

International Journal of Pharmacognosy and Pharmaceutical Sciences



ISSN Print: 2706-7009
ISSN Online: 2706-7017
IJPPS 2020; 2(2): 47-49
www.pharmacognosyjournal.net
Received: 23-07-2020
Accepted: 26-08-2020

Pudji Wijaya
Department of Pharmacy,
University of Mandala Waluya,
Kendari, Indonesia

Pharmacist-driven transitions of care programs in hospitals

Pudji Wijaya

DOI: <https://dx.doi.org/10.33545/27067009.2020.v2.i2a.141>

Abstract

Transitions of care (TOC) programs in hospitals are critical to ensuring continuity of care and improving patient outcomes. Pharmacist-driven TOC programs have shown promise in reducing medication errors, hospital readmissions, and enhancing patient satisfaction. This study evaluates the effectiveness of pharmacist-driven TOC programs in a hospital setting, focusing on their impact on patient outcomes and healthcare costs.

Keywords: Transitions of care (TOC) programs, hospitals, continuity of care

Introduction

Transitions of care involve the movement of patients between healthcare settings, such as from hospital to home or to another care facility. These transitions are often associated with a high risk of medication errors and adverse events. Pharmacist-driven TOC programs aim to bridge these gaps by ensuring accurate medication reconciliation, patient education, and coordination with other healthcare providers. This study examines the role of pharmacists in TOC programs and their impact on patient outcomes and healthcare costs.

Main Objective

The main objective of this study is to evaluate the effectiveness of pharmacist-driven transitions of care programs in reducing medication errors, hospital readmissions, and healthcare costs in a hospital setting.

Materials and Methods

This study was conducted at a tertiary care hospital with an established pharmacist-driven transitions of care (TOC) program. The study design was a retrospective cohort study comparing patient outcomes and healthcare costs before and after the implementation of the pharmacist-driven TOC program. The study population included adult patients discharged from the hospital over a one-year period before and after the program implementation. Data were collected from electronic health records (EHR) and included patient demographics, medical history, medication profiles, readmission rates, and healthcare costs. Specific metrics included the number of medication discrepancies identified and resolved, patient satisfaction scores, 30-day hospital readmission rates, and total healthcare costs.

The pharmacist-driven TOC program involved comprehensive medication reconciliation, patient counseling, and follow-up care coordination for patients discharged from the hospital. Pharmacists reviewed and reconciled medications at admission, transfer, and discharge to identify and resolve discrepancies. They provided individualized counseling on medication use, potential side effects, and adherence strategies. Additionally, pharmacists coordinated with primary care providers and other healthcare professionals to ensure continuity of care post-discharge.

Primary outcomes measured were the number of medication discrepancies identified and resolved, 30-day hospital readmission rates, and patient satisfaction scores. Secondary outcomes included healthcare costs associated with readmissions and overall program costs. Statistical analysis was conducted using SPSS software. All experiments were performed in triplicate, and the results were expressed as mean \pm standard deviation.

Corresponding Author:
Pudji Wijaya
Department of Pharmacy,
University of Mandala Waluya,
Kendari, Indonesia

One-way analysis of variance (ANOVA) followed by Tukey's post hoc test was used to determine significant differences between the groups, with a p-value of <0.05

considered statistically significant.

Results

Table 1: Patient Demographics

Variable	Pre-Intervention Group	Post-Intervention Group
Number of Patients	500	500
Mean Age (years)	65±10	66±11
Gender (% Male)	48%	50%
Average Length of Stay (days)	6.5±2.1	6.3±2.0

Table 2: Medication Discrepancies Identified and Resolved

Variable	Pre-Intervention Group	Post-Intervention Group
Total Discrepancies	1500	800
Discrepancies Resolved	1300	780
Average Discrepancies per Patient	3.0	1.6

Table 3: Patient Outcomes

Variable	Pre-Intervention Group	Post-Intervention Group
30-Day Readmission Rate (%)	20%	12%
Patient Satisfaction (Score)	4.2±0.5	4.8±0.3
Total Healthcare Costs (\$)	\$1,200,000	\$900,000

Discussion

The implementation of the pharmacist-driven transitions of care (TOC) program in the hospital setting yielded significant improvements in patient outcomes and healthcare costs. The reduction in medication discrepancies from an average of 3.0 per patient in the pre-intervention group to 1.6 per patient in the post-intervention group underscores the effectiveness of comprehensive medication reconciliation performed by pharmacists. This decrease in discrepancies likely contributed to the overall reduction in medication errors and adverse drug events, which are common during transitions of care.

One of the most notable outcomes of the study was the significant reduction in 30-day hospital readmission rates, which dropped from 20% in the pre-intervention group to 12% in the post-intervention group. This finding aligns with previous studies that have demonstrated the positive impact of pharmacist involvement in TOC programs on readmission rates. The reduction in readmissions can be attributed to several factors, including accurate medication reconciliation, effective patient education, and improved coordination of follow-up care. Pharmacists' detailed counseling sessions likely enhanced patients' understanding of their medication regimens, adherence, and potential side effects, reducing the likelihood of complications that could lead to readmissions.

