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Bridging the gap: a resident-led transitional care clinic to improve post hospital care in a safety-net academic community hospital

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ABSTRACT

The transitional period between hospital discharge and primary care follow-up is a vulnerable time for patients that can result in adverse health outcomes and preventable hospital readmissions. This is especially true for patients of safety-net hospitals (SNHs) who often struggle to secure primary care access when leaving the hospital due to social, economic and cultural barriers. In this study, we describe a resident-led postdischarge clinic that serves patients discharged from NYU Langone Hospital—Brooklyn, an urban safety-net academic hospital. In our multivariable analysis, there was no statistical difference in the readmission rate between those who completed the transitional care management and those who did not (OR 1.32 (0.75–2.36), p=0.336), but there was a statistically significant increase in primary care provider (PCP) engagement (OR 0.53 (0.45–0.62), p<0.001). Overall, this study describes a postdischarge clinic model embedded in a resident clinic in an urban SNH that is associated with increased PCP engagement, but no reduction in 30-day hospital readmissions.

INTRODUCTION

Hospital readmissions impact 1 out of every 12 admissions in the USA, costing an estimated US$16 billion annually.[1] To mitigate this, diverse postdischarge clinics, led by hospitalist, pharmacist or residents, have been established across diverse settings and conditions.[2–10] Safety-net hospitals (SNHs), which predominantly serve Medicaid or uninsured patients, face unique postdischarge challenges, as their patients often face socioeconomic and cultural barriers preventing them from securing primary care provider (PCP) follow-up.[11 12] It remains unclear which model is most effective for this demographic. We evaluate the efficacy of a resident-run postdischarge clinic at an SNH to assess its impact on readmissions and PCP engagement.

METHODS

In our 450-bed urban academic SNH (NYU Langone Hospital—Brooklyn, NYUL-BK) and affiliated Federally Qualified Health Center clinics (Family Health Centers (FHC)) with embedded internal medicine resident clinic, we launched a resident-led postdischarge clinic. We targeted adult patients discharged home from general medicine units who were unable to secure PCP access within 14 days, regardless of insurance status or specialist appointments.

1 month prior to the launch of transitional care management (TCM), residents and hospitalists received education about the programme's objectives, patient eligibility and scheduling during inpatient meetings. Residents also received training on a TCM template during outpatient didactics (figure 1). After the launch, monthly email refreshers were sent to all providers. On discharge, the inpatient team was responsible for suggesting TCM visits, either in-person or virtual, to eligible patients. Visits were scheduled within 14 days post discharge, with a reminder from the FHC coordinator 2 days post discharge. Residents, who were not necessarily the patient's primary inpatient provider, conducted these TCM visits. After the TCM visit, patients without a PCP who wanted to continue at FHC saw the same resident for ongoing care.

This observational study focused on two primary outcomes—30-day readmission rate at NYUL-BK and PCP engagement, which was defined as follow-up FHC clinic visit following the TCM appointment within 1 year. Data from FHC and NYU Electronic Medical Records (EMRs) were visualised in Tableau (Washington, USA). We used linear regression analysis to evaluate the 30-day readmission rate and

