

Effect of Electronic Face to Face Certification Form on Home Healthcare Services Start Date and 30-Day Rehospitalizations and Emergency Room Visits

Karen A Neeb, MSN, ANP-BC, Li Zhu, MSN, AGNP-C, Andrzej Galecki, MD, PhD, Mohammed Kabeto, MS, Navasuja Kumar, MBBS, MPH, Ana Montoya, MD, MPH, CMD
³Division of Geriatric Medicine, University of Michigan, Ann Arbor, MI

Introduction

- Patients who transition from hospital to skilled nursing facilities (SNF) frequently require home healthcare (HHC) services upon discharge to home.
- CMS requires a physician certify a patient's eligibility for home health benefit as condition for payment by signing a face-to-face encounter (FTF) form. Typically, a non-physician practitioner (NPP) is the person who sees the patient to prepare for discharge and completes the FTF form and physically routes the paper form to the physician for signature.
- Frequently these forms were misplaced and re-issued generating concern for delays in start of care at home and causing additional work for NPP, physicians and HHC staff.
- The FTF form was incorporated into the electronic discharge summary in the patient's electronic health record (EHR) and routed to physician for signature.

Methods

- Study: pre-implementation and post-implementation to β test the effect of our intervention on days to start of care, 30-day ED visits and 30-day rehospitalizations
- Time period: 25 months prior to implementation date of 10/1/2016 and 25 months post implementation
- Site: 3 LTC facility affiliated with University hospital in MI
- Data abstracted from EHR and U-HHC agency for patient's discharged within the dates above. Depending on the distribution of the continuous variables, either mean and standard deviation or median and interquartile range (IQR) were calculated.
- To test the difference between pre- and post-implementation groups, Student's t-test, Wilcoxon rank sum test or chi square tests were used as appropriate. Multivariable logistic regression models were employed to compare the outcomes.

Specific Aims

1. To decrease the number of days until the start of care at home services through implementation of a combined FTF/discharge summary electronic document.
2. To reduce 30-day ED visit rate through the implementation of the combined electronic document.
3. To reduce 30-day rehospitalization rate through the implementation of the combined electronic document.

Results

- 382 patients were discharged from the three participating SNF's between September 2014 and October 2018. 130 patients were discharged during the pre-implementation period and 252 were discharged during the post-implementation period (Table 1).
- No statistical difference was noted on the days until start of care between pre and post-implementation groups or when compared by diagnosis (Table 2). After adjusting for age and gender, the odds of starting care within 24 or 48 hours was variable and did not reach statistical significance.
- When comparing post-implementation group to pre-implementation group, after adjusting for age, gender and start of home care within 48 hours, the odds of being rehospitalized within 30 days was 57% lower among the post-implementation group. Similarly, the odds of having an ED visit within 30 days was 60% lower among the post-implementation group, compared to the pre-implementation group (Table 3).

Table 3: Post-intervention start of care, 30-day rehospitalizations and 30-day ED visits

Outcome	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Start of care within 24 hours	0.90 (0.59, 1.37)	0.94 (0.61, 1.45)*
Start of care within 48 hours	0.98 (0.60, 1.60)	1.06 (0.64, 1.75)*
30-day Rehospitalizations	0.43 (0.25, 0.74)	0.43 (0.25, 0.75)**
30-day ED visit	0.41 (0.25, 0.67)	0.40 (0.24, 0.66)**

* Adjusted for age and gender ** Adjusted for age, gender and start of care within 48 hours

Results

Table 1: Characteristics of study population

Variable	Pre (n=130)	Post (n=252)	P
Age, Mean (SD)	71.53 (13.86)	74.65 (11.86)	0.0283 a
Days until Start of Care, median (IQR)	2.00 (1.00, 2.00)	2.00 (1.00, 2.00)	0.7995 b
Gender n (%)			
Female	88 (67.69%)	159 (63.10%)	
Male	42 (32.31%)	93 (36.90%)	

a: Student's t-test b: Wilcoxon

Table 2: Days until start of home care by diagnosis

Diagnosis	n	Days until start of		P (Wilcoxon)
		Pre-intervention group	Post-intervention group	
Altered mental status / Dementia	22	2.0 (1.00, 2.00)	1.00 (1.00, 2.00)	0.8863
Cerebrovascular accident	27	2.00 (1.00, 3.00)	2.00 (1.00, 4.00)	0.8773
Cardiac	47	2.00 (1.00, 3.00)	2.00 (1.00, 3.00)	0.5189
Elective joint replacement	37	1.50 (1.00, 2.00)	1.00 (1.00, 2.00)	0.3137
Fall/Fracture	76	2.00 (1.00, 2.00)	2.00 (1.00, 3.00)	0.8792
Infections	95	1.00 (1.00, 2.00)	2.00 (1.00, 3.00)	0.1843
Malignancies	26	2.00 (1.00, 2.50)	1.00 (1.00, 2.00)	0.4837
Other	52	2.00 (1.00, 3.00)	2.00 (1.00, 2.00)	.8006

Conclusions

- The implementation of a combined FTF/discharge summary electronic document upon discharge from SNF to home with U-HHC services was associated with lower 30-day ED visits and 30-day rehospitalizations, however, it was not associated with a decrease in number of days until the start of home care services.

References

1. Neuman, MD, Wirtalla, C, Werner, RM. (2014). Association between skilled nursing facility quality indicators and hospital readmissions. *JAMA*, 312(15), 1542-51.
2. Weerahandi, H., Li, L., et al. (2019). Risk of readmission after discharge from skilled nursing facilities following heart failure hospitalization: A retrospective cohort study. *JAMDA*, 20(4), 432-437.