

Evaluation of a Discharge Clinic and 30-Day Readmission Rates

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Learning Objectives

- Identify successful interventions that can be used to improve 30-day readmission rates.
- Discuss the implications for future care opportunities.

Background

- Patients often struggle to obtain appropriate care following hospitalization which CMS estimates to cost \$17 billion annually
- Transitioning to self-care responsibilities post-discharge as well as social drivers of health increase the risk of 30-day readmissions
- 30-day readmissions result in increased cost and resource utilization for the organization as well as decreased quality of life for the patient
- This is significant considering most 30-day readmissions are avoidable
- Care transition programs have resulted in cost avoidance and a reduction of 30-day readmissions, but determining which programs have the greatest impact creates a challenge
- Effectiveness of transition programs is often determined by targeting a specific patient population
- Interventions focused on symptom reduction and preserving quality of life appear to have the greatest impact
- Family & Community Medicine's transition of care model led to the opening of a Discharge Clinic
- Community Paramedicine Programs expand the role of paramedics to help with healthcare reform by acting as a liaison between the patient, community resources, and the healthcare system

Purpose

The purposes of this project were to determine if the implementation of a Discharge Clinic improved 30-day readmission rates in patients who did not have a primary care provider or did not have access to their primary care provider, whether a visit from the community paramedicine program impacted 30-day readmission rates in patients who missed their Discharge Clinic appointment, and whether a second post-discharge phone call from a licensed practical nurse affected 30-day readmission rates

Methods

- Single-center, retrospective, exploratory study
- November 2021 November 2022
- University of Kentucky Hospitals and Discharge Clinic
- Adult patients with no PCP or no access to their PCP
- IRB approval obtained
- Determine baseline readmission rates
- Determine if collaboration impacted readmissions
- Determine if follow-up call impacted readmissions

Results





Commercial 📕 Medicaid 🔳 Medicare 📕 Self-Pay 🔳 Other

- Mean age 53.49
- Bivariate analysis only variable significantly associated with readmission status was appointment outcome
- Patients who completed a discharge clinic appt had 34% lower odds of readmission compared to those who did not complete the Discharge Clinic appointment

Variable	n (%)
Appointment Outcome	
Completed	452 (62.2%)
No Show	275 (37.8%)

	Readmitted	Not readmitted	р
Discharge clinic appt status (n=727)			.022
Completed	80 (17.7%)	372 (82.3%)	
No show	68 (24.7%)	207 (75.3%)	
Among No Show (n = 187)			.251
Paramedicine Visit	2 (11.1%)	16 (88.9%)	
No Paramedicine Visit	42 (24.9%)	127 (75.1%)	
Among Completed (n = 144)			<.001
Follow-up Call	2 (3.8%)	51 (96.2%)	
No Follow-up Call	24 (26.4%)	67 (73.6%)	

- Advocate for policy change focused on breaking down upstream barriers that are leading to poor health outcomes
- Advocate for nursing curriculum redesign to include care redesign, system innovation, and value-conscience care
- A reduction in the 30-day readmission rate was a measure of success, but further research is needed to determine which interventions have the greatest impact
- Identifying interventions that have the greatest impact and improve 30-day readmission rates is imperative for improving outcomes, reducing resource utilization and healthcare costs, and avoiding penalties in value-based programs

- Ndugga, N., & Artiga, S. (2011). Disparities in Health and Health Care: 5 Key Questions and Answers. Disparities in Health and Health Care: 5 Key Questions and Answers | KFF O'Meara, P., Stirling, C., Ruest, M., & Martin, A. (2016). Community paramedicine model of care: An observational, ethnographic case study. BMC Health Services Research, 16(1). https://doi.org/10.1186/s12913-016-1282-0 Rennke, S., Nguyen, O. K., Shoeb, M. H., Magan, Y., Wachter, R. M., & Ranji, S. R. (2013). Hospital-initiated transitional care interventions as a patient safety strategy. Annals of Internal Medicine, 158(5_Part_2), 433-440. https://doi.org/10.7326/0003-4819-158-5-201303051-00011 Schaeffer, C., Teter, C., Finch, E. A., Hurt, C., Keeter, M. K., Liss, D. T., Rogers, A., Sheth, A., & Ackermann, R. (2018). A pragmatic randomized comparative effectiveness trial of transitional care for a socioeconomically diverse population: Design, rationale and Baseline Characteristics. *Contemporary Clinical Trials*, 65, 53–60. https://doi.org/10.1016/j.cct.2017.12.003 Setser, J., & Wade, A. (2021). The Readmission Mission: A Multifaceted, Patient-Centered Approach to Reducing Readmissions. Poster presented at: Society of Teachers of Family Medicine: Conference on Practice Improvement: September 2021: Virtual.



