The Outcome-Based Quality Improvement Pilot Project: A Perspective From Maryland

Deborah L. Chisholm, RN, BSN, CPHQ
Kathleen Murdock, MS

Home health agencies have been collecting objective outcome data through their OASIS assessments since 1999. These data are being used to produce three reports: the adverse event outcome report, the risk-adjusted outcome report, and the case mix report. In early 2002, agencies nationwide will receive a risk-adjusted outcome report and case mix report, which will be used for Outcome-Based Quality Improvement (OBQI). The Centers for Medicare and Medicaid Services (CMS) has funded the Outcome-Based Quality Improvement Pilot Project. The Quality Improvement Organizations (QIO) in five states—Maryland, Michigan, New York, Rhode Island, and Virginia—and approximately 416 volunteer agencies are participating in this project. This article provides an overview of implementing the pilot project in Maryland and shares the observations and experiences of the Maryland QIO Project Coordinator.

The Delmarva Foundation for Medical Care, Maryland's quality improvement organization (QIO), is one of five QIOs (along with those in Michigan, New York, Rhode Island, and Virginia) participating in the Home Health Outcome-Based Pilot Project. The goal of this project is to assist home health agencies (HHAs) to implement and maintain continuous quality improvement by using the Outcome-Based Quality Improvement (OBQI) process. OBQI is based on the risk-adjusted outcome and case mix reports that are derived from Outcome and Assessment Information Set (OASIS) data. The OBQI program was developed by the Center for Health Services Research (CHSR) at the University of Colorado, the same organization that developed the OASIS data set for the Centers for Medicare & Medicaid Services (CMS).

Thirty-nine Maryland HHAs volunteered to participate in the pilot project, which represented 81% of the agencies in Maryland. The Delmarva Foundation held focus groups to discuss issues related to OASIS data collection and the impact on the agencies represented in the group. Local groups and associations related to home care were contacted to explain the initiative and invite their support in promoting the project to their memberships. The Maryland project coordinator called all Medicare-certified HHAs in the state to explain the

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pilot project and followed up with formal invitations to participate.

One primary goal of the pilot project was to educate HHAs on how to use the OBQI methodology, which had been tested and proved successful by the CHSR in previous demonstration projects. The Maryland QIO used the train-the-trainer approach that was developed for all the pilot QIOs to use. Representatives from the agencies took what they had learned back to their offices and implemented in-house training and OBQI programs.

In preparation for training agencies, the Delmarva Foundation's project coordinator selected training sites, handled the logistics of training, and produced the training materials. In Maryland, the training was delivered in February 2001 by Delmarva staff members. Subsequent to training, the QIO distributed agency-specific OBQI reports, helped agencies select outcomes for improvement, assisted with the HHAs' development of plans of action, and provided ongoing technical support throughout the process.

OVERVIEW OF THE OBQI PROCESS

The OBQI process has two stages: outcome analysis and outcome enhancement. Outcome analysis begins with the collection of the OASIS data, which are then processed, edited, and transmitted by HHAs to the state OASIS system. The final step of this stage is the production of the risk-adjusted outcome report from the analysis of the OASIS data submitted. Outcome enhancement, the second stage, begins with an HHA selecting one or more target outcomes on which to focus quality improvement activities. This is followed by an evaluation of care related to the targeted outcome(s) and ends with the development and implementation of a plan of action focused on changing aspects of the care provided.

When the risk-adjusted outcome report is produced the following year, the process, which is cyclical, begins again. The report is analyzed to determine if there was an improvement in the targeted outcome(s). Then, the HHA determines its current and future plans of action on the basis of these data.

In the outcome enhancement stage, the data provided in the OASIS risk-adjusted outcome report and the case mix report are used. The CHSR, as a subcontractor in the five-state pilot project, extracted data from the OASIS national repository and prepared outcome and updated case mix reports for the HHAs participating in the pilot project. Thus, these agencies received reports in May 2001, almost a year ahead of the proposed date when all agencies in the country will receive their first risk-adjusted outcome reports.

The OASIS risk-adjusted outcome report provides HHAs with data on 41 outcome measures. This annual report compares each agency's outcomes to those of a national reference sample and, in future years, to its own prior outcomes. To make true comparisons between one agency and a reference group, outcomes must be risk adjusted. The risk adjustment process takes into consideration the patient characteristics documented at the time of admission that may have affected specific outcomes during a home health episode of care. For example, characteristics that may influence a patient's likelihood of delayed wound healing are termed *risk factors*.

