught the discrepancy.

Because the region’s total cost of care figures were low relative to the four other communities participating in the TCOC project, there was a concern that there was a mistake with respect to the data. After re-examining the data multiple times, MHI was finally confident that the total cost results were accurate. Adding more regions to the project that may show a wider range in costs in the next phase may mitigate similar concerns in the future.

Staff and stakeholders anticipate future challenges related to messaging, tension related to referrals, and sustainability. There are concerns that community members may see more expensive care (identified in the TCOC findings) as being better care. For example, when one stakeholder saw that the region’s total costs were low relative to the four other communities, the person was worried that the providers in the area weren’t charging enough.

As the data is introduced to the community, there may be some pressure on physicians to refer to low-cost providers. However, there is likely already pressure on these physicians to refer to services and specialists within the health care system, which may be higher priced. These issues are likely to create tension.

Moving forward, a significant challenge will be related to sustainability. Because many providers and insurers already have payer-specific information around total cost of care, they may not be willing to financially support the initiative. However, a health plan representative who was interviewed noted that the TCOC project’s merging of larger data sets and multiple data sources lends additional credibility to the measure.

### *Perceived Impact*

Overall, all stakeholders interviewed agreed that participating in the TCOC project has added momentum and additional credibility to their health care measurement activities. There is power in having a “million conversations a million times,” in order to change thinking and behavior, and this project has helped spur those conversations. The hope is that dissemination of TCOC information ends the “whack-a-mole” game of pushing down costs in one area only to see them rise in another. There is an ongoing discussion about what is needed to make the information most actionable. There is

agreement among stakeholders that the lack of trend data in the initial report (based on just 2013 data) diminishes the ability for this information to tell a story about cost and utilization in the region.

Different stakeholders plan to use the TCOC information in different ways. Most stakeholders agreed that the initial group-level and practice-level TCOC data would have limited “actionability,” but the information may generate conversations about why a particular group is more expensive than another, and promote tough conversations between physician groups and their health systems. Physician groups that have favorable TCOC scores may use the data to market themselves and negotiate better reimbursement from health plans. One interviewee thought cost reports sent by health plans in the past were often “just one more report that [physicians] don’t understand and don’t care to understand,” underscoring the importance of the TCOC release messaging. It also highlights the opportunity of providing physicians with one meaningful report that aggregates their data across plans.

Employers are cautious about using data to drive employees to particular providers. One employer who is actively involved with MHI initiatives expressed that his company will likely use TCOC information to educate employees around purchasing decisions, but that the data is unlikely to directly impact the company’s purchasing of health care in the near future. While employers are “very excited to see numbers, the data isn’t ready for employers to use for payment design.”

One stakeholder thought that if the information is made public, the larger community and health plans could make TCOC data actionable as a population health measure, by dividing per-member per-month data by sub-geographies and targeting resources appropriately.

### Lessons

MHI’s experience to date provides lessons for other collaborative health care improvement efforts.

**Spend more time on the planning phase.** When this project began, MHI was extremely excited to get started, and, in retrospect, staff felt more time in the planning phase would have been helpful. Performing the quality checks developed by the Maine TCOC coalition up front may have avoided some of the data mistakes that affected the project timeline. MHI staff and the data vendor repeatedly mentioned that these quality checks were extremely helpful. However, the overall project timeline was reasonable.

**Stay on top of your data vendor.** It was important for MHI to stay “really on top of [of the data vendor]” to get the work completed correctly and in a timely manner. MHI found, for example, that some data they received was not adequately peer reviewed, so they addressed this issue with the vendor.

**Use your existing organizational structure.** MHI found that using their existing committee structure to implement this project was beneficial. Their stakeholders have other positions and volunteer on these committees, and MHI did not want to stretch them too thinly by creating additional committees and meetings.

**Keep the physicians engaged.** Physicians have been a critical stakeholder group throughout this project, and the National Physician Leadership Seminar was a valuable way to keep them engaged and spread total cost of care information to other physicians. However, it was felt that this seminar should not be a “one-off” event. Keeping physicians involved is an “ongoing piece of the puzzle” in order to reduce cost and improve quality. MHI is brainstorming ways to recreate the seminar in its own region.

**Confidence in your data and consensus building are slow but critical.** It's important to generate support among key stakeholders and ensure the data is solid to maintain this support. However, this often means that progress is takes much longer than planned.

**Participating in a national project is beneficial.** The TCOC project was introduced to MHI at a time when they were considering moving forward with cost data on their own, and it was apparent to staff and stakeholders that participating in the larger national project enabled them to progress faster than they would have otherwise.

#### Acknowledgements

The evaluation team interviewed the following individuals: Mary Jo Condon, Midwest Health Initiative (MHI); Louise Probst, St. Louis Area Business Health Coalition and MHI; Barb Ward, Milliman; Ray Kleeman, Monsanto; Bryan Burns, MD, St. Anthony's Primary Care Consultants; Steve Martenet, Anthem Blue Cross and Blue Shield in Missouri.

