DIABETES VALUE METRIC
A Roundtable Discussion

Executive Summary

On September 22, 2009, the Wisconsin Collaborative for Healthcare Quality (WCHQ) convened a roundtable discussion of its members and strategic partners. The meeting served to update attendees on the progress of WCHQ's diabetes value metric project and to solicit feedback, questions and suggestions regarding the approach, process and next steps.

Guest speakers at the event – Greg Pawlson, M.D., M.P.H., executive vice president of the National Committee for Quality Assurance and Anne Weiss, M.P.P., senior program officer and team director for the Quality/Equality Portfolio for the Robert Wood Johnson Foundation – added insight and perspective. Project leader, Jack Bowhan, presented a value metric project update and led the ensuing discussion.

Aligning Forces for Quality in Wisconsin

Recognizing the necessity of performance measures to effect behavior change at the community level, the Robert Wood Johnson Foundation (RWJF) has made an unprecedented $300 million commitment to fund initiatives to improve the quality of health care. RWJF seeks to promote local competitive markets organized around comparative measures of quality, cost and active consumer engagement through the Aligning Forces for Quality initiative.

WCHQ has worked with Aligning Forces for Quality for over two years as one of 15 community-based organizations around the country. The diabetes value metric project represents an important aspect of WCHQ's involvement with Aligning Forces for Quality as an opportunity to explore how cost and quality data intersect to develop a working value metric.

Ms. Weiss acknowledged that there is significant work yet to be done; however, Wisconsin's efforts are considered to be among those at the leading edge of uniting cost and quality to measure healthcare value. She reinforced the belief that while national forces can shape and drive quality of care initiatives, problems need to be addressed at the local level where reform should take place.

Ms. Weiss recognized WCHQ for providing a strong foundation to bring together healthcare providers and payers and its outstanding commitment to address the complicated issue of healthcare value.

The current state and the need for a measure of value

The U.S. will spend more than $2.3 trillion on healthcare this year, with strong evidence of waste and inefficiency in some instances. However, there is insufficient transparency in terms of quality, cost-resource use or appropriateness to allow adequate diagnosis, let alone resolution of the problem. Existing data and performance measures focus on our current conception of the healthcare system, not on how we would want it to work. Most organizations measure quality and some type of cost data but both areas lack clarity and sufficient breadth and are usually looked at in isolation of each other.

The next level of performance measurement needs to demonstrate an organization's ability to simultaneously provide a high level of quality across a broad spectrum of care at the lowest cost possible (i.e., deliver high-value care). An ideal measure of value would include

at least three dimensions: cost (price and resource use), quality (including appropriateness) and patient experience. The first step and purpose of the RWJF grant is to combine quality and cost resource data into a single measurement of value for the management of diabetes.

Measurement; important considerations

Dr. Pawlson offered an overview of the ongoing effort to measure value. He maintained that to measure value (benefits minus risks over costs), you must define precisely what you're measuring but not lose sight of what you are trying to accomplish: a value-based healthcare system that restores, maintains or moves a population to the healthiest or lowest risk state possible.

Measurement is necessary to determine how to define a high-value healthcare delivery system. We are at the beginning stages of measuring many of the characteristics of such a system; however, there are a few isolated examples of progress such as the effort underway in Wisconsin to develop a diabetes value metric. According to the Institute of Medicine (IOM), a high-value healthcare delivery system consists of the following characteristics:

Table I

The Critical Aims of Healthcare

- Safe
- Timely
- Effective
- Efficient
- Equitable
- Patient Centered

What can we currently measure?

As part of the effort to identify a high-value healthcare system, quality measures are used to determine if individuals as well as populations have received the right kind of care. Dr. Pawlson noted the IOM's definition of quality as "the degree to which healthcare services increase the likelihood of desired health outcomes and are consistent with current professional knowledge."

The majority of quality measures currently available relate to the underuse of resources/interventions with a few useful measures available to identify overuse or mis-use. Virtually no measures are available to determine appropriateness. Additionally, there are few publicly available, meaningful measures related to cost and resource use.

Table 2

What is currently being done to measure quality and cost?

- **Quality**
  - HEDIS-MD specified
  - Physician Consortium for Performance Improvement (PCPI)
  - Ambulatory Quality Alliance (AQA)
  - National Quality Forum
- **Cost & Resource Use**
  - HEDIS Relative Resource Use (RRU) measures
  - Episode of care measures

In 2006, NCQA initiated measures of resource use at the health plan level for diabetes, cardiovascular disease, low back pain, asthma, COPD and uncomplicated hypertension. Dr. Pawlson shared high-level results related to diabetes quality and resource use from the initial two years of data collection. Starting in 2010, these HEDIS resource use measures (excluding the low back pain measure) at the health plan level will be paired with composite quality measures and publicly reported.

