Hospital to Outpatient Follow-up: A Comparison of Three Sites

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BACKGROUND

- Recognizing the importance of outpatient follow-up after hospitalization; not only in management of chronic conditions, but also to decrease 30-day hospital readmissions.
- "Timely outpatient follow-up has been promoted as a key strategy to reduce hospital readmissions, though one-half of patients readmitted within 30 days of hospital discharge do not have follow-up before the readmission." (1)
- Shen et al. found there was 12% to 24% lower risk of 30-day readmission for patients who followed-up outpatient after hospital discharge, compared to those patients who did not.

OBJECTIVES

- The goal of this study is to compare outpatient follow-up rates after hospital discharge across three family medicine resident clinics.
- To see how many patients had a follow-up within 7 days from hospital discharge, and to see if that had lower odds of 30-day hospital readmission to those that did not have a follow-up within 7 days.

METHODS

- Data was collected from Epic via a SQL query for patients who were admitted to any Samaritan hospital between 2015 and 2019 with a hospital diagnosis of Heart Failure, MI, COPD Exacerbation, Pneumonia, or acute kidney/renal failure.
- Only patients who had a primary care provider (PCP) at the time of their admission associated with Samaritan's LCH, AGH, or GSR Family Medicine Resident Clinics were included.
- Data was collected on outpatient office visits at these clinics within 7 days of discharge, and on 30-day readmission to any Samaritan hospital for any reason.

RESULTS

- **20,971 hospital admissions** were identified between 2015 and 2019, with a hospital problem list diagnosis of one of the following: Heart Failure, MI COPD Exacerbation, Pneumonia or Acute Kidney Injury/ Renal Failure.
- **3,068 of those encounters** involved patients with PCP from LCH, GSR, or AGH Resident Clinics
- 7-day follow-up rates varied by clinic (Table 1 & Figure 1).
  - LCH family resident clinic had lowest follow-up rate (5%)
  - GSR family resident clinic had the highest (24%)
- **In all clinics**, patients who had follow-up within 7 days had lower 30-day hospital readmission rates. (Table 1 & Figure 2)
- The odds of 30-day hospital readmission were 40% lower for patients who follow-up at PCP's clinic within 7 days of discharge (Odds Ratio = 0.60, 95% CI = 0.45-0.80, p<0.001)

Table 1. Hospital Encounters and follow-up, by clinic

PCP Department	# of hospital encounters	# (%) with f/u at this clinic within 7 days	Readmission rate, overall	Readmission rate for those with 7 day f/u	Readmission rate for those without 7 day f/u
LCH SAMARITAN FAMILY MEDICINE RESIDENT CLINIC	1161	5% (54)	21% (245)	15% (8/54)	21% (237/1107)
GSR SAMARITAN FAMILY MEDICINE RESIDENT CLINIC	712	24% (171)	18% (128)	16% (27/171)	19% (101/541)
AGH SAMARITAN FAMILY MEDICINE GEARY ST	1195	21% (248)	18% (211)	11% (27/248)	19% (184/947)
OVERALL	3068	15% (473)	19% (584)	13% (62/473)	20% (522/2595)

Figure 1. % of hospital admissions with follow-up at patient PCP's clinic within 7 days

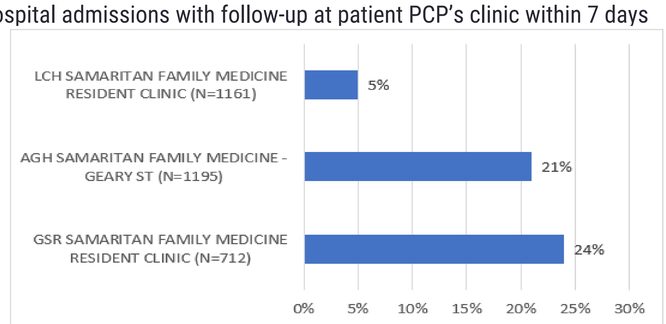
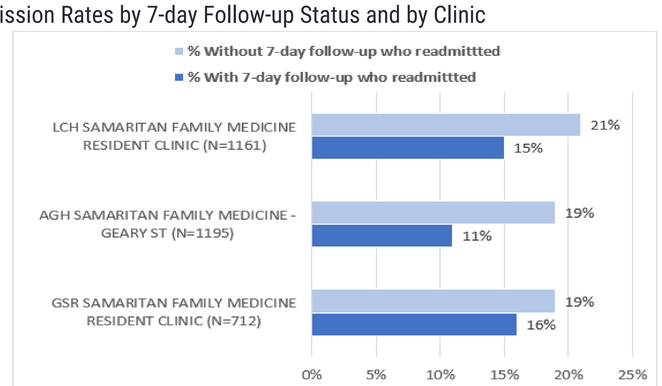


Figure 2. Readmission Rates by 7-day Follow-up Status and by Clinic



CONCLUSIONS

- There is a decrease rate of 30 day hospital readmission if patients follow-up with their outpatient primary care provider within 7 days of discharge from the hospital.
- Follow-up rates within 7 days seem to be best at Corvallis Family Medicine Resident Clinic.
- Chronic conditions were not taken into account during this study, and "although follow-up within 7 days was associated with substantially lower readmission rates… most patients do not appear to benefit from very early follow-up. Among patients with no or just 1 chronic or acute condition.. readmissions were uncommon and negligibly affected by the timing of outpatient follow-up for up to 30 days." (1)

FUTURE IMPLICATIONS

- Developing a system which patients are seen within one week following discharge from hospital; whether that be in the clinic, telemedicine, or a home visit.
- Finding resources, as certain requirements have presented a barrier to widespread implementation of successful programs.(2)
- Future quality improvement project ideas:
  - Determine whether correct coding for ED visit vs hospital admission is being utilized
  - Consider chronic conditions in timeline for follow-up.
- Future research project ideas:
  - Compare treatment methods for those typical diagnoses across three Samaritan Hospitals: GSRMC, AGH, LCH
  - Home visits for frequent ED utilizers or telemedicine follow-ups following hospital discharge to identify determinants and barriers to health/recovery within the three communities.

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