

Testing and Risk Adjustment of Home Health Measures

Project Overview: Outcome and Assessment Information Set Quality Measure Development and Maintenance (OASIS QM)

The Outcome and Assessment Information Set (OASIS) is a core data set for home health patient assessment, care planning and other purposes. Medicare participating home health agencies are required to collect the OASIS for Medicare home health patients at various points in a home health episode. The items contained in the OASIS also provide the basis for quality measurement of home health agencies. The most recent version of the OASIS – the OASIS-C – was implemented in January 2010.

The Centers for Medicare & Medicaid Services (CMS) has contracted with Acumen, LLC and subcontractors Abt Associates, Inc (Abt), the University of Colorado at Denver, School of Medicine's Division of Health Care Policy Research (UCD), and key consultant Elizabeth Madigan of Case Western Reserve University (CWRU) to: 1) complete testing and validation of new OASIS-C based home health agency quality process measures; and 2) develop risk adjustment models for new OASIS-C based outcome measures. The overall purpose of the project is to ensure the development of valid and usable measures to report the quality of care provided to Medicare home health beneficiaries. Toward this goal, measure development follows the CMS Measure Management System Blueprint process, and measures are submitted for National Quality Forum (NQF) endorsement.

The Development and Testing Process:

Through prior work with Abt, UCD and CWRU, CMS revised the prior OASIS-B1 data set to incorporate changes and enhancements requested by members of the home health industry, maximize efficiency, and support assessment of agency implementation of best practices as recommended by NQF and the Medicare Payment Advisory Committee (MedPAC). The revised data set was field tested in 2008 to assess usability, inter-rater reliability, and validity. Based on that experience, as well as input from NQF and public comments received as part of the Paperwork Reduction Act (PRA) review in 2008-2009, further refinements were made. The revised data set, called OASIS-C, received final approval from the Office of Management Budget (OMB) in July 2009.

In October 2008, while the revised OASIS-C dataset was undergoing the OMB review process, a set of revised home health measures based on the OASIS-C were submitted for NQF review and endorsement. These measures included new process measures developed in conjunction with the revised OASIS-C dataset as well as existing outcome measures whose underlying items were still included in OASIS-C and scheduled for maintenance review under the NQF measure cycle process.

After review by the NQF Steering Committee and Consensus Standards Approval Committee (CSAC), the NQF Board of Directors granted full endorsement for ten home health outcome measures and time-limited endorsement for nine home health process measures in March 2009. An additional four process measures received time limited endorsement (TLE) in August 2009. Time limited endorsement for the process measures is in effect until March 2011. NQF provided TLE so that CMS could undertake additional testing to ensure NQF measure standards were met prior to resubmission for full endorsement. Tables 1 and 2 (below) display the home health measures that received NQF endorsement and will be publicly-reported on the CMS Home Health Compare website. Table 1 shows the ten

outcome measures that received full NQF endorsement, and Table 2 shows the thirteen process measures that received time-limited endorsement

Table 1: Home Health Outcome Measures with NQF Endorsement

Measure
Improvement in Bathing
Improvement in Bed Transferring
Improvement in Ambulation-Locomotion
Improvement in Management of Oral Medications
Improvement in Dyspnea
Improvement in Pain Interfering with Activity
Improvement in Status of Surgical Wounds
Emergency Department Use without Hospitalization
Acute Care Hospitalization
Increase in Number of Pressure Ulcers

Table 2: Home Health Process Measures with Time-Limited NQF Endorsement

Measure
Timely Initiation of Care
Drug Education on Medications Provided to Patients/Caregiver During Episode
Diabetic Foot Care and Patient Education Implemented
Influenza Immunization Received for Current Flu Season
Pneumococcal Polysaccharide Vaccine (PPV) Ever Received
Depression Assessment Conducted
Multifactor Fall Risk Assessment Conducted
Pain Assessment Conducted
Pain Interventions Implemented
Heart Failure Symptoms Addressed
Pressure Ulcer Risk Assessment Conducted
Pressure Ulcer Prevention In Plan of Care
Pressure Ulcer Prevention Plans Implemented

Because the OASIS-C was first implemented in January 2010, fall 2010 will be the first time that sufficient OASIS-C data will be available to undertake the additional testing of the TLE measures requested by NQF. Additional testing of the TLE measures will include analysis of OASIS-C data from home health episodes with a start and end date during the first 6 months of 2010 focused on:

- Descriptive statistics of the TLE Process Measure scores including distributions of implementation rates with stratification by selected agency characteristics to provide information on:
- Overall level of performance
- Variation in performance among providers
- Extent of variation in performance across population groups
- Computation of the correlations between each of the TLE Process Measure scores and related outcome(s)

The team will also conduct an Environmental Scan/review of recent literature to facilitate evaluation of:

- Evidence of the importance of the care processes measured based on the number of patients affected and the impact of the processes (to the degree possible); and
- The consistency of measured processes with current clinical practice guidelines.