## Appendix D: TCOC in Minnesota

### Overview

Minnesota's Total Cost of Care (TCOC) program is led by MN Community Measurement (MNCM), a non-profit organization dedicated to improving health by publicly reporting health care information. Though the state had an all payer claims database, it is currently on hold. Instead, MNCM was able to obtain data from the four major commercial health plans, including the one that developed the TCOC methodology used in the RWJF TCOC pilot. In December 2014, MNCM was the first of the five participating RHICs to publicly report TCOC information for 115 medical groups representing more than 1,000 clinics in the region. Its website allows consumers to view below average/average/above average ratings for each medical group, as well as numerous quality and patient experience scores at the clinic and medical group levels. MNCM also distributed more detailed reports focusing on the total cost index to the medical groups, and it plans to include resource utilization in the near future.

### State and Local Context

Both the private and public sectors in Minnesota have been leaders in health care transparency. Initiated by major commercial health plans, MNCM has been developing and reporting standardized metrics for quality since 2005, later adding patient experience and some cost metrics. MNCM produces annual Health Care Quality, Health Care Disparities and Equity of Care reports and a public reporting website ([www.MNHealthscores.org](http://www.MNHealthscores.org)) that allows consumers to compare numerous performance metrics across physician clinics, medical groups and hospitals.

Each of the major health plans, including HealthPartners, has been measuring provider quality and cost or "efficiency" based on its own data, and using the information to tier networks or design plans. That is, cost of care has been incorporated into provider contracting for many years. The plans use different methodologies, however, leading to confusing and sometimes conflicting results from different payers on a provider's performance. This frustration helped build support for a total cost of care measure across payers.

In 2008 the Minnesota legislature passed a statewide Health Care Reform Act that, among other initiatives to move the state toward value-based payments, mandated greater transparency of provider cost and quality. The Minnesota Department of Health established an all payer claims database (APCD)<sup>17</sup> to support a Provider Peer Grouping initiative<sup>18</sup> that would allow comparisons of cost and quality of care (adopting quality measures developed by MNCM) provided by clinics and hospitals. However, stakeholders reported that technical difficulties with the APCD led the legislature to suspend the PPG initiative in 2014.

Meanwhile, some health plans and hospitals were looking for a private alternative to the state's Provider Peer Grouping project, according to interviewees, and turned to MNCM to "step up." The RWJF TCOC grant provided additional support to this initiative that MNCM had already begun. Interviewees suggest that the facts that the major health plans are local and are required by the state to be not-for-profit make dialogue and cooperation easier than if national and/or for-profit health plans had a major presence. The provider market is dominated by about 15 large medical groups.

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<sup>17</sup>Also known as the Minnesota Health Care Claims Reporting System (MHCCRS).

<sup>18</sup> The APCD was later authorized to support additional analyses and evaluation activities.

## Program Design

### *Implementation*

With a framework already in place, the TCOC pilot allowed MNCM to “really get moving,” supporting additional communication with providers, revision of their website, and testing of the process. The primary purpose of the effort is to identify and learn from variation across providers, make improvements, and ultimately reduce total cost.

MNCM tasked its existing multi-stakeholder Technical Advisory Group (TAG) to focus on cost. The group chose a total-cost-of-care over episode-of-care approach because TCOC was more inclusive, and recommended using the National Quality Forum-endorsed HealthPartners’ TCOC methodology. Three subgroups worked simultaneously on data mechanics, data validation, and cost public reporting. HealthPartners distinguished the aspects of their TCOC measure that were NQF-endorsed, which would be kept, from those that could be open to community discussion. Attribution, for example, was an area of debate and modification, and having the ability to shape this piece of the measure was empowering to the group, according to an interviewee.

The TAG reported to MNCM’s Measurement and Reporting Committee (MARC), which reviews and adopts new measures. MNCM engaged stakeholders through meetings to explain and answer questions about the measure concept; worked with two health plans to test and refine the methodology for ease of implementation; and gathered feedback from providers through both meetings and public comment to ensure the attribution approach made sense to the community.

Once those initial engagement and testing stages were completed, MNCM worked with the four major commercial health plans to adopt a uniform approach to processing the 2013 data. An outside firm confirmed the calculations were accurate and that the methodology had been followed as agreed upon. MNCM distributed medical group-level reports to 12 large medical groups initially, to test the process and ensure their usability and intuitiveness. Reports were then sent to all 115 medical groups analyzed. While the 115 groups represent a minority of the 521 medical groups that exist in the region, these large groups dominate the market and serve the vast majority of the region’s commercially-insured population.

Throughout this engagement, data aggregation and review process, MNCM staff were in continual contact with and received frequent feedback from the TAG, which would keep the MARC and Board of Directors up to speed. As of early Summer 2015, MNCM is working with the health plans to analyze 2014 data, which will allow them to examine variation between years, and to run companion reports on resource utilization. Early analysis suggests the 2014 data is congruent with the 2013 data. MNCM is on track to release the data in the Fall of 2015.

MNCM staff found that working with other RHICs and receiving technical assistance from Maine’s advisors helped provide “legitimacy to people in Minnesota that we’re not just winging this – others are working on it too.” Though some aspects of MNCM’s model did not fit the same format as the one used by the other participating RHICs, MNCM learned, for example, a better way to do age band reporting through the group. When providers who do not get a good score want to change the model, being part of a national collaborative gives MNCM a good rationale to retain its approach.