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Discussion

- Completed Discharge Clinic appointments resulted in a 30-day readmission rate of 17.7% compared to no-show visits (24.7%)
- The Discharge Clinic targeted patients with an Epic risk score of 14 meaning they were at higher risk of 30-day readmission compared to the general population
- Referral to the paramedicine program led to lower readmission rates (11%) suggesting traditional hospital follow-up may not be the only way to reduce hospital readmissions Second TOC calls allowed continued care coordination efforts with a 30-day readmission rate of 4%
- Interventions focused on how, who, when, and where healthcare is organized and delivered have the greatest potential to improve outcomes and the results of this study are consistent with prior research

Next Steps

- Expand the Paramedicine intervention to include more patients
- Add texting capabilities to potentially reach more patients
- Future research should focus on why 38% no-showed their appointment
- Determine the full extent of the ROI to drive cost-saving interventions and lower overall healthcare costs

References

- Baldino, M., Bonaguro, A. M., Burgwardt, S., Lombardi, A., Cristancho, C., Mann, C., Wright, D., Jackson, C., & Seth, A. (2021). Impact of a novel Post-Discharge Transitions of care clinic on hospital readmissions. Journal of the *National Medical Association, 113*(2), 133–141. https://doi.org/10.1016/j.jnma.2020.07.018 Ballard, J., Rankin, W., Roper, K. L., Weatherford, S., & Cardarelli, R. (2018). Effect of ambulatory transitional care management on 30-day readmission rates. American Journal of Medical Quality, 33(6), 583–589
- https://doi.org/10.1177/1062860618775528 Boyd, C. M., & Fortin, M. (2010). Future of multimorbidity research: How should understanding of multimorbidity inform health system design? Public Health Reviews, 32(2), 451–474. https://doi.org/10.1007/bf03391611 Chan, J., Griffith, L. E., Costa, A. P., Leyenaar, M. S., & Agarwal, G. (2019). Community Paramedicine: A systematic review of program descriptions and training. CIEM, 21(6), 749–761. https://doi.org/10.1017/cem.2019.14 Gardner, R., Li, Q., Baier, R. R., Butterfield, K., Coleman, E. A., & Gravenstein, S. (2014). Is implementation of the care transitions intervention associated with cost avoidance after hospital discharge? Journal of General
- Internal Medicine, 29(6), 878–884. https://doi.org/10.1007/s11606-014-2814-0 Hwang, A. B., Schuepfer, G., Pietrini. M., Boes, S. (2021). External validation of EPIC's Risk of Unplanned Readmission model, the LACE+ index and SQLape as predictors of unplanned hospital readmissions: A monocentri retrospective, diagnostic cohort study in Switzerland. PLoS One, 16(11).
- Jencks, S. F., Williams, M. V., & Coleman, E. A. (2009). Rehospitalizations among patients in the medicare fee-for-service program. New England Journal of Medicine, 360(14), 1418–1428. https://doi.org/10.1056/nejmsa0803563
- Kastner, M., Cardoso, R., Lai, Y., Treister, V., Hamid, J. S., Hayden, L., Wong, G., Ivers, N. M., Liu, B., Marr, S., Holroyd-Leduc, J., & Straus, S. E. (2018). Effectiveness of interventions for managing multiple high-burden chronic diseases in older adults: A systematic review and meta-analysis. Canadian Medical Association Journal, 190(34). https://doi.org/10.1503/cmaj.171391