

Developing a Tool to Support Decisions on Patient Prioritization at Admission to Home Health Care



Maxim Topaz^{1,2}, Kathryn H. Bowles^{1,3}

MILLIONS of Americans are discharged from hospitals to home health every year and about third of them return to hospitals. A significant number of rehospitalizations (up to 60%) happen within the first two weeks of services. Early targeted allocation of services for patients who need them the most, have the potential to decrease readmissions. Unfortunately, there is only fragmented evidence on factors that should be used to identify high-risk patients in home health. This study aimed to (1) identify factors associated with priority for the first home health nursing visit and (2) to construct and validate a decision support tool for patient prioritization.

Methods: We recruited a geographically diverse convenience sample of nurses with expertise in care transitions and care coordination to identify factors supporting home health care prioritization. This was a predictive study of home health visit priority decisions made by 20 nurses for 519 older adults referred to home health. Variables included socio-demographics, diagnosis, comorbid conditions, adverse events, medications, hospitalization in last 6 months, length of stay, learning ability, self-rated health, depression, functional status, living arrangement, caregiver availability and ability and first home health visit priority decision. A combination of data mining and logistic regression models was used to construct and validate the final model.

Results: The model identified five factors associated with first home health visit priority. A cut point for decisions on low/medium versus high priority was derived with a sensitivity of 80% and specificity of 57.9%, area under receiver operator curve (ROC) 75.9%. Nurses were more likely to prioritize patients who had wounds (odds ratio [OR]=1.88), comorbid condition of depression (OR=1.73), limitation in current toileting status (OR= 2.02), higher numbers of medications (increase in OR for each medication =1.04) and comorbid conditions (increase in OR for each condition =1.04).

Discussion: This study developed one of the first clinical decision support tools for home health, the PREVENT- Priority for Home Health Visit Tool. Further work is needed to improve the specificity and generalizability of the tool, implement an electronic version and test its effects on patient outcomes.

¹University of Pennsylvania, School of Nursing

²Brigham and Women's health hospital

³Visiting Nurse Service of New York