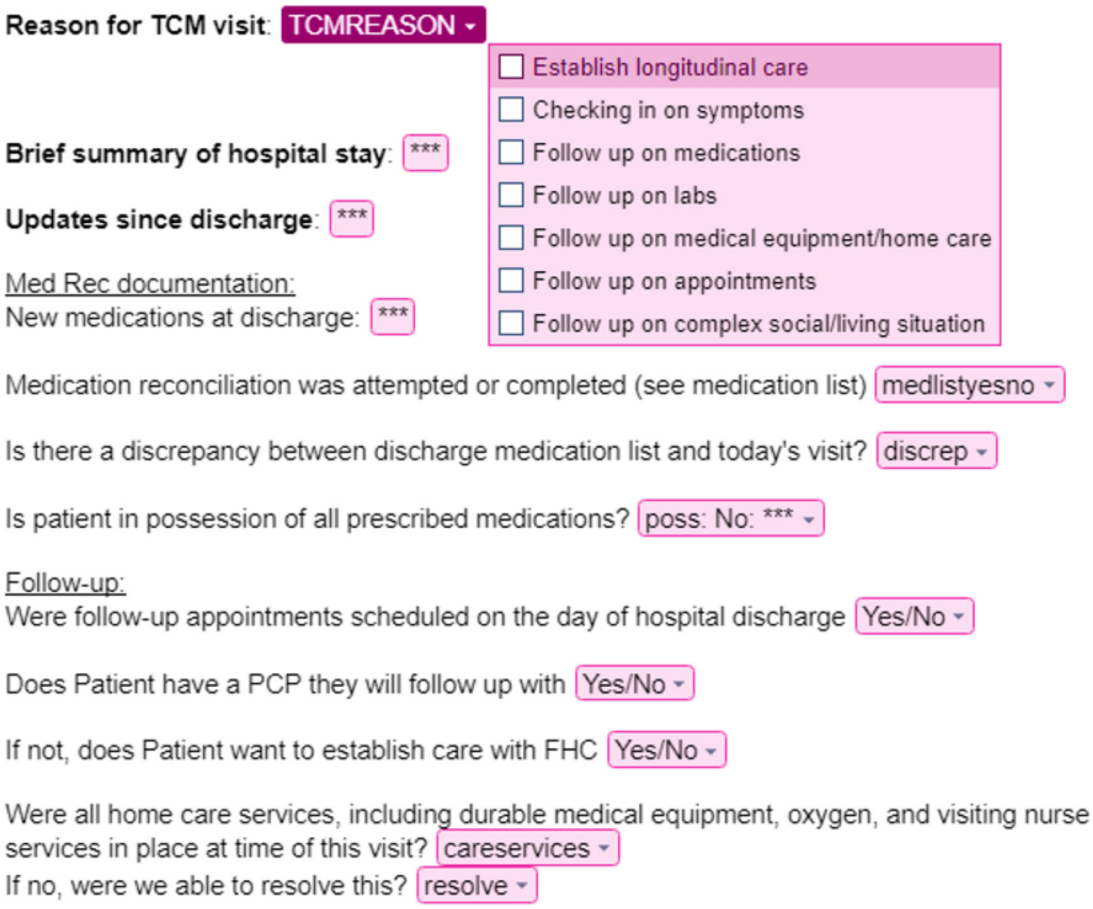

Figure 1 TCM template prepopulated for every TCM visit on the Electronic Medical Record (EMR). The template included evaluation of key postdischarge items including clinical condition, medication reconciliation, follow-up appointments, medical equipment and visiting nurse needs. FHC, Family Health Centers; PCP, primary care provider; TCM, transitional care management.

Poisson multivariable regression analysis to evaluate PCP engagement. Covariates included age, gender, insurance type, race, language and visit type. Analyses were conducted in R, V.4.2. Statistical testing was two sided, with a significance level of 0.05.

RESULTS

Between October 2020 and January 2022, 921 patients accepted TCM referrals, with 418 (45%) completing TCM visits (table 1). Differences between completers and non-completers included age, insurance type, ethnicity, disease severity and type of visit. Notably, completers opted for more virtual visits compared with non-completers (51% vs 26%, p<0.001).

For outcomes, the 30-day readmission rate was 7% for non-completers and 5.3% for completers (p=0.29); this was not statistically significant. After adjusting for potential confounders, age, gender, insurance type, race, language and visit type, there was still no statistically significant difference (p=0.336). Among TCM completers, 34% had at least one subsequent PCP encounter with a resident in the FHC clinic, contrasting with 9% of non-completers (p<0.001), which persisted even after adjustment (p<0.001) (table 1).

DISCUSSION

Our study highlights the advantages of embedding TCM in a resident clinic at an SNH. Integration of postdischarge care into the existing resident clinic offers a seamless transition, eliminating the need to divert other personnel, which is a common challenge in hospitalist-led models.[12] While readmission rates were not reduced, consistent with the existing literature on postdischarge clinics for the general medical unit admissions, it was associated with increased PCP engagement.[4 12] SNHs often struggle with securing adequate postdischarge access for their patients, so this resident-centric model leverages the versatility and availability of residents to address the unique challenges faced in this patient population.[2]

Our study has several limitations. As a single-centre observational study, the results may not be generalisable. The provider-driven recruitment may introduce potential referral bias, skewing patient selection.

Table 1 Demographic characteristics and outcomes associated with TCM completion

Characteristic and key indicators of TCM study population	Referred, completed TCM (n=418)	Referred, not completed (n=503)
Age, mean (SD)	50 (17)	54 (17)
Male, n (%)	305 (69)	354 (58)
No PCP, n (%)	303 (72)	339 (67)
Type of visit, n (%)		
In-person	218 (49)	371 (74)
Virtual	224 (51)	132 (26)
Length of stay (days)	4.75	4.69
Insurance type, n (%)		
Medicaid	304 (73)	290 (58
Medicare	85 (20)	159 (32)
Commercial	28 (6.7)	53 (11)
Race/ethnicity, n (%)		
Black	72 (18)	77 (16)
Hispanic	151 (37)	160 (33)
White	94 (23)	150 (31)
Asian	43 (11)	34 (6.9)
Other	45 (11)	70 (14)
Language, n (%)		
English	243 (58)	305 (61)
Other	175 (42)	198 (39)
CMI*	1.43	1.30
30-day readmissions, n (%)	22 (5.3)	35 (7)
Subsequent PCP follow-up, n (%)	142 (34)	43 (9)
Outcomes associated with TCM completion		**Adjusted OR (95% CI)**
30-day readmissions†	Not completed versus completed	1.32 (0.75 to 2.36)
PCP engagement‡	Not completed versus completed	0.53 (0.45 to 0.62)

Multivariable regression analysis covariates.
*CMI is a measure of the average disease severity and resource needs of a patient.
†Age, gender, insurance, race, primary language spoken, visit type and PCP status.
‡Age, gender, insurance, race, primary language spoken and visit type.
CMI, case mix index; PCP, primary care provider; TCM, transitional care management.

Despite measuring confounding variables, inherent differences may exist between those patients who opted into TCM compared with those who did not. The absence of external PCP follow-up data may underestimate true engagement rates outside our facility. By including the general discharge population, already known for low readmission rates, our results may be less pronounced than those focusing on higher-risk groups.[3 9 12] Our next iteration focuses on standardising the patient recruitment process, with a focus on congestive heart failure patients.

In conclusion, our research showcases a resident-centric TCM clinic model for SNH discharges. Despite no statistically significant reduction in 30-day readmissions, the notable increase in PCP engagement underscores the potential application of this model in addressing postdischarge challenges in SNHs.

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