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# Effect of Nurse-Developed Dyspnea Improvement Education on Home Health Patients

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## Introduction of the Problem

In home health patients, dyspnea is one of the quality indicators on the Medicare Outcome and Assessment Information Set (OASIS). Any home health agency that is seeking Medicare certification is required to meet Medicare Conditions of Participation. This includes compliance with OASIS data collection and transmission of data (Centers for Medicare and Medicaid Services, 2012). At a hospital affiliated home health agency in the Midwest, between November 2015 and October 2016, 82.85% of patients admitted for services received Medicare coverage (Memorial Home Services, 2016). Due to the high Medicare population seen by this home health organization, it is important to show improvement in dyspnea scores in their OASIS data. Between July 1, 2015 and June 30, 2016, 64.1% of patients' dyspnea improved at this organization. This is compared to a state average of 72% and a national average of 71.1% (Centers for Medicare and Medicaid Services, 2017).

## Literature Review

Dyspnea is associated with having a negative effect on patients' quality of life. The Medicare Outcome and Assessment Information Set (OASIS) is used to measure specific quality indicators on home health agencies, which are needed to be met for Medicare certification. One of these quality indicators involves improvement in patients' shortness of breath. Dyspnea is difficult to assess due to its subjective nature. Currently #M1400 scores are based off either the provider's subjective assessment, patient's subjective assessment, or the provider's objective assessment. Unfortunately, validity and reliability of the OASIS varies which makes dyspnea difficult to measure. However, accuracy of the OASIS is important because OASIS is used for reimbursement, outcome-based quality improvement and monitoring, and identification of adverse events (Madigan, Tullai-McGuinness, & Fortinsky, 2002). To improve OASIS

reliability, incorporating live videos of "mock" assessments representing the "gold standard," defining ambiguous terms, and clarifying the differences between item choices can help to standardize OASIS scoring (Kinatukara, Rosati, & Huang, 2005).

**Project Methods**

The primary purpose of this project was to measure improvement in dyspnea scores with OASIS #M1400 before and after home health nurse education. Additional measurements included: 1) patients' admission and discharge perception of dyspnea and comparing for significant differences between this and home health providers' objective assessment of dyspnea and 2) evaluating the home health providers' knowledge and correct utilization of OASIS question #M1400.

The target sample for the primary measure was Medicare and Medicaid patients admitted to the home health organization. Exclusion criteria included patients not on Medicare or Medicaid, hospice patients, individuals less than 18 years old, and individuals older than 90 years old. Participants were selected based on inclusion criteria met during the implementation phase. A nonprobability convenience sample was used. The sample size was 50 patients.

The target sample for the first secondary outcome measured was Medicare and Medicaid patients admitted to the home health organization between August-October 2017. The same inclusion and exclusion criteria were used. The sample size was 28 patients.

The target sample for the other secondary outcome measured was home health providers, nurses and physical therapists, who complete OASIS assessments. A total of 40 providers attended the educational sessions.

The project interdisciplinary team included the two project leaders and the clinical quality and safety manager at the home health organization. Other stakeholders included the home health providers who received education and the patients who participated in the study.

The project leaders submitted an exempt IRB application to the Southern Illinois University Edwardsville Institutional Review Board. Approval was received in July 2017. The appropriate recruitment statements were drawn up by the project leaders. No informed consent was necessary. Participation in this project was no risk to the patients.

The two project leaders created home health provider educational materials which were based on best evidence. The project leaders also created a video depicting different patient scenarios that depicted various levels of dyspnea. One scenario for each OASIS #M1400 item score (1-4) was created. During the educational sessions, the home health providers watched the videos and wrote down on an anonymous, pre-survey, how he/she would score the patient in each scenario. Completion of this survey served as consent for participation. Each staff member participated in an educational session on how to accurately assess patients with the OASIS #M1400. The nurses and physical therapists then re-watched the videos and wrote down how he/she would score each patient scenario following education. Pre and post-surveys were compared to evaluate effectiveness of education. A total of 40 home health providers attended the educational sessions.