Dr. Pawlson concluded that slow but steady progress is being made in the effort to measure value. Current barriers to progress include limitations in data, data collection and the payment system. Promising developments exist for the standardization of measures in Electronic Medical Record (EMR) and Electronic Health Record (EHR) environments. Various projects around the country, like the WCHQ value metric project, will contribute significantly to the dialogue and serve as valuable national models.

Diabetes value metric project background

Jack Bowhan introduced the value metric project, which is supported by a special Aligning Forces for Quality grant from the RWJF. WCHQ has undertaken a project to develop, test and produce a value metric for the management of diabetes by the end of the year. With recent access to the Wisconsin Health Information Organization's (WHIO) data mart, the project intends to blend WCHQ's quality data with WHIO's standardized cost data to identify opportunities for improvement. Initial results will be reported at the clinic and specialty level and published internally.

If the project proves successful, the methodology can be applied to other areas of care. As with other WCHQ performance measurement initiatives, the effort relies on a collaborative process to build a metric front-line clinicians can easily use for comparison and identification of improvement opportunities. As differences between WCHQ and WHIO are tested, results will be fully disclosed as well as challenges and solutions to help support the development of the value metric. The roundtable discussion served as an important step in this process.

Approach

The value metric project will blend WCHQ performance measures derived from clinical systems data with WHIO data mart information. Each reporting system has been tested and the data validated for its own original purpose. For example, the WHIO data mart is designed for tracking and measuring episodes of care using healthcare claims data. WCHQ is a measure development and reporting system built from internal clinical systems data. Data source and specification differences between the WCHQ and WHIO systems need to be tested and understood before they can be combined for a measure of value.

Table 3

Current WCHQ/WHIO Data Specifications Differences

Concern	WCHQ	WHIO
Population Reported	All patients, all payers	Limited payer sources: WPS, WEA, Humana, UHC, Anthem and non-commercial Medicare
Denominator Build Differences	Ages 18-75 and at least 2 office visit encounters	No age exclusions and use office visits or inpatient admissions, ER visits or 1x insulin or hyper/hypoglycemic
Outliers	No exclusions	Excludes high and low cost
Risk Adjustment	None	Age, sex, co-morbidities
Attribution	Currently reports at system level only	Reports at system level, clinic by department and by individual physician

Analysis

The project intends to answer the question as to whether the data specification differences will impact the end result of reporting value by:

Step 1. Matching current 'unmodified' WCHQ data with WHIO data and producing a rank of organizations based on value

Step 2. Modifying WCHQ data to more closely resemble WHIO data to produce a comparative rank of organizations based on value

Step 3. Comparing 'unmodified' results (Step1) with 'modified' results (Step 2)

The results of this analysis will determine next steps to be taken by WCHQ to maintain the integrity of its measurement methodology and ensure the value metric's adoption by front-line clinicians:

- If the WCHQ 'unmodified' and 'modified' specifications provide the same ranking of organizations by value, the WCHQ and WHIO differences in data specifications may not need to be resolved for future reporting.
- If the 'unmodified' and 'modified' specifications provide a different ranking of organizations, additional steps will need to be taken to address and reconcile the differences.

Findings to date

Through the generous support of three WCHQ member organizations, WCHQ has begun to analyze the data source and specification differences between the WCHQ and WHIO systems. Test site participants – Bellin Health, ProHealth Care and ThedaCare – are diligently working with WCHQ to test the validity of combining the WCHQ and WHIO data to build a value metric.

The following findings represent the first steps in comparing population sizes and individual diabetes process measure results of unmodified WCHQ specifications to WHIO data.

Results of unmodified WCHQ data specifications

- Matching same payers within the WCHQ and WHIO databases results in differences in the numbers of patients with diabetes by clinic
  - While there were fewer WHIO-identified patients with diabetes, some differences are to be expected since all payers and all patients are not included in the WHIO database (e.g., self-funded payers). The WCHQ process includes all patients and all payers.
  - There were also differences in how patients were qualified as diabetic.