The TCOC effort seems to be becoming more sustainable, according to an interviewee, with buy-in from the health plans that are providing in-kind data work and general funding to MNCM.

### *Data Approach*

Due to technical and access difficulties with the APCD, MNMCM revised its legal agreements with the four major commercial health plans in order to directly obtain and use cost data on more than 1.5 million patients.

Unlike the other participating TCOC sites whereby the health plans submit claims data into a central database for analysis, Minnesota uses a distributed model. The health plans conduct the attribution, apply the ACG risk adjustment assignment, roll up the information to the medical group level, and then submit the data to MNMCM. MNMCM audits and combines the information from all of the health plans, and calculates the weighted average costs for each medical group. A data intelligence consulting firm also tallies the numbers as a quality check.

MNMCM staff noted a few advantages and disadvantages to their unique approach. If a RHIC does not have an APCD that is accessible, clean, and tested, then having the health plans conduct the bulk of the analysis is “a lot faster and cheaper.” Further, the health plans know their data and claims systems better than would any outside organization. However, under this model the RHIC does not have access to patient-level information, so it cannot do additional patient-level analyses nor change the data methodology easily; it must return to all of the health plans to ask them to make the changes in unison. Also, the RHIC does not control how much time each health plan dedicates to this analysis.

Although TAG members felt that reporting TCOC at the clinic site level would be ideal, the data would not be reliable given that claims, across multiple platforms, do not have a reliable clinic level indicator, so they decided to conduct the analysis at the larger medical group level. Still, despite greater confidence in the larger numbers and robust testing, staff believe the real test of stability will be comparing the first and second years of data to determine the extent of variation.

MNMCM staff report that the success of the TCOC project depends on the trust built over ten years that the health plans would each fulfill the agreement to aggregate the data in the same way. It was agreed that plans would not attempt to use the TCOC reports to make inferences about each other’s confidential “business intelligence.”

### *Medical Group and Public Total Cost Reports*

The TCOC reports distributed privately to physicians about their medical group offer much more detail than the information available publicly, which was part of the agreement with the health plans. The primary measure on the 5-page report to physicians is the Total Cost Index (TCI), with adult and pediatric metrics separated. The report also contains risk-adjusted cost per patient, the medical group’s rank in the state, cost breakdowns by type of service, and other measures. (See Figure D-1.) The medical groups have the option to request, and the health plans provide, a full patient list on which the analysis is based (MNMCM does not have access to this information). This facilitates drilling down to better understand cost drivers. Reports in the near future will also include resource utilization measures.

Figure D-1. Portion of Sample Medical Group TCOC Report

| <b>Sample Clinic</b>                      |                       |                              |                |
|---|-----------------------|------------------------------|----------------|
| MNCM Medical Group ID                     | 999                   |                              |                |
| Tax ID(s) used for patient attribution    | 41-1234567            |                              |                |
| Date Of Service Range                     | 1/1/2013 - 12/31/2013 |                              |                |
| 1 Attributed Patients                     | 2,843                 | 961                          | 3,804          |
| Patient Months                            |                       |                              |                |
| 2 Medical                                 | 33,985                | 11,465                       | 45,450         |
| 3 Pharmacy                                | 21,750                | 7,097                        | 28,847         |
| 4 Total Costs                             | \$19,758,983          | \$1,837,014                  | \$21,595,997   |
| Costs after truncation applied            |                       |                              |                |
| 5 Medical                                 | \$16,641,239          | \$1,755,330                  | \$18,396,569   |
| 6 Pharmacy                                | \$2,230,041           | \$81,685                     | \$2,311,725    |
|   | \$18,871,280          | \$1,837,014                  | \$20,708,294   |
| Cost Per Patient Per Month (PPPM)         |                       |                              |                |
| 7 Medical                                 | \$489.66              | \$153.10                     | \$404.76       |
| 8 Pharmacy                                | <u>\$102.53</u>       | <u>\$11.51</u>               | <u>\$80.14</u> |
| 9 Cost Per Patient Per Month (PPPM)       | \$592                 | \$165                        | \$485          |
| 10 Adjusted Clinical Groupings Risk Score | 1.2223                | 0.3814                       | 1.0102         |
| 11 State Average Risk Score               | 1.1751                | 0.5055                       | 1.0000         |
| 12 Risk Adjusted Costs PPPM               | <b>\$484</b>          | <b>\$432</b>                 | <b>\$480</b>   |
| 13 State Average PPPM                     |                       |                              | \$436          |
| 14 Total Cost Index (TCI)                 | <b>1.1119</b>         | <b>0.9905</b>                | <b>1.1016</b>  |
| 15 State Average PPPM by Age Group        | \$514                 | \$217                        | \$436          |
| 16 Risk and Age Group Adjusted PPPM       | <b>\$571</b>          | <b>\$215</b>                 | <b>\$480</b>   |
| 17 TCI Standard Deviation                 | 0.160                 | 0.231                        | 0.158          |
| <b>Detail Results</b>                     |                       |                              |                |
| <b>Analysis by type of claim</b>          | <b>Actual</b>         | <b>Expected <sup>1</sup></b> | <b>Ratio</b>   |

The MNHealthScores.org website allows consumers to see whether a medical group is higher-than-average, average, or lower-than-average (with 80 percent assigned the 'average' rating) in Total Cost overall, for adults, and for pediatric patients (See Figure D-2). Medical groups that do not meet the minimum threshold for attributable patients from the project's data sources are "not reportable." Consumers can also compare costs across a range of procedures, quality, and patient experience ratings.