The 41 outcome measures include 38 end result outcomes that reflect physiologic, functional, cognitive, and emotional status, and three utilization outcomes that result from a change in patient health status. The end result outcomes are of two types: stabilization and improvement. Stabilization means that a patient's condition did not worsen; the patient either stayed the same or improved. Improvement in an outcome occurs when a patient's OASIS assessment shows that there was less disability or dependence at discharge (Shaughnessy & Crisler, 1995).

The case mix report refers to the characteristics of an HHA's Medicare and Medicaid patients. The report reveals how the HHA's case mix profile compares to the national reference sample (and in the future, to itself) over time. The risk adjustment process is based on an agency's case mix data.

MARYLAND'S EXPERIENCE WITH THE OBQI PROCESS

The Maryland QIO pilot project coordinator has worked since February 2000 with the participating HHAs through all the steps of the outcome enhancement process. These include the following (Richard, Crisler, & Stearns, 2000):

- reviewing outcome and case mix reports,
- selecting target outcomes,
- conducting the process-of-care investigation,
- developing the plan of action,
- implementing the plan of action, and
- monitoring the plan of action.

The following discussion addresses the successes achieved and the barriers faced by the Delmarva Foundation's project coordinator and the Maryland agencies participating in the pilot project.

After participating in the training in February 2001, Maryland's HHAs received the risk-adjusted outcome and updated case mix reports in May 2001. The 3-month interval proved to have both pros and cons. On one hand, it enabled training participants ample time to organize and deliver in-house training and to build enthusiasm and support for the OBQI process among the staff. For some agencies, however, the time lag proved too long, because attention returned to other priorities, and in some cases, agencies were not prepared to begin working with the reports as soon as they arrived in May, losing valuable time in moving the process forward.

In the training, agencies had been strongly encouraged to develop plans of action within a month of receiving the reports so that the plans would be in place as long as possible before the next outcome reports were generated. In Maryland, 42% of the agencies developed their plans of action within this time frame. The remaining agencies reported barriers to producing timely plans of action, such as staff shortages, loss of administrative staff, surveys in progress, vacations, and heavy workloads. Throughout the process, the Delmarva Foundation provided assistance in the form of telephone consultation, newsletters, on-site visits, and workshops.

In anticipation of receiving the risk-adjusted outcome reports, agencies were concerned over what the OASIS data would show. Once participants studied the reports, however, and began the outcome enhancement activities, staff members began to better understand the value of the OASIS data they had been collecting. The reports enabled staff members to identify both what their agency was doing well and where to focus quality improvement efforts. Among the participating agencies in Maryland, outcomes that compared favorably to the reference sample outnumbered those that were unfavorable.

After studying the reports, agency staff members began the process of selecting the outcomes to target. In carrying out the outcome enhancement activities, the HHAs had been encouraged to form teams composed of staff members from a variety of disciplines and administrative positions. With the common goal of improved patient outcomes, teamwork can foster ownership of the process, promote enthusiasm throughout the ranks, and provide valuable clinical input from the various disciplines.

The agencies were provided with a prioritized list of criteria to use as a guide in selecting outcomes on which to concentrate. The most important criterion was that the difference between an agency's outcome and that of the reference group was statistically significant. The target outcome can be one for which an agency performed either better than the reference group or worse than the reference group. The Delmarva Foundation encouraged the HHAs to limit themselves to one or two outcome measures in this first effort. Because OBQI was a new way of conducting quality improvement, it could have overwhelmed the staff if too much change were attempted at once.

For those agencies that applied the selection criteria as outlined, the Delmarva Foundation's project coordinator observed that it was relatively easy for the team to reach a consensus regarding outcome selection. Some staff members expressed to the coordinator that it was edifying to have this type of concrete data driving the development of a quality improvement plan.

Some agencies, however, did have problems reaching consensus. For example, for a few agencies, the only statistically significant measures were related to instrumental activities of daily living, such as phone use or shopping. Some staff members, notably administrators, did not consider these to be activities that are normally included in a home health plan of care. Although they recognized the need for a patient to be able to use a phone or shop, some staff members expressed that these were not activities that required skilled care. With limited resources, they did not want to commit to measures that they felt were ancillary, not core activities.

Once the outcome measures were selected, teams started to investigate the care that led to the outcomes. It usually became evident to staff members at this point that the OBQI model differed from other models commonly used in home health care. Staff members first developed lists of care behaviors, interventions, and assessments that they believed represented best practices in relationship to the target outcomes. The agencies had been taught that these lists should be comprehensive and well thought out, often containing 10 to 15 care behaviors. Next, teams narrowed the lists down to the 4 or 5 care behaviors that they agreed were most important. The earlier demonstration projects had shown that shortening the list was necessary to make investigating the care manageable.

