Transformation of Transition of Care and Closer Follow up with Primary Care Provider to Reduce Hospital Readmission and ER Revisits

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Abstract

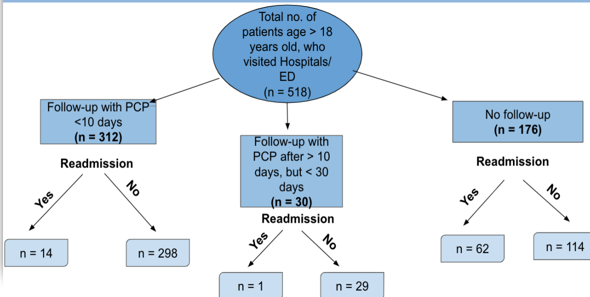
Hospital readmissions and Emergency Department (ED) revisits can be costly to patients and the entire health system. Our study analyzes how this can be reduced through timely follow-up and transition of care with an outpatient primary care provider (PCP) after discharge from the hospital or the ED. Our hypothesis is that those who follow up with their PCP within 10 days of discharge are less likely to be readmitted to hospital/ED than those who do not. A total of 518 adult patients (age >18 years), who had visited a hospital at least once during the period between 1/28/22 - 4/28/22, were studied. Based on the results, it was observed that patients who followed up with their PCP within 10 days of discharge had significantly lower number of hospital readmissions and/or ED revisits compared to others. Interventions that showed promise include post-discharge telephone follow-up by clinic staff, provider to provider notifications, and continuity of care in both the hospital and the clinic by the the same resident physician team.

Background

- Medicare's Hospital Readmissions Reduction Program captures unplanned readmissions within 30 days of discharge from the initial admission.
- An analysis of Medicare claims data between 2003 and 2004 found that nearly 20% of the >11 million Medicare patients who had been discharged from a hospital were readmitted within 30 days, at a cost of $17.4 billion.

Methods

- Our registry of patients came mostly from health insurance data that record and notify us of hospital, and ED discharges.
- From our Federally Qualified Health Center (FQHC) patient list, we retrospectively analyzed patients who had gone to a hospital or ED during the period between 1/28/22 - 4/28/22 at either Phelps Hospital or Northern Westchester Hospital.
- We then reviewed each patient's chart through both the clinic and the hospital's EMR systems.
- In the hospital's EMR, we looked at how often a patient was readmitted to the hospital or revisited the ER.
- In the clinic's EMR, we looked at whether or not a patient followed up with their PCP after discharge and the various transition of care modalities that were used to assure a definite follow up with each patient after discharge.



Results

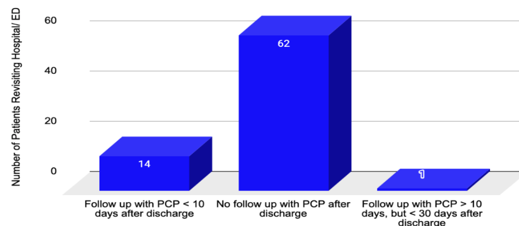


Figure 1. Number of hospital readmissions or ED revisits among those who follow up with PCP versus those who do not follow up.

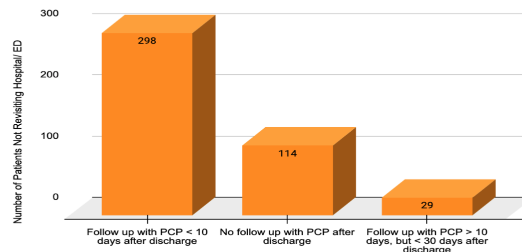


Figure 2. Comparing number of patients who do not have hospital readmissions or ED revisits among the three different groups.

Observed	Revisit to Hospital or ED within 30 days		
Follow w/ PCP	No	Yes	Grand Total
No	114	62	176
Yes (> 10 days)	29	1	30
Yes (< 10 days)	298	14	312
Grand Total	441	77	518

Statistics:	
Significance Level	5.00%
Degrees of Freedom	2
Test Statistic	87.367
p-value	1.06 x 10^ -19

Expected	Revisit to Hospital or ED within 30 days		
Follow w/ PCP	No	Yes	Grand Total
No	149.84	26.16	176.00
Yes (> 10 days)	25.54	4.46	30.00
Yes (< 10 days)	265.62	46.38	312.00
Grand Total	441.00	77.00	518.00

Interpretation of Result

Figure 1 reveals that patients who followed up with their PCP within 10 days of discharge had only 14 hospital readmissions/ED revisits; whereas, those who did not follow up with their PCP after discharge had 62 hospital readmissions/ED revisits.

Figure 2 reveals that 298 out of 312 patients, who followed up with their PCP within 10 days of discharge, did not revisit the ED/hospital again within 30 days.

We then performed a Chi-square analysis, and based on the results, the p-value was found to be 1.06 x 10^(-19), which is < p-value of 0.05, therefore making the result statistically significant.

Conclusion

We conclude that timely follow-up with PCP within 10 days of discharge have statistically significant impact on reducing the number of hospital readmissions and/or ED revisits and could save significant amount in health care costs. Also in our study, some quality transition of care interventions that show promise include:

- Thorough patient-centered discharge instructions (both in English and Spanish).
- Medication reconciliation
- Virtual visit appointments with PCP
- Post-discharge telephone follow up by Nurse; TOC text message
- Continuity of care the same resident physician team
- Provider to Provider notifications.
- Detailed discharge summary accessible to the PCP through hospital EMR

Limitations

- Small sample from a community in Westchester County, NY. Only two local community hospitals
- Some patients might have followed up with PCP at outside clinic
- Study only focused on a specific time period (i.e.,1/28/22 - 4/28/22)
- Primarily Hispanic population

Future Work

- Comparing the effect of virtual visits vs. in-person follow-up visit with PCP on reducing readmissions to hospital or ED
- Comparing Spanish speaking vs. English speaking patients on follow-up visits w/ PCP and how it affects hospital readmissions and ED revisits

References

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