Figure D-2. Sample from MNHealthScores Public Total Cost Web Page

|   | Stillwater Medical Group<br>STILLWATER, MN | Burnsville Family Physicians<br>BURNSVILLE, MN | Buffalo Clinic, PA- IHN<br>BUFFALO, MN |
|---|--|--|--|
| <b>COST MEASURES (per month)</b>                  |  |  |  |
| <b>TOTAL COST: OVERALL</b><br>MORE INFORMATION    | AVERAGE \$381                              | AVERAGE \$382                                  | AVERAGE \$392                          |
| <b>TOTAL COST: ADULTS</b><br>MORE INFORMATION     | AVERAGE \$448                              | AVERAGE \$449                                  | AVERAGE \$466                          |
| <b>TOTAL COST: PEDIATRICS</b><br>MORE INFORMATION | AVERAGE \$196                              | NOT REPORTABLE                                 | AVERAGE \$188                          |

### Stakeholder Involvement

Under Minnesota's model, the four large health plans were intimately involved in the TCOC project. HealthPartners was willing to share its TCOC methodology, and met with the TCOC pilot project's technical advisor from Maine's RHIC. Because the health plans would share sensitive business intelligence, MNMCM staff had to build personal relationships with and between health plan management. They held one-on-one and group meetings with health plan executives, programmers, and provider relations personnel. "It helps that everyone knows each other," according to MNMCM staff. Running test models and examining the output helped to ensure the process was working.

Physician involvement in the project was a focus and a challenge. MNMCM staff said physicians who attended the TCOC National Physician Leadership Seminar in 2014 found it helpful, and used that experience to champion the work to their peers. Staff said those physician champions were critical, along with physicians on the MNMCM Board of Directors, MARC, and TAG committees. In addition, MNMCM communicated with and gathered feedback from a broader array of providers throughout the four-year development process through webinars, professional conference presentations, newsletter/web articles, committee updates, public comment periods, published articles in Minnesota physician periodicals, and engaging their professional societies. In particular, MNMCM sent the proposed methodology to all medical groups for feedback during the public comment period, and both the medical and hospital societies were involved throughout the measure development process.

Despite these efforts, there were challenges to engaging providers. Two physician representatives expressed that they and their colleagues were not included sufficiently in the measure design process. Physicians were particularly interested in being engaged about attribution, risk adjustment and the way the information would be presented on the consumer website. Those topics were discussed by the TAG, which included physician representatives, but the broader provider community was not as engaged in those discussions. Additionally, some physicians expressed a concern about the lack of Medicare and Medicaid data in the process. MNMCM hopes to add those payer-types to the results in coming years.

Interviewees reported that most providers felt their concerns were addressed, although some continue to have reservations. For instance, one provider interviewee felt that concerns from the smaller medical groups were not fully addressed. Another noted that more communication early on would have been preferred, in addition to more time to respond to preliminary reports. Finally, one interviewee suggested that Minnesota's medical group management association could have been a helpful resource

Consumer representatives were involved on all of the committees, and several focus groups to test the format and understanding of the information have been conducted. Additional testing is planned as future refinements to the consumer display are made. One interviewee reported that the state is considering doing a similar TCOC initiative.

## Accomplishments and Challenges

### *Accomplishments*

MNCM was the first of the five participating RHICs to publicly report TCOC information, and the only one to meet the initial goal of public reporting in December 2014. The analysis included costs from more than 1.5 million patients for 115 medical groups representing more than 1,000 clinics in Minnesota and nearby communities. The results showed a range of \$1,500 per patient annually. Along with the more detailed reports to medical groups, multiple stakeholders view the findings to be fueling conversations about variability in costs, and a “starting point” for drilling down and understanding the factors behind that variation. Future reports that include resource use will show whether price or utilization are the main cost drivers.

### *Challenges*

MNCM staff shared that it took a lot of effort to obtain agreements from the major health plans to share cost data, despite existing relationships and data sharing for quality measurement. Even with data-sharing structures in place, it took about four years to publish the TCOC reports.

Physicians raised questions and concerns (described above) about whether they would be compared “fairly.” Providers who question their scores may use a long-established appeal process (initially developed for MNMCM’s quality measurement effort) that prompts going back and double-checking the data. Interviewees reported that most providers felt their concerns were addressed, though some continue to disagree.

MCMN also faced challenges related to cleaning data and validating calculations, leading the group to hire an outside consultant. Staff felt that NRHI was very helpful in troubleshooting and coordinating among the participating RHICs, but that they could have used more guidance on calculations during early stages of the project.

