

Patient Safety in Transitions of Care: Addressing Discharge Communication Gaps and the Potential of the Teach-Back Method

Trivedi SP, Corderman S, Berlinberg E, et al. Assessment of patient education delivered at time of hospital discharge. *JAMA Intern Med.* 2023;183(5):417-423. doi:10.1001/jamainternmed.2023.0070

Marks L, O'Sullivan L, Pytel K, et al. Using a teach-back intervention significantly improves knowledge, perceptions, and satisfaction of patients with nurses' discharge medication education. *Worldviews Evid Based Nurs.* 2022;19(6):458-466. doi:10.1111/wvn.12612

Study 1 Overview (Trivedi et al)

Objective: This observational quality improvement study aimed to evaluate the discharge communication practices in internal medicine services at 2 urban academic teaching hospitals, specifically focusing on patient education and counseling in 6 key discharge communication domains.

Design: Observations were conducted over a 13-month period from September 2018 through October 2019, following the Standards for Quality Improvement Reporting Excellence (SQUIRE) guidelines.

Setting and participants: The study involved a total of 33 English- and Spanish-speaking patients purposefully selected from the "discharge before noon" list at 2 urban tertiary-care teaching hospitals. A total of 155 observation hours were accumulated, with an average observation time of 4.7 hours per patient on the day of discharge.

Main outcome measures: The study assessed 6 discharge communication domains: (1) the name and function of medication changes, (2) the purpose of postdischarge appointments, (3) disease self-management, (4) red flags or warning signs for complications, (5) teach-back techniques to confirm patient understanding, and (6) staff solicitation of patient questions or concerns.

Main results: The study found several gaps in discharge communication practices. Among the 29 patients with medication changes, 28% were not informed about the name and basic function of the changes, while 59% did not receive counseling on the purpose for the medication change. In terms of postdischarge appointments, 48% of patients were not told the purpose of these appointments. Moreover, 54% of patients did not receive counseling on self-management of their primary discharge diagnosis or other diagnoses, and 73% were not informed about symptom expectations or the expected course of their illness after leaving the hospital. Most patients (82%) were not counseled on red-flag signs and symptoms that should prompt immediate return to care.

Teach-back techniques, which are critical for ensuring patient understanding, were used in only 3% of cases, and 85% of patients were not asked by health care providers if there might be barriers to following the care plan. Less than half (42%) of the patients were asked if they had any questions, with most questions being logistical and often deferred to another team member or met with uncertainty. Of note, among the 33 patients, only 2 patients received extensive information that covered 5 or 6 out of 6 discharge communication domains.

Outcomes Research in Review SECTION EDITORS

DANIEL ISAAC, DO, MS
Michigan State University
East Lansing, MI

TAISHI HIRAI, MD
University of Missouri
Columbia, MO

FRED KO, MD, MS
Icahn School of Medicine
at Mount Sinai
New York, NY

WILLIAM W. HUNG, MD, MPH
Icahn School of Medicine
at Mount Sinai
New York, NY

The study found variable roles in who communicated what aspects of discharge education, with most domains being communicated in an ad hoc manner and no clear pattern of responsibility. However, 2 exceptions were observed: nurses were more likely to provide information about new or changed medications and follow-up appointments, and the only example of teach-back was conducted by an attending physician.

Conclusion: The study highlights a significant need for improved discharge techniques to enhance patient safety and quality of care upon leaving the hospital. Interventions should focus on increasing transparency in patient education and understanding, clarifying assumptions of roles among the interprofessional team, and implementing effective communication strategies and system redesigns that foster patient-centered discharge education. Also, the study revealed that some patients received more robust discharge education than others, indicating systemic inequality in the patient experience. Further studies are needed to explore the development and assessment of such interventions to ensure optimal patient outcomes and equal care following hospital discharge.

Study 2 Overview (Marks et al)

Objective: This study aimed to investigate the impact of a nurse-led discharge medication education program, Teaching Important Medication Effects (TIME), on patients' new medication knowledge at discharge and 48 to 72 hours post discharge. The specific objectives were to identify patients' priority learning needs, evaluate the influence of TIME on patients' new medication knowledge before and after discharge, and assess the effect of TIME on patients' experience and satisfaction with medication education.

Design: The study employed a longitudinal pretest/posttest, 2-group design involving 107 randomly selected medical-surgical patients from an academic hospital. Participants were interviewed before and within 72 hours after discharge following administration of medication instructions. Bivariate analyses were performed to assess demographic and outcome variable differences between groups.

Setting and participants: Conducted on a 24-bed medical-surgical unit at a large Magnet® hospital over 18 months

(2018-2019), the study included patients with at least 1 new medication, aged 18 years or older, able to read and speak English or Spanish, admitted from home with a minimum 1 overnight stay, and planning to return home post discharge. Excluded were cognitively impaired patients, those assigned to a resource pool nurse without TIME training, and those having a research team member assigned. Participants were randomly selected from a computerized list of patients scheduled for discharge.

Main outcome measures: Primary outcome measures included patients' new medication knowledge before and after discharge and patients' experience and satisfaction with medication education.

Main results: The usual care (n=52) and TIME (n=55) patients had similar baseline demographic characteristics. The study revealed that almost all patients in both usual care and TIME groups were aware of their new medication and its purpose at discharge. However, differences were observed in medication side effect responses, with 72.5% of the usual-care group knowing side effects compared to 94.3% of the TIME group ($P=.003$). Additionally, 81.5% of the usual-care group understood the medication purpose compared to 100% of the TIME group ($P=.02$). During the 48- to 72-hour postdischarge calls, consistent responses were found from both groups regarding knowledge of new medication, medication name, and medication purpose. Similar to discharge results, differences in medication side effect responses were observed, with 75.8% of the usual care group correctly identifying at least 1 medication side effect compared to 93.9% of the TIME group ($P=.04$). TIME was associated with higher satisfaction with medication education compared to usual care (97% vs. 46.9%, $P<.001$).