A convenience sample of 50 patients from August, September, and October 2016 served as baseline OASIS #M1400 scores. Admission and discharge scores were used. OASIS #M1400 scores were collected on admission and discharge for three months after education was provided. Demographics (age, gender, and hospital discharge diagnosis) were collected from both groups

to ensure group equivalence. OASIS #M1400 scores were collected from both groups upon admission and discharge and compared.

During the 3-month data collection period, home health providers gave patients an OASIS #M1400 score card at admission. The home health provider asked the patient to score him/herself regarding their perception of dyspnea. The patient then placed their score card in a sealed envelope and returned it to the home health provider without sharing their score. Project leaders then compared patient scores to nurse scores.

The project leaders added a reminder to the home health organization's weekly memo to use the new assessment skills and to collect patient score cards

**Evaluation**

This project followed a quasi-experimental descriptive pre-posttest design. The baseline group was 50 OASIS #M1400 randomly selected scores from patient charts between August-October of 2016. The mean scores were compared to the mean scores from a matched set of 50 patient charts from August-October of 2017 with a paired t-test to determine significant difference in sample means. Demographics (age, gender, hospital discharge diagnosis) were collected from both groups to ensure group equivalence and matching. To determine if there was a statistically significant difference between home health provider objective assessment of dyspnea and the patients' subjective assessment of dyspnea, an independent-means t-test was used. A pre-post-test design and paired t-test was used to determine statistically significant changes in home health providers' knowledge and correct utilization of OASIS question #M1400 before and after education was provided.

**Impact on Practice**

Overall, the number of patients who showed improvement in dyspnea scores from admission to discharge using OASIS #M1400 increased by 14.6%. From September-December 2016, 73.5% of patients at the home health organization showed an improvement in dyspnea. This was compared to a state average of 77.4% and a National average of 77.0% (Centers for Medicare and Medicaid Services, 2016). Provider education was given on August 2-3, 2017. From September-December 2017, 84.2% of patients at the home health organization showed an improvement in dyspnea. This was compared to a state average of 72.7% and a National average of 73.1% (Centers for Medicare and Medicaid Services, 2017). Long-term, these results can be sustained as long as the home health organization continues to use the education materials provided by the project leaders.

This quality improvement project should be replicated on a larger scale. Future projects can be aimed at providing education at multiple agencies to test for consistency of results obtained from this project. Future projects should also be conducted over a longer period of time to ensure that improvement in dyspnea is maintained over time.

On a larger scale, future studies should be aimed at improving the reliability and validity of OASIS #M1400. The validity and reliability of the OASIS varies which makes dyspnea difficult to measure using this tool.

## Conclusions

Overall, provider education lead to improvement in the assessment of patients' dyspnea which further lead to a 14.6% increase in improvement in dyspnea scores at the home health organization. This increase will help to improve Medicare/Medicaid reimbursement for this organization. The educational materials also helped to increase providers' knowledge of how to assess dyspnea which will help to improve patient care and outcomes.

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## References

Centers for Medicare and Medicaid Services. (2012, April 5). *Outcome and Assessment Information Set (OASIS)*. Retrieved from Centers for Medicare and Medicaid Services: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/OASIS/index.html?redirect=/oasis/

Centers for Medicare and Medicaid Services. (2016). *Real-Time home health compare: Memorial home services.* Springfield, IL: Strategic Health Programs.

Centers for Medicare and Medicaid Services. (2017, January 26). *Home Health Compare*. Retrieved from Centers for Medicare and Medicaid Services: https://www.medicare.gov/homehealthcompare/search.html

Centers for Medicare and Medicaid Services. (2017). *Real-Time home health compare: Memorial home services.* Springfield, IL: Strategic Health Programs .

Kinatukara, S., Rosati, R., & Huang, L. (2005). Assessment of OASIS reliability and validity using several methodological approaches. *Home Health Care Services Quarterly, 24*(3), 23-38.

Madigan, E., Tullai-McGuinness, S., & Fortinsky, R. (2002). OASIS is here to stay. Where do you go from here? *Caring, 21*(11), 6-9.

Memorial Home Services. (2016). *Risk-Adjusted Outcome Report.* Springfield, IL.