### *Perceived Impact*

Many stakeholders see value in putting out the TCOC information, and that it’s up to providers whether or how they will use it. Larger medical groups have “seen all this [cost information] before” on a payer-specific basis and already have contracts based on total cost of care. The new TCOC project reports differ by using a standard methodology and combining data across health plans. A physician representative noted that larger medical groups or health systems have dedicated staff to analyze such reports, but that smaller groups do not have that capacity.

When the initial mock report was shared with one provider committee, some physicians felt it was not sufficiently “actionable.” MNMCM staff made refinements to improve the usefulness of the report. Most interviewees were not certain about the degree to which providers were using the information yet, and one suggested that the information may be more helpful for contracting purposes than for practice improvement. One provider representative expressed that improving attribution and adding public payers to the analysis, as is planned for the future, would make the data more meaningful for certain medical groups, such as those with large Medicaid patient populations. Different stakeholders hope that

the TCOC information is getting people to pay attention to cost, but acknowledge that just releasing it is not sufficient to change behavior.

Some large employers and employer coalitions have talked about building networks based on quality and cost measures, and plan to make sure their employees see the TCOC information.

Most stakeholders questioned the value of the public TCOC information to consumers. One interviewee reported that the public response was “muted,” and that TCOC is not in the public consciousness because it does not affect them directly as it is unrelated to out-of-pocket costs or insurance benefits. Another interviewee suggested that the current information is a good start but that it needs to be presented at the clinic level to be meaningful for consumers, and should be blended into a single metric with quality and patient experience.

### Lessons

MNCM’s experience to date provides lessons for other collaborative health care improvement efforts.

**If you could build the relationships, you could do it.** MNM staff concluded that any community could tackle the data aspects of TCOC reporting, and their experience proved that an APCD is not necessary. Building relationships is harder, and success depends on multi-stakeholders backing the process. Offering some flexibility to those involved in designing the project seemed to give the group comfort and a sense of control over certain aspects.

**Reaching physicians requires repeated, ongoing messages.** Physicians are a “tough crowd to reach,” particularly because they are inundated with plethora of information from multiple sources. MNM found they needed to repeat the message about TCOC over and over, and *continue* to engage physicians because you “don’t want to have to put in all this work and have it not be used for much.” Staff underscored the importance of working closely with the professional associations that are well-positioned to reach the provider community.

**Air concerns early.** MNM knew from experience that certain medical groups would have legitimate concerns about their TCOC scores, so they brought those groups into the testing phase. This enabled the groups to voice their concerns early, minimizing late-stage surprises and resistance.

**Small steps may be more effective than leaps.** MNM staff attribute much of their success to a “slow and steady” approach. “We never make a very big leap – we’re able to gather momentum through smaller committees, small groups, and building up smaller achievements.” Through this approach, the “tide just kind of turned and snowballed in a positive way.”

**Always put quality alongside costs.** Quality measures should be presented along with cost, to help avoid consumers’ concluding that *highest* cost providers are automatically the best. MNM also conducts focus groups to test how the information should be displayed to be best understood, and redesigned their website accordingly.

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The evaluation team interviewed the following individuals: Gunnar Nelson and Tony Weldon, MN Care Measurement (MNCM); Janet Silversmith, Minnesota Medical Association; Mark Wheeler, Sanford Health, and Kris Soegaard, Minnesota Health Action Group.

## Appendix E: TCOC in Oregon

### Overview

Oregon's Total Cost of Care (TCOC) program is led by Oregon Health Care Quality Corporation (Q Corp), a multi-stakeholder organization that provides information and leads collaborative initiatives to improve health care quality, affordability and patient experience. Q Corp built on its voluntary, multi-payer claims database to obtain cost data for measuring TCOC attributed to primary care practices. After experiencing delays due to data quality and vendor challenges, as well as the lengthy process of securing new data use agreements with carriers, Q Corp produced and privately distributed clinic-specific reports to more than 150 primary care practices in April 2015, and plans to update the reports twice a year. It is implementing a communication plan with webinars to educate practices about the TCOC measures, and determine how to provide assistance on how to use the information. Q Corp, its Board, and its committees will be deciding during 2015 what and how to report TCOC publicly, potentially in the next year.

### State and Local Context

Oregon's environment appears favorable for the TCOC initiative. Oregon has a history and culture of collaboration and interest in efficient use of resources. No one health plan dominates the market, and the health plans are very collaborative. The state is small enough that health care stakeholder leaders know each other personally and it is easy to pull them together around a table.

Health care reform initiatives are part of the Oregon landscape. The state has a CMS State Innovation Model (SIM) grant to pursue transparency and value, and a Patient-Centered Primary Care Home initiative. Its Medicaid program is creating Coordinated Care Organizations that assume risk for population health under global budgets and require cost measurement. The commercial insurance market is primarily fee for service; however, stakeholders described a rapid increase in high deductible plans over recent years. They noted that incentives tied to cost sharing are starting to affect patients, who are asking their physicians about price. Responding to a request from the Governor, a December 2013 report from the Oregon Health Policy Board (OHPB) contains recommended actions and strategies to align Oregon's implementation of the Affordable Care Act (ACA) with existing state health reform efforts and promotion of the Triple Aim. One of the five recommendations by the OHPB (with technical and policy guidance supported by the Robert Wood Johnson Foundation, RWJF) was "to measure the total cost of care and move the health care marketplace toward a fixed and sustainable rate of growth."