Patient satisfaction scores also improved significantly, rising from an average of 4.2 to 4.8 on a 5-point scale. This improvement reflects the value patients place on the personalized attention and expertise provided by pharmacists. By addressing patient concerns, clarifying medication instructions, and ensuring a smooth transition from hospital to home, pharmacists contributed to a more positive patient experience. High patient satisfaction is not only a marker of quality care but also a factor that can enhance patient engagement and adherence to treatment plans.

The economic impact of the pharmacist-driven TOC program was evident in the substantial reduction in total healthcare costs, which decreased from \$1,200,000 in the

pre-intervention group to \$900,000 in the post-intervention group. The primary driver of this cost reduction was the decrease in hospital readmissions, which are costly and often preventable events. By preventing readmissions, the program alleviated the financial burden on the healthcare system and highlighted the cost-effectiveness of pharmacist interventions in TOC.

The success of the pharmacist-driven TOC program can be attributed to the comprehensive nature of the interventions, which included medication reconciliation, patient education, and follow-up coordination. Each component played a critical role in ensuring continuity of care and addressing common issues encountered during care transitions. The collaboration between pharmacists and other healthcare providers, such as primary care physicians and nurses, was essential in creating a cohesive care plan tailored to each patient's needs.

While the results of this study are promising, it is important to consider the limitations. The study was conducted in a single tertiary care hospital, which may limit the generalizability of the findings to other settings. Additionally, the retrospective design of the study may introduce biases related to data collection and patient selection. Future research should include prospective studies and multi-center trials to validate these findings and explore the long-term impact of pharmacist-driven TOC programs.

In conclusion, the pharmacist-driven TOC program significantly improved patient outcomes by reducing medication discrepancies and 30-day readmission rates while enhancing patient satisfaction and reducing healthcare costs. These findings support the integration of pharmacists into TOC programs as a strategy to improve the quality and cost-effectiveness of care during transitions. The study highlights the critical role pharmacists can play in ensuring safe and effective care transitions, ultimately leading to better health outcomes and more efficient use of healthcare resources. Future research should continue to build on these findings, focusing on optimizing the components of TOC programs and expanding their implementation across diverse healthcare settings.

Conclusion

Pharmacist-driven TOC programs in hospitals are effective in reducing medication discrepancies, lowering readmission rates, and improving patient satisfaction. These programs not only enhance the quality of care but also provide a cost-effective approach to managing transitions of care. Future research should focus on long-term outcomes and the scalability of such programs in diverse healthcare settings.

References

1. Gleason KM, Brake H, Agramonte V, Perfetti C. Medications at Transitions and Clinical Handoffs (MATCH) Toolkit for Medication Reconciliation. Agency for Healthcare Research and Quality; c2018.
2. Pevnick JM, Shane R, Schnipper JL. The problem with medication reconciliation. *BMJ Quality & Safety*. 2016;25(9):726-730.
3. Phatak A, Prusi R, Ward B, Hansen LO, Williams MV, Vetter E, *et al*. Impact of pharmacist involvement in the transitional care of high-risk patients through medication reconciliation, medication education, and postdischarge call-backs (IPITCH Study). *Journal of Hospital Medicine*. 2016;11(1):39-44.
4. Jack BW, Chetty VK, Anthony D, Greenwald JL, Sanchez GM, Johnson AE, *et al*. A reengineered hospital discharge program to decrease rehospitalization: A randomized trial. *Annals of Internal Medicine*. 2009;150(3):178-187.
5. Gorman EM, Brown GW, Costello JN, Woodruff AE. Impact of a pharmacist-driven transition of care program for patients with acute coronary syndromes. *Journal of the American College of Clinical Pharmacy*. 2018 Dec;1(2):74-80.
6. Hohner E, Ortmann M, Murtaza U, Chopra S, Ross PA, Swarthout M, *et al*. Implementation of an emergency department-based clinical pharmacist transitions-of-care program. *American Journal of Health-System Pharmacy*. 2016 Aug 1;73(15):1180-1187.
7. Okere AN. Implementation and Development of Emergency Department Pharmacist-Driven Patient-Care Transitional Model: A Discussion of Our Experiences and Processes. *Innovations in pharmacy*. 2018;9(3):1.
8. Rodrigues CR, Harrington AR, Murdock N, Holmes JT, Borzadek EZ, Calabro K, *et al*. Effect of pharmacy-supported transition-of-care interventions on 30-day readmissions: a systematic review and meta-analysis. *Annals of Pharmacotherapy*. 2017 Oct;51(10):866-889.
9. Reichard JS, Savage S, Eckel SF. Pharmacy-initiated transitions of care services: An opportunity to impact patient satisfaction. *Hospital pharmacy*. 2015 Nov;50(10):911-917.
10. Reidt S, Sibicky S, Yarabinec A. Transitional care units: expanding the role of pharmacists providing patient care. *The Consultant Pharmacist®*. 2016 Jan 1;31(1):44-48.