Teams then decided on an approach for the care investigation, such as chart reviews, staff interviews, home visit observation, structured case conferences, or discussions at staff meetings. Once this information was collected, teams identified at least one, but no more than three, care behaviors that needed to be improved or reinforced.

In Maryland, most agencies relied on chart review. In working through this process, staff members learned that care behaviors needed to be stated clearly and specifically for the chart reviewers to find what they were looking for. As an example, for the outcome measure "improvement in pain interfering with activity," consider what would happen if the care behavior had been broadly written as "the patient's pain will be assessed." Most charts might contain an assessment of a patient's pain at some point during the home care episode, giving the impression that there were no problems with assessment. However, for an assessment to successfully lead to an improvement in pain, it needs to be performed at specific time intervals, use a specific scale, and include certain attributes such as those suggested by Joint Commission on Accreditation of Healthcare Organizations (JCAHO). As a result, participants often needed to rewrite the care behaviors to include this level of detail. With the care behaviors thus written, the chart reviewers could then determine more accurately whether or not the optimal interventions had been provided to a patient. It is this specificity that will ultimately contribute to improved patient outcomes.

Another problem noted by the PRO coordinator was that the care behaviors written by team members sometimes did not focus on patient outcomes. For example, if an agency chose the outcome measure "improvement in urinary tract infection" (UTI), writing a care behavior that simply identified the patient with a UTI did not go far enough. Although identifying UTIs is an important nursing intervention, staff members also needed to construct care behaviors that identified what to do next and what would prevent the occurrence of UTIs. Again, specificity is key to affecting patient outcomes.

As a result of the earlier demonstration projects conducted by the CHSR (2000), the training program had highlighted other pitfalls to avoid in the process-of-care investigation. These included the following:

- drawing immediate conclusions about what contributed to a particular outcome without full investigation, and prematurely moving into corrective action;
- not involving clinical staff members in the process-of-care investigation;
- "blaming" the data collection or analysis methods for the outcomes without further investigation; and
- not focusing on care provided to patients rather than other issues.

Each of these pitfalls tempted a number of Maryland's agencies. A few reported to the Delmarva Foundation's project coordinator that resources were too limited to include field staff members in the process-of-care investigation. Others wanted to blame their outcomes on poor data collection techniques, while yet another group focused only on a lack of documentation as the sole source of their problems, not believing that it could be poor or inconsistent care provision. The QIO counseled these agencies, drawing on lessons learned from the demonstration projects.

Once information from the process-of-care investigation was compiled and analyzed, it was summarized into a concise statement of an agency's problem or strength, on which the plan of action would be based. If an unfavorable outcome had been targeted, an HHA now had hard data proving that it had a problem and an opportunity to improve. In this situation, staff members developed a plan of action for remediation. When a favorable outcome had been chosen, a plan of action to reinforce the successful care behaviors was developed. The plan delineated the processes and care behaviors to be implemented. Each plan of action included the following elements:

- one target outcome (if two outcomes are selected, each has a separate plan of action),
- designation as a plan for remediation or reinforcement,
- a statement of the agency's identified problem or strength as related to the target outcome,
- best practices to be implemented,
- intervention actions,
- monitoring approaches and activities to ensure that the plan of action is being implemented, and
- evaluation.

The QIO had strongly encouraged the agencies to use the plan of action template that had been provided in the training materials so that they would not overlook an important aspect of the plan.

The Delmarva Foundation offered to review plans of action before they were implemented, and all agencies took advantage of this assistance. The QIO project coordinator found that developing the plan of action was often the most challenging task related to the process. Many HHAs had problems limiting the number of care behaviors and were overly aggressive, attempting to change too many behaviors at one time. The coordinator cautioned that the demonstration projects had revealed that keeping the plans simple resulted in the greatest success. It is difficult for staff members to consistently remember a long list of new care behaviors. Some problems experienced by the HHAs included the following:

- Including more than one outcome measure in the plan of action,
- not including intervention actions for all the care behaviors,
- interventions that did not have corresponding monitoring activities, and
- including care behaviors that did not address the identified problem or strength.

Participants reported that they appreciated and used the feedback to improve their plans. They discussed the suggestions within their teams and submitted revised plans of action for the coordinator to review. The Delmarva Foundation's role was to assist and advise, but the final decision on how to proceed always rested with the agency. This collaboration was a valuable learning experience for both the agencies and the QIO.