In 2008, Q Corp began aggregating and analyzing administrative claims information from multiple payers. As of Spring 2015, the database includes 80 percent of the state's fully insured commercial population, 35 percent of the self-insured commercial population, 92 percent of the Medicare population, and all of the Medicaid population. Q Corp produces quality and utilization reports including quality measures publicly available on its website.

### Program Design

#### *Implementation*

The lack of cost measures and tools to meet the goals of Oregon's various transformation initiatives and the Triple Aim prompted interest by Q Corp's Board and program committee to examine cost. Q Corp was already participating in the RWJF's Aligning Forces for Quality program, and TCOC was one of the options it could pursue under that grant.

While there was great interest in including all populations – especially Medicare which comprises the largest share of costs – the Board decided to begin with HealthPartners’ TCOC measures with the commercial population because it was developed by a respected entity and was endorsed by the NQF. The current TCOC grant allowed them to test and validate the measure, add the missing ‘cost’ piece to the Triple Aim, and accelerate the process by learning from the other RHICs, especially Maine which had experience with the tool. They viewed TCOC as a building block for payment reform, and an opportunity to enhance Q Corp’s sustainability by developing and selling products and services around the measure.

Q Corp convened a TCOC Steering Committee in the summer of 2014 to guide the project. Expanding its database to include cost information, Q Corp worked with a vendor to calculate the TCOC measures at the primary care clinic level. Finding problems with 2012 data, they decided to move onto 2013 data, and after “cleaning” data and requesting additional data runs, found they had acceptable data in February 2015. Q Corp staff and committees spent much of 2014 and 2015 on developing the format and content of the practice-level reports and strategizing around implementation and communications. Q Corp gave practice reports to six physician groups and conducted focus groups to gauge their reactions and obtain feedback about report content and style.

Q Corp successfully produced and distributed practice reports to over 150 primary care practices by April 30, and plans to update the reports twice a year. It is refining and implementing a promotion plan to educate practices about how to read and use the information. Lacking resources to work with individual practices, Q Corp decided to develop and conduct webinars. Other elements of a roll-out campaign are part of the next phase under a follow up grant. Discussions are beginning about who is best to coach the practices, whether to build expertise in-house or partner with community organizations, how to develop related products and services, and when and how to incorporate Medicare and Medicaid data.

Q Corp also plans to incorporate cost information into its annual statewide report that will show variation and provide high level analysis for policymakers. Q Corp will be considering over the next year how and what TCOC information to publicly report. Staff plan to conduct consumer focus groups and will be watching reactions to TCOC public reporting in Minnesota and in Maine (expected July 2015).

#### *Data Approach*

Q Corp completed detailed legal agreements for obtaining and using cost information with most of the health plans that were already providing claims data for quality measurement. This took about 18 months, and any changes in methodology required renegotiating with the plans.

The same data vendor is working on the TCOC project with both Q Corp and the Midwest Health Initiative. Despite the potential for efficiencies, however, working with their data vendor has been “very frustrating” for Q Corp staff. They believe that the vendor underestimated the resources needed for the project, resulting in serious delays despite financial penalties. Q Corp has tried to address these issues through weekly calls at the analyst level and monthly calls at the executive level, and agreements to provide Q Corp greater access to the data to let them address data issues earlier and in-house.

#### *Clinic Comparison Reports*

Q Corp started with the TCOC practice report format developed by the Maine Health Management Coalition, and then went through a painstaking modification process, getting page-by-page feedback from Q Corp staff, committees, and external stakeholder groups. This resulted in “hundreds” of versions. After testing the reports with six clinics, one practice administrator said the reports were “eye opening,”

the color coding helped identify areas to examine more closely, and the physicians were very interested and continued to discuss the results after the focus groups. The physicians used a more careful eye when they viewed reports on their own performance (versus sample anonymous reports), and gave helpful feedback (e.g., suggestion for a glossary of terms and acronyms). This process also gave Q Corp confidence that the data looked accurate.

**Figure E-1. Portion of Cover Letter with sample Clinic Comparison Report**



The package for each practice includes a cover letter, an 8-page “Adult Clinic Comparison Report: Quality Utilization and Cost,” and a 6-page FAQ that includes examples of how clinics can use the report information to identify outliers and areas for further examination. The report presents tables and graphics illustrating raw and risk-adjusted TCI, RUI, and Price Index by service category; comparisons to other Oregon clinics; patient demographics and diagnoses; readmission rates, and other data. Figure 1 presents summary information from the cover letter of a sample report.

*Stakeholder Involvement*

The Q Corp executive director and TCOC project staff engaged stakeholders early and continue to talk about the TCOC effort “at every opportunity.” Q Corp established a multi-stakeholder TCOC Steering committee comprised of physicians, health plan leaders, consumer advocates, and clinic administrators.