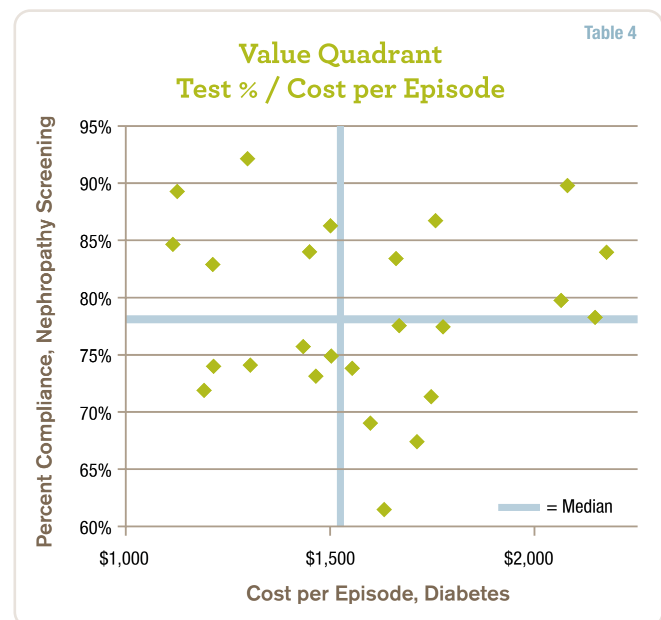
- When moving from the healthcare system or group reporting level to the clinic reporting level, 22 of 50 clinics had less than 30 patients
  - The WHIO data mart currently includes limited information from five payer sources; however, sample size may become less of an issue in the future when new iterations become available with additional sources of data.

- Certain process measure tests fell outside the 95 percent confidence interval
  - Nephropathy screening and LDL testing resulted in 64 percent and 40 percent, respectively.

Display options discussion

There was a brief presentation and discussion of options to display measurements of value. The display options include a quadrant as well as a quality and cost pairing.

Table 4



The roundtable discussion participants decided it would be difficult to track performance over time with the quadrant display. A second concern included a fundamental challenge with the use of the quadrant display format. The upper-left quadrant includes multiple organizations with good quality and cost; however, it does not rank organizations by best value. Separate points are used to represent the best clinical performance and the best cost result. The preferred display would display clinical performance and cost as a single point of value.

Table 5

Quality and Cost Display Options

The participants also found challenges with the quality and cost pairs display option of observed to expected results. It also isolates quality and cost and does not identify best value. However, this display would make it easier to track performance over time.

Value metric insights

The roundtable discussion provided additional insights that will help guide the development of the diabetes value metric and the next steps for the project. First, a value measure for diabetes should be a composite of all sub-measures. The observed to expected is informative, but a relatively complex concept to communicate at the clinic level and a considerable departure from WCHQ's approach to creating metrics that front-line clinicians can easily use for improvement opportunities.

There are different considerations for what is reported to the public and what is reported internally. For example, internal reporting might be used to identify opportunities for improvement, track results of improvement initiatives and support new payment approaches. Public reporting, in the ideal scenario, would help a patient select a physician group and individual physician at a level of value they expect, desire and need.

The next steps include conducting a match of 'unmodified' and 'modified' WCHQ and WHIO diabetes test results against the 90th and 95th percentile confidence intervals. The project team will also run correlation coefficients for WCHQ and WHIO process measure results.

The presentation of the project approach and initial findings also raised several issues and key questions that will inform the project's next steps and the development of additional value metrics:

- **Blending standard WCHQ and WHIO data is not an "apples to apples" comparison**
  The differences in WCHQ and WHIO data specifications and sources of data, as shown in Table III, raise a concern about the validity of blending data from various sources. Claims-based and clinical record-based databases are different; however, it is not clear as to whether the populations are representative of one another. The differences must be addressed, dismissed and/or resolved to gain physician buy-in to the value metric data. Testing with 'modified' data is needed to better understand the differences and allow for a fair comparison.
- **A one-time match of WCHQ and WHIO data may not be enough**
  Even if the data are successfully matched during the project's testing phase, a one-time match may not hold up over time or work for other measures. A validation process may be needed for each release of WHIO data to assure consistency of the value metric results.
- **Does quality trump cost?**
  Each database has its own advantages and perspective (i.e., quality vs. resource use cost). It is not clear if one database should take priority when considering data specification changes. If the goal is quality (i.e., patient outcomes and good care), it may be important for WCHQ data specifications to take priority and remain unchanged. It may be possible to manually generate quality reports from the WHIO data mart that match WCHQ specifications.

- **Resource measures may require a much larger sample size**
  WHIO's current limitation of five payer sources causes concern that larger sample sizes may be needed to provide reasonable reliability for a given use. Future iterations of the WHIO database may increase sample size and resolve this concern. Sample sizes may need to be varied by measure to reliably conclude that an organization performs differently than others.

Conclusion

WCHQ is sincerely appreciative of the tremendous support it has received from RWJF through Aligning Forces for Quality as well as the hard-working team members at Bellin Health, ProHealth Care, and ThedaCare. Much of the work to be done and ensuing discussion will center on demonstrating the validity of the data for physicians.

Additional findings and new information will be shared at future meetings and in planned updates through WCHQ's ValueWorks newsletter. Questions, feedback and suggestions are encouraged as an integral part of the collaborative learning process. For more information, please contact Jack Bowhan at 608-826-6842 or jbowhan@wchq.org.

A participant in the Robert Wood Johnson Foundation's *Aligning Forces for Quality* initiative to improve health and health care in Wisconsin.