Conclusion: The nurse-led discharge medication education program TIME effectively enhanced patients' new medication knowledge at discharge and 48 to 72 hours after discharge. The program also significantly improved patients' experience and satisfaction with medication education. These findings indicate that TIME is a valuable tool for augmenting patient education and medication adherence in a hospital setting. By incorporating the teach-back method, TIME offers a structured approach to educating patients about their medications at hospital discharge, leading to improved care transitions.

Commentary

Suboptimal communication between patients, caregivers, and providers upon hospital discharge is a major contributor to patients' inadequate understanding of postdischarge care plans. This inadequate understanding leads to preventable harms, such as medication errors, adverse events, emergency room visits, and costly hospital readmissions.¹ The issue is further exacerbated by a lack of clarity among health care team members' respective roles in providing information that optimizes care transitions during the discharge communication process. Moreover, low health literacy, particularly prevalent among seniors, those from disadvantaged backgrounds, and those with lower education attainment or chronic illnesses, create additional barriers to effective discharge communication. A potential solution to this problem is the adoption of effective teaching strategies, specifically the teach-back method. This method employs techniques that ensure patients' understanding and recall of new information regardless of health literacy, and places accountability on clinicians rather than patients. By closing communication gaps between clinicians and patients, the teach-back method can reduce hospital readmissions, hospital-acquired conditions, and mortality rates, while improving patient satisfaction with health care instructions and the overall hospital experience.²

Study 1, by Trivedi et al, and study 2, by Marks et al, aimed to identify and address problems related to poor communication between patients and health care team members at hospital discharge. Specifically, study 1 examined routine discharge communication practices to determine communication gaps, while study 2 evaluated a nurse-led teach-back intervention program designed to improve patients' medication knowledge and satisfaction. These distinct objectives and designs reflected the unique ways each study approached the challenges associated with care transitions at the time of hospital discharge.

Study 1 used direct observation of patient-practitioner interactions to evaluate routine discharge communication practices in internal medicine services at 2 urban academic teaching hospitals. In the 33 patients observed, significant gaps in discharge communication practices were identified in the domains of medication changes,

postdischarge appointments, disease self-management, and red flags or warning signs. Unsurprisingly, most of these domains were communicated in an ad hoc manner by members of the health care team without a clear pattern of responsibility in reference to patient discharge education, and teach-back was seldom used. These findings underscore the need for improved discharge techniques, effective communication strategies, and clarification of roles among the interprofessional team to enhance the safety, quality of care, and overall patient experience during hospital discharge.

Study 2 aimed to augment the hospital discharge communication process by implementing a nurse-led discharge medication education program (TIME), which targeted patients' priority learning needs, new medication knowledge, and satisfaction with medication education. In the 107 patients assessed, this teach-back method enhanced patients' new medication knowledge at discharge and 48 to 72 hours after discharge, as well as improved patients' experience and satisfaction with medication education. These results suggest that a teach-back method such as the TIME program could be a solution to care transition problems identified in the Trivedi et al study by providing a structured approach to patient education and enhancing communication practices during the hospital discharge process. Thus, by implementing the TIME program, hospitals may improve patient outcomes, safety, and overall quality of care upon leaving the hospital.

Applications for Clinical Practice and System Implementation

Care transition at the time of hospital discharge is a particularly pivotal period in the care of vulnerable individuals. There is growing literature, including studies discussed in this review, to indicate that by focusing on improving patient-practitioner communication during the discharge process and using strategies such as the teach-back method, health care professionals can better prepare patients for self-management in the post-acute period and help them make informed decisions about their care. This emphasis on care-transition communication strategies may lead to a reduction in medication errors, adverse events, and hospital readmissions, ultimately improving

patient outcomes and satisfaction. Barriers to system implementation of such strategies may include competing demands and responsibilities of busy practitioners as well as the inherent complexities associated with hospital discharge. Creative solutions, such as the utilization of telehealth and early transition-of-care visits, represent some potential approaches to counter these barriers.

While both studies illustrated barriers and facilitators of hospital discharge communication, each study had limitations that impacted their generalizability to real-world clinical practice. Limitations in study 1 included a small sample size, purposive sampling method, and a focus on planned discharges in a teaching hospital, which may introduce selection bias. The study's findings may not be generalizable to unplanned discharges, patients who do not speak English or Spanish, or nonteaching hospitals. Additionally, the data were collected before the COVID-19 pandemic, which could have further impacted discharge education practices. The study also revealed that some patients received more robust discharge education than others, which indicated systemic inequality in the patient experience. Further research is required to address this discrepancy. Limitations in study 2 included a relatively small and homogeneous sample, with most participants being younger, non-Hispanic White, English-speaking, and well-educated. This lack of diversity may limit the generalizability of the findings. Furthermore, the study did not evaluate the patients' knowledge of medication dosage and focused only on new medications. Future studies should examine the effect of teach-back on a broader range of self-management topics in preparation

for discharge, while also including a more diverse population to account for factors related to social determinants of health. Taken together, further research is needed to address these limitations and ensure more generalizable results that can more broadly improve discharge education and care transitions that bridge acute and post-acute care.

Practice Points

- There is a significant need for improved discharge strategies to enhance patient safety and quality of care upon leaving the hospital.
- Teach-back method may offer a structured approach to educating patients about their medications at hospital discharge and improve care transitions.

—Yuka Shichijo, MD, and Fred Ko, MD,
Mount Sinai Beth Israel Hospital, New York, NY
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