Knowing that physicians were needed to become spokespeople in the community and open doors to other physician and provider groups, Q Corp invited physicians representing clinics, a hospital, and health systems to the TCOC steering committee. It sent four physicians to the TCOC National Physician Leadership Seminar; two expressed that it was valuable to hear that others were working on the same project and to learn about their experiences so far. One attendee, the CEO of a five-clinic medical group, brought back a basic toolkit that enabled her to explain the project to her employees and to colleagues at the area IPA. She found that physicians are aware of trends toward value-based purchasing and are interested to see where they fall on the cost and resource use spectra.

According to one stakeholder, “Physician involvement is key at the end of the day, because they’re the ones who directly partner with patients...If you don’t have physicians on board and buying in, it won’t work.” Another stakeholder stressed the need to bring physician champions when Q Corp goes to clinics, because, “Physicians don’t necessarily trust data from non-clinicians.”

Physicians had numerous concerns about the TCOC measure, including: it could make providers reluctant to care for sicker patients if the risk adjustment is inadequate; the claims information is too old (and therefore does not reflect current practice patterns) and often inaccurate; use of commercial data only is inadequate; physicians will be “shamed” based on their cost data without adequately considering quality; primary care physicians, especially in rural areas, do not have control over prices or do not have alternative options for referrals; and health plans may use the information to manipulate contracts and reduce rates. Q Corp addressed some of these concerns through: internal discussion with the board, and responding in writing to some; treating the issues as learning opportunities; being honest and humble about what the tool can and cannot do, and inviting other solutions. For example, they admitted that the risk adjustment mechanism cannot account for social determinants of health, and they continue to discuss and address these issues.

Engagement of health plans was critical to obtain the data, and Q Corp agreed that it would not share the health plans’ contracts or rates. The CMO of one health plan expressed that the TCOC information is useful, because it covers a wider population than internal health plan-specific cost calculations. He pointed out, however, that there isn’t enough excess capacity in primary care for a health plan to use TCOC to steer patients away from practices at this point.

Q Corp has found it a challenge to engage employers. The two employer representatives who were initially on the TCOC Steering committee have retired and replacements have not yet been found. An employer health coalition in the state disbanded recently due to lack of interest. This may be in part due to the majority of workers being employed by small businesses, while the large companies (e.g., Nike and Intel) have a national presence and are “doing their own thing.” Consumer advocates were invited to the Steering committee to push toward transparency sooner, creating a healthy tension with those who pushed for waiting to perfect the measures.

To manage relationships among the stakeholders, Q Corp has relied on its image as a neutral convener. Staff selected a physician chair for the TCOC committee who ensures everyone has an opportunity to be heard but is cordial. He meets regularly with the Q Corp support staff between committee meetings to prepare for the meetings, discuss areas to focus on and committee members to engage, and plan ways to use the time wisely.

Despite the outreach by Q Corp and its board and steering committee, some stakeholders believe that there is not much awareness of TCOC outside these groups and that the roll out will be critical for broadening the initiative.

## Accomplishments and Challenges

### *Accomplishments*

Q Corp has undertaken a tremendous volume of work, obtained agreements with health plans, engaged stakeholders, conducted data analysis, designed and privately distributed practice reports, and developed a communication plan. Staff are pleased at how well the concept has been received overall, and how it has contributed to the larger discussion about transparency. The TCOC project has resulted in “lots of people talking” to each other about costs and resource use. The very deliberate process of monthly steering committee meetings, presentations to multiple organizations, focus groups, and discussions has helped stakeholders to understand the project and to provide feedback. Stakeholders emphasized that the Q Corp leadership and staff have been exceptional in providing a neutral and safe space to express views, and in considering and addressing concerns.

### *Challenges*

Q Corp found that the project timeframe was too short. The coalition did not meet its December goal of publicly releasing TCOC data, primarily due to data and vendor issues described above. Also, when data looked problematic, requested resubmissions often took a long time under the voluntary arrangement with health plans. Data challenges arose because Q Corp’s lack of granular access to the data kept them from monitoring the vendor’s cleaning of the data and determining whether the carriers were submitting the right data. Physicians’ concerns noted above required that Q Corp take time to fully examine and address the issues they raised. It has also taken a long time to design and vet the clinic-level reports.

Going forward, the major challenge is how to roll out the clinic-level reports in a way that promotes action by providers. Q Corps staff think it will be helpful to share other communities’ experiences.

Other challenges are around public reporting of TCOC, such as what level of detail to show, and how to make the information useful to consumers with different levels of sophistication. One health plan physician questioned how often patients look at existing quality reports, and posited that the TCOC information will be useful only if it is incorporated into consumers’ benefit design. A consumer advocate anticipated that it will take 1 ½ to 2 ½ years to figure out how to present and disseminate the information for consumers, suggesting focus groups and getting the story to mass media. At the time of our site visit in March, Q Corp expected public reporting to occur in the next year.

The effort also faces financial challenges. Q Corp could not have conducted the TCOC work without some funding from their Aligning Forces grant supplementing the TCOC grant. It will need the second phase of funding to support dissemination and adoption. Sustaining TCOC measurement beyond grant funding and supporting the all-important task of working with practices to promote change are further challenges. Q Corp hopes to identify TCOC-based products and services that stakeholders would be willing to pay for, and see potential value for ACOs, IPAs, or payers to use it in risk-based contracting.