Risk Adjustment Modeling

CMS intends to risk-adjust all of the home health outcome measures, both those that are NQF-endorsed and publicly-reported, and those that are not. Process quality measures will not be risk adjusted because the expectation is that the process should be followed for every patient to whom it applies. Risk adjustment work completed under the prior contract included the development of prediction models to risk adjust both Outcome Based Quality Improvement (OBQI) outcome measures and adverse event (now called Potentially Avoidable Event) outcome measures. New strategies for representing risk factors used in the prediction models and alternative methodologies to validate prediction model efficacy were developed for low frequency events. Additionally, a preliminary mapping of new risk factors that would be available in the OASIS-C data was completed.

Risk adjustment based on OASIS-C variables cannot begin until sufficient data have been submitted to support the modeling (estimated October 2010). Re-estimation of risk adjustment models for outcome measures using OASIS-C data will begin as soon as sufficient data have been submitted to support the modeling.

For more information about the measure development/reevaluation processes refer to the Measure Management System Blueprint documentation available on the link in the left navigation bar.

Technical Expert Panel Objectives:

We anticipate results of planned testing and modeling efforts discussed above will be available to present to the TEP in early December 2010. TEP members will be asked to review process measure testing methods and results related to the time limited endorsed process measures in light of NQF criteria, and provide recommendations for any changes to methodology for the proposed risk adjustment models.

1) Time-Limited Endorsed Process Measures

- a) Opportunity for Improvement
 - TEP will review the distribution of measure scores in order to determine whether the data show an opportunity for improvement (either due to overall poor performance or sufficient variation among providers)
 - In the case of overall high performance or little variation, the TEP will consider findings from the Environmental Scan/Literature Review and comment on importance to measure considering lack of variation or limited opportunity for improvement.
- b) Predictive Validity
 - TEP will review the relationship between process measures scores and related outcomes and assess validity of the process measures using appropriate statistical tests. TEP will consider the results of the OASIS-C data analysis and findings from the Environmental Scan/Literature Review, and systematically rate: a) the extent to which the measure reflects the quality of care for the specific topic; and b) whether the measure focus is the most important aspect of quality for the specific topic.
- c) Meaningful Differences in Performance
 - TEP will assist with defining what constitutes a “meaningful” (i.e. clinically and statistically meaningful) difference for distinguishing between providers of higher and lower quality for each of the TLE process measures.

2) Re-estimation of risk adjustment models for outcome measures using OASIS-C data

- Clinical and statistical review of risk adjustment methodology
- TEP will offer recommendations for changes to risk adjustment methodology as needed. Potential TEP topics for discussion include:
 - Strengths and weaknesses of different ways to create prediction models
 - Alternative ways to apply the prediction models to risk adjust outcomes
 - How sample size (# of episodes per unit of time) and data limitations (item quality and/or scales) impact model validity and public reporting

Technical Expert Panel Composition:

The TEP will be comprised of 8 – 13 individuals with the following areas of expertise and perspectives:

Time Limited Endorsed Measures (5-8 TEP members):

- Topic Knowledge: Care Coordination, Drug Education, Chronic Disease Management, Immunizations, Depression, Falls Risk, and Pressure Ulcers
- Home Health Performance Measurement
- Quality Improvement
- Consumer Perspective
- Purchaser Perspective
- Provider Perspective
- Health Care Disparities

Risk Adjustment (3-5 TEP members):

- Methods to develop prediction models
- Methods to apply prediction models to risk adjust outcomes
- Sample size, data limitations, and model validity issues

All potential TEP members must disclose any current and past activities that may pose a potential conflict of interest for performing the tasks required of the TEP.

Technical Expert Panel Expected Time Commitment:

- In person meeting (1 – 1.5 days) planned for early December in Bethesda, Maryland, and additional (1 – 3) phone meetings (1 - 1.5 hours per meeting).
Note: TEP members may participate in either the TLE measure review or the risk adjustment review, or both.
- TEP chair (TBD) will represent the TEP at the NQF Steering Committee 1-2 day meeting in Washington DC in March 2011 and follow-up conference calls during March 2011. All TEP members need to be available for possible conference calls to discuss NQF recommendations during this time period.
- Project will reimburse TEP travel costs and provide a small honorarium.

TEP Nomination:

Self-nominations are welcome. Third-party nominations must indicate that the individual has been contacted and is willing to serve.

Required Information:

- A completed nomination form
- Confirmation of availability to participate in calls and meetings as outlined above
- A letter of interest (not to exceed two pages), highlighting experience/knowledge relevant to the expertise described above and involvement in measure development
- Curriculum vitae and/or list of relevant experience (e.g., publications) a maximum of 10 pages
- Disclosure of potential conflict of interest

The TEP Nomination and Disclosure Form can be found in the Download section of this page. If you wish to nominate yourself or another individual for consideration, complete the form and e-mail to: **oasis-tep@acumenllc.com**

Thank you for helping CMS to improve the quality of care for all Americans.