Once a plan of action was developed, it could facilitate change only if it was fully implemented and monitored. In the fall of 2001, when this article was written, most Maryland agencies were in the midst of implementing and beginning to monitor plans of action. In a correctly executed plan of action, each intervention should be clear and specific. The interventions may be assessments, treatments, service interventions, care planning, and/or coordination systems. Interventions should

- be precise clinical activities or processes,
- address the stated problem specifically,
- identify actions desired of all clinical staff members, and
- address activities beyond documentation.

The plan should include a specific time frame to start and finish each action, identify a person who is responsible for implementing it, and describe a monitoring approach that will ensure that the action is implemented successfully. It is important for agencies to ensure that the entire staff is aware of the plan so that everyone can assist with the long-term goal of improving patient outcomes.

PRO SUPPORT FOR THE HHAs

The support provided by the Delmarva Foundation to the participating agencies took many forms. In addition to those previously mentioned, the project coordinator writes a newsletter to provide the participants with information regarding the project as well as other relevant topics. The newsletter contains information about project status, characteristics of the state's HHAs, useful Web sites, clarifications of questions submitted by individual home care agencies, and articles that elaborate on the steps of the OBQI process.

The project coordinator also moderates a mailing list server for the participants in Maryland. Its purpose is to enable agency staff members to communicate with their peers in the state efficiently and cost effectively. The HHAs are using the list server to

- post questions to all the other home care agencies in the pilot project;
- exchange ideas, knowledge, and insights;
- discuss home health specific issues;
- solicit the opinions of other home health professionals in the state who are knowledgeable on other topics, such as OASIS, OBQI, the Prospective Payment System, the JCAHO, and so on; and
- receive notices of meetings, events, and updates from the pilot coordinator.

Under another CMS contract, the Delmarva Foundation, in its role as the lead QIO on the pilot project, has also developed the Clearinghouse for Outcome Based Quality Improvement (Delmarva Foundation for Medical Care, Inc., 2001). At this Web site, there is a public page that provides links to information about Delmarva, the other four PROs, the OBQI training, frequently asked questions, and other useful Web sites.

THE FUTURE OF OBQI

To understand the future of OASIS and OBQI, one must look to the past and understand why the OASIS data set was developed. In the 1980s, when home health care costs were skyrocketing, CMS (then the Health Care Financing Administration) decided that it needed an objective measurement tool to provide evidence of the effectiveness of Medicare dollars being spent on home care. With funding from CMS and the Robert Wood Johnson Foundation, the CHSR at the University of Colorado began developing, testing, and refining OASIS.

Using OASIS, the OBQI process provides HHAs with hard data to determine if care provision is resulting in positive patient outcomes and to drive continuous quality improvement initiatives. In the future, outcome results will be made available to consumers to guide them in their choice of an HHA. The manner in which this information will be presented to the public is being designed by CMS at this time.

Beginning with this pilot project, QIOs are preparing to play a role in CMS's plans to implement OBQI in Medicare-certified HHAs nationwide. With their presence in every state, Puerto Rico, the Virgin Islands, and the District of Columbia, QIOs are uniquely situated to work within the states to meet agencies' unique circumstances and needs. QIO staff members, as health care quality experts, will work collaboratively with HHAs to achieve the goal of providing the best and most cost-efficient care possible for Medicare beneficiaries.

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Deborah L. Chisholm*, RN, BSN, CPHQ, currently works in Baltimore as a quality improvement coordinator at the Delmarva Foundation for Medical Care, Inc., the quality improvement organization for Maryland and the District of Columbia. She is responsible for coordinating the Maryland Home Health Outcome-Based Quality Improvement Pilot Project as well as managing home health records reviews. She has 6 years of home care and hospice experience; 3 were in quality improvement management. Prior to that, she worked for 18 years as a certified critical care nurse in the intensive care unit of the Upper Chesapeake Health System.*

Kathleen Murdock*, MS, has worked in various workplace settings as an educator for over 12 years. She is currently with the Delmarva Foundation, Inc., the quality improvement organization (QIO) for Maryland and the District of Columbia. Kathleen has been actively involved in the Outcome-Based Quality Improvement (OBQI) pilot project as the education coordinator, working closely with the Center for Health Services Research at the University of Colorado to provide training programs to QIO staff members involved in the OBQI pilot project as well as to participating home health agencies. She has also served as Delmarva's corporate education coordinator and worked in the communications and outreach department. Kathleen has a varied background that also includes research, writing, and marketing, and she has a particular interest in health care and housing issues related to senior adults.*