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Brief Report

THE IMPACT OF TEACH-BACK METHOD ON RETENTION OF KEY DOMAINS OF EMERGENCY DEPARTMENT DISCHARGE INSTRUCTIONS

Becky Ann Slater, DO,[*1] Yinjiang Huang, MD,[*2] and Preeti Dalawari, MD, MSPH†

*Saint Louis University School of Medicine, Saint Louis, Missouri and †Division of Emergency Medicine, Saint Louis University School of Medicine, Saint Louis, Missouri

Reprint Address: Preeti Dalawari, MD, MSPH, Saint Louis University Hospital, 3635 Grand at Vista Avenue, First Floor Desloge Towers, Saint Louis, MO 63110

□ **Abstract—Background: Studies have shown that patient understanding and recall of their emergency department (ED) discharge instructions is limited. The teach-back method involves patients repeating back what they understand, in their own words, so that discharge providers can confirm comprehension and correct misunderstandings. Objective: The objective of this study was to determine if the teach-back method would increase retention of post ED discharge instructions. Methods: A before-and-after study design (pre and post teach-back method) was used at an academic Midwestern institution. After discharge, patients were asked a set of standardized questions regarding their discharge instructions via telephone interview. Answers were compared with the participant's discharge instructions in the electronic medical record. A composite score measuring mean percent recall correct was calculated in four categories: diagnosis, medication reconciliation, follow-up instructions, and return precautions. Data were collected for 1 week prior to and 1 week post intervention. One additional week between the pre- and postintervention phases included training and practice behavior adoption. The primary outcome was mean percent recall correct between the two groups assessed by a Mann-Whitney *U* test, and adjusted for confounders with an analysis of covariance model. Results: The mean percent recall correct in the teach-back phase was 79.4%, or 15 percentage points higher than the preintervention group. After adjusting for age and education, the adjusted model showed a recall rate of 70.0% pre vs. 82.1% ($p < 0.005$) post intervention. Conclusions: The teach-back method had a positive association on retention of discharge instructions in the ED regardless of age and education.** © 2017 Elsevier Inc. All rights reserved.

□ **Keywords—teach-back method; discharge instructions; emergency department**

INTRODUCTION

Background

The emergency department (ED) poses unique challenges to effective communication between patient and provider due to multiple factors: an unbound workload, caring for multiple patients at once who all require different communicative approaches, a high level of diagnostic uncertainty, significant time constraints, and lack of follow-up. This combination provides little opportunity to assess which communication strategies are most effective (1,2). Communication during the discharge process is essential in the ED, as the patient and family must leave with an understanding of how to safely manage their diagnosis and medications. Patient dissatisfaction with discharge instructions has been cited as one important factor for patient noncompliance with medications after ED discharge (3). A lack of comprehension of discharge

[1] Currently at Great Falls Clinic Hospital, Great Falls, Montana.
[2] Currently Emergency Medicine PGY-4 at University of California Los Angeles-Harbor (UCLA-Harbor