The History of Quality Measurement in Home Health Care

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KEYWORDS

• Home health care • Quality improvement • OASIS
• OBQI • QIO

There is little debate that focusing on quality improvement can result in improved patient outcomes and reduce the cost of health care delivery. Home health care is no different from other sectors of the delivery system in its need to focus on improving quality. This article provides a perspective on the current state of quality improvement, how it has evolved, and where it is headed.

OASIS DEVELOPMENT AND IMPLEMENTATION

Understanding the impact of care delivery and, therefore, its quality requires the measurement of patient outcomes to assess both intended and unintended effects. Home health care is in a unique position, measuring health status when patients enter and exit care, allowing evaluation of individual patient outcomes. In 1995, Shaughnessy and colleagues[1] proposed that a new assessment tool could become the basis of outcome based quality improvement (OBQI). The tool was called Outcome and Assessment Information Set (OASIS). An early form of OASIS was released in 1994 after 5 years of research conducted by the Center for Health Services Research and Policy at the University of Colorado.[2] Because a wide variety of factors influence home care outcomes, OASIS includes items related to demographics and patient history, supportive assistance, sensory status, integumentary status, respiratory status, elimination status, neurological/emotional/behavioral status, activities of daily living (ADLs), instrumental activities of daily living, ability to manage medications, equipment management, emergent care (EC), and discharge disposition. The instrument contains nearly 100 items that cover all of these domains, and because patients' condition changes rapidly in home care, OASIS was designed to be collected at admission or resumption of care, follow-up time points (every 60 days), and at transfer or discharge.

Changes in scores from start of care to discharge allow for the computation of patient outcomes. In October 2000, the Centers for Medicare and Medicaid Services

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Clin Geriatr Med 25 (2009) 121–134
doi:10.1016/j.cger.2008.11.001 **geriatric.theclinics.com**
0749-0690/08/$ – see front matter

(CMS) mandated that OASIS be collected on all Medicare and Medicaid patients receiving skilled services. The current version of OASIS-B1, which is based on revisions made in 2002[3] and 2008, is available on the CMS Web site (http://www.cms.hhs.gov/oasis/). Since its inception, there has been debate about the value of OASIS within the home health care industry. Questions have been raised about the reliability of the instrument,[4–6] burden of completing the assessment due to the length, and value as an indicator of quality.[7] Nonetheless, OASIS seems to have survived the controversy and become a fundamental component of home health care quality assessment. Some organizations have shown that OASIS is a tool to improve quality,[8] and the industry, in general, has begun to rely on it as a major component of quality improvement efforts.[9]

RISK ADJUSTMENT

To level the playing field and address provider concerns that their outcomes are worse "because our patients are sicker," a fundamental component of being able to accurately assess outcomes across providers is the ability to risk adjust measures based on patient characteristics. From the early development of OASIS, consideration was given to developing case mix or risk-adjusted outcome measures. Patient outcomes are adjusted based on start or resumption of care assessment information. For example, a statistical model was developed to risk adjust the improvement in dressing the lower body based on whether the patient lives alone, receives assistance provided by a caregiver, level of functional status at start of care, and the presence of other specific clinical conditions (eg, The International Classification of Diseases, Ninth Revision (ICD-9) diagnoses).[10] All 41 outcomes that can be generated from OASIS have separate risk-adjustment models. Each model includes a large number of variables, yet the models vary in the amount of explained variance from 10% to 27%. The measures are valid and statistically significant, but the unexplained variance highlights the challenge of outcome measurement in the home setting. CMS provides patient outcome reports to home health care agencies based on the risk-adjusted models. In late 2008, CMS released a new set of risk-adjustment models that will take into account recent changes in the characteristics of the home health care population.

PROSPECTIVE PAYMENT SYSTEM

One of the unexpected uses of OASIS was the mandate to base per-episode Medicare home health care reimbursement on how patients scored on the assessment at start of care. In 2000, there was a shift from cost-based fee-for-service reimbursement to prospective lump-sum payment for 60-day episodes of care.[11] Selected items from OASIS are used to assign severity scores in three domains: clinical, functional, and service use.

The clinical and service use domains have four levels of severity: minimal, low, moderate, and high. The functional status domain adds an additional level called maximum. Levels are determined based on a complicated scoring system, and reimbursement increases when the three domains are scored higher. The clinical domain is based on ICD-9 diagnoses, vision impairment, reported pain, treatment for wounds, shortness of breath, urinary and/or bowel incontinence, bowel ostomy, and behavioral problems. The functional domain includes the level of impairment in dressing, bathing, toileting, and locomotion.

The service use domain is based on whether the patient was admitted from the community or came from a rehabilitation or skilled nursing facility and whether the patient is expected to receive physical or occupational therapy visits during the home care episode. The initial therapy visit criterion was a threshold of at least