### *Perceived Impact*

All stakeholder interviewees agreed that the TCOC project has started conversations about health care costs, and that population-based TCOC measures have value when compared with episode-based

measures. They expect that some physicians will view the reports as credible and constructive, some will be skeptical, and some will attack the reports. All agree that messaging and support for practices around the roll out of the practice reports, as well as timely and frequent reports, will be critical to engage rather than overwhelm the physician practices, noting the danger of “transformation fatigue” from the many health system reform efforts underway.

Q Corp is working to develop a communication plan that presents the information as instructive and non-threatening, with the understanding that it will not be publicly available for a while. It shifted from describing the project as providing “actionable” data to offering “informative” data to clinics, acknowledging the need to make sure the information is valid and accurate. Most agree it will require a lot of time and consulting services to help practices take action. Rural and small independent clinics may need additional guidance (for example, “if your score is high in area A, you can consider X, Y, or Z”) because they have fewer resources for analyzing the data or making changes, and fewer options for referrals.

Physician leaders view TCOC as a tool in a stepwise change toward providers being accountable for cost, utilization, and quality. “It’s shocking that in the medical world you don’t know what the cost is,” said one physician leader. A physician practice manager stated, “Having cost numbers will help us be better utilizers.” She hopes to put the information on their own clinic website to show that they and the services they refer to are a good value. She noted that the reports don’t reveal the underlying causes, but they point to the areas where the practice itself can drill down further. The TCOC reports will also enable physicians to “start conversations” with patients, specialists, and insurers. For example, physicians can use the information in shared decision-making with patients, and clinic managers could use the data as a negotiating tool with health plans. The CEO of a multi-clinic group reported that TCOC will be on the agenda at their monthly clinic director meetings, and she expects that the ACO to which they belong will use the reports to look for patterns and to find areas to focus on and improve.

Providers serving Medicaid and uninsured patients do not find the current commercial-based TCOC measures relevant, and hope that Q Corp will incorporate Medicaid data in the future. The state has given permission to report on Medicaid data, but Q Corp does not yet have the methodology to do so.

There were mixed views about the degree to which consumers would use TCOC information once made public. “It won’t help to just post numbers,” according to a consumer advocate, “you need to educate the news media and consumers to have a conversation with your doctor.” He felt that on the way from “ignorance” to “knowledge,” the public will go through a phase of “confusion” that may be stressful and unfair to some physicians, but is necessary. In order to be more fair to practices, public reports could use arrows showing trends, e.g., to indicate whether the practice is improving over time, even if starting at a relatively poor starting point. Others pointed to the need for a “culture change” to shift consumers away from thinking that more care is better and more expensive care is better.

A physician practice administrator hopes that health plans don’t use the TCOC information as “a stick,” but rather to reduce variation, and eventually consider quality and cost in creating panels. Some expect health plans to compare the TCOC for their own membership with state averages that emerge from this initiative. One health plan leader felt that the risk adjustment mechanism is “still in evolution,” and is concerned that the any savings from reducing price or utilization will be negated by increases in pharmaceutical spending.

Health care leaders believe that the TCOC project is replicable and scalable if a RHIC or other organization has multi-payer data, political will, and relationships with stakeholders. It is also helpful to learn from early adopters, while allowing for some variation in design or stakeholder engagement based on local dynamics. However they also point out that the RHICs involved so far are “flannel shirt” communities with cultures of collaboration and concern about using resources wisely. TCOC efforts may face greater obstacles in other regions.

### Lessons

Q Corp’s experience to date provides lessons for other collaborative health care improvement efforts.

**Planners should double the timeline and resources they think they need.** Q Corp found that it underestimated the time and effort required for the TCOC project, and that the *process* is important – presenting the data to stakeholders, letting them digest it and share it with colleagues, and asking for feedback. Staff learned to avoid presenting the data or methodology as perfect, and instead say “it’s the best we have to start.” Q Corp also found it necessary to supplement their TCOC grant with additional funding.

**Include multiple stakeholders at the table with a neutral convener.** Collaboration and multi-stakeholder support is key. Q Corp realized that consensus takes a long time and that compromise is essential.

**Get physicians on board early.** Q Corp found it essential to have supportive physicians in the room during virtually all discussions, particularly those involving community physicians. They suggest starting by focusing on small areas of “low hanging fruit” where costs could easily be reduced.

**Check the data and don’t assume vendors are doing it right.** Merging and validation of claims data are an ongoing challenge. Make sure someone is looking closely at the data, and communicate up front with vendors about expectations and timeline.

**Presentation of the information is important.** The messaging around TCOC information, and even the formatting of reports, are important. Color-coding that identifies areas for practices to focus on is appreciated and could help steer physicians toward action. It is a challenge, however, to present information to varied audiences to optimize usefulness.

**Learn from others.** Q Corp staff and committee members found that working with other RHICs has “allowed us to advance faster” by sharing experiences, challenges and strategies. They also see benefits in benchmarking across regions, to better understand variation attributed to urban/rural and other factors. They view NRHI as indispensable, providing excellent project management and an instant peer group for both technical and moral support. Q Corp executive director and NRHI chair Mylia Christensen believes that this collaborative model should be used going forward with other transformation initiatives.

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