

Using OASIS Data to Predict Hospitalization Risk for Home Care Patients

Jessica L. Fischer MSN, RN-BC, COS-C | M. Kathleen Scanlon MSN, RN, PNP | St. Joseph's Home Care, Syracuse, NY

Learning Objective

Following review of the poster, the participant will be able to verbalize understanding of how data analytics can improve patient care by identifying agency trends that will be used by the agency to establish patient interventions to decrease acute care hospitalizations.

Background & Overview

- As a Capstone for a Master's of Science in Nursing with a specialization in Informatics degree, a research project was conducted analyzing data from the Outcome Assessment Information Set (OASIS) to identify patients at risk for hospitalization in the home care setting.
- St. Joseph's Home Care (SJHC) is a Medicare-certified home care agency with an average daily census of 775 patients and a 30-day re-hospitalization rate that exceeds national benchmark (www.medicare.gov/homehealthcompare). Currently, the home care agency does not have an objective method to assess risk for acute care hospitalization.
- An OASIS assessment is a data set required by Centers for Medicare & Medicaid Services (CMS) to be collected at specific time points during the home care episode, including the start of care (SOC). OASIS data set items are used to quantify home care quality measures including 60-day hospitalization and 30-day re-hospitalization rates. In January 2015 a new data set item, M1033 Risk for Hospitalization (see Figure 1), was added to the SOC assessment aimed at identifying risk factors for hospitalization. However, no guidance has been provided on how to use this data to prioritize patients most likely to be admitted to the hospital.
- In an effort to decrease healthcare costs, 30-day readmission rates are being used as quality indicators for both home care agencies and hospitals (O'Connor, 2012). A review of the literature confirmed that "little has been published about home health care patient-level risk factors" (Fortinsky, Madigan, Sheehan, Tullai-McGuinness, & Kleppinger, 2014, p. 474).

Research

Every patient admitted to the home care agency from 01/01/2015-01/21/2015 was monitored for acute care hospitalization (ACH) for 30 days. Responses to OASIS data set item M1033 Risk for Hospitalization for patients with ACH were compared to those without ACH.

Two objectives were identified:

- Determine if the number of risk factors selected in M1033 serves as a predictor for admission to acute care.
- Determine if particular risk factors identified in M1033 serves as a more frequent predictor of readmission to acute care than others identified in M1033.

Works Cited

Centers for Medicare and Medicaid Services. (2015). www.CMS.gov

Fortinsky, R., Madigan, E., Sheehan, T. J., Tullai-McGuinness, S., Kleppinger, A. (2014). Risk factors for hospitalization in a national sample of Medicare home health care patients. *Journal of Applied Gerontology*, 33(4), 474-493.

Home Health Compare. (n.d.). www.medicare.gov/homehealthcompare

O'Connor, M. (2012). Hospitalization among Medicare-reimbursed skilled home health recipients. *Home Health Care Management & Practice*, 24(1), 27-37.

M1033 Risk for Hospitalization

(M1033) Risk for Hospitalization: Which of the following signs or symptoms characterize this patient as at risk for hospitalization? (Mark all that apply.)

- ☐ 1 - History of falls (2 or more falls - or any fall with an injury - in the past 12 months)
- ☐ 2 - Unintentional weight loss of a total of 10 pounds or more in the past 12 months
- ☐ 3 - Multiple hospitalizations (2 or more) in the past 6 months
- ☐ 4 - Multiple emergency department visits (2 or more) in the past 6 months
- ☐ 5 - Decline in mental, emotional, or behavioral status in the past 3 months
- ☐ 6 - Reported or observed history of difficulty complying with any medical instructions (for example, medications, diet, exercise) in the past 3 months
- ☐ 7 - Currently taking 5 or more medications
- ☐ 8 - Currently reports exhaustion
- ☐ 9 - Other risk(s) not listed in 1 - 8
- ☐ 10 - None of the above

Figure 1- OASIS item M1033 from the OASIS-C1 data set.

Centers for Medicare and Medicaid Services. (2015). CMS.gov/homehealthcompare

Results

263 patients were admitted to the home care agency from 01/01/2015-01/21/2015. 63 of those patients were admitted to acute care within 30 days. Data analysis was conducted to determine if any one individual risk factor identified in M1033, if a combination of factors, or the total number of risk factors identified for an individual patient serves as a predictor for acute care hospitalization.

- While there seems to be an increase in risk for ACH for patients with 3 or more risk factors identified, these results were not statistically significant. The number of identified risk factors failed to predict risk for ACH.
- Two risk factors produced clinically and statistically significant results:
 - 54% of patients admitted to acute care had history of multiple hospitalizations compared to 21% of patients who were not admitted to acute care (p -factor ≤ 0.001).
 - 27% of patients admitted to acute care had problems complying with medical instructions compared to 9.5% of patients who were not admitted to acute care ($p=0.005$).
 - 62.5% of patients admitted to acute care had both risk factors compared to 37.5% of the patients without admission to acute care.

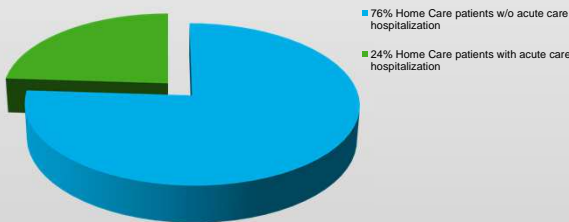


Figure 2 – Patients admitted to home care 01/01/2015-01/21/2015

Results

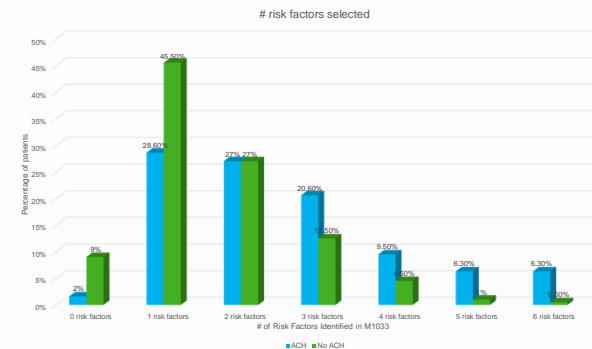


Figure 3. Comparison of the # of risk factors selected for those patients admitted to an acute care hospital (ACH) vs. those without ACH.

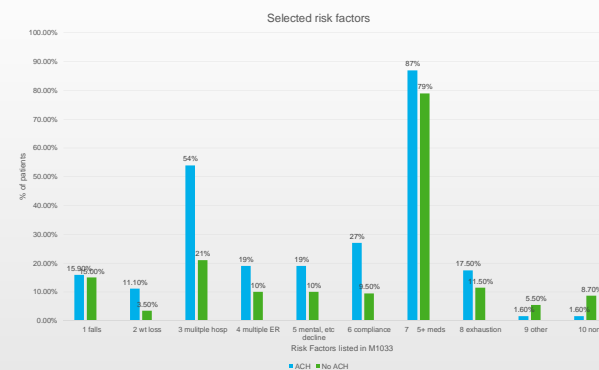


Figure 4. M1033 risk factors selected for patients admitted to ACH within 3 days within 30 days vs those who were not.

Conclusion

- This study produced clinically and statistically significant data indicating that OASIS data set item M1033 could potentially be used to prioritize patients at risk for ACH.
- Due to the small sample size, the determination as been made to repeat the study using 3 months of data for 3 home care agencies servicing geographically different populations.
- Results of this study will be used to identify patients in need of additional or alternative action plans aimed at reducing the likelihood of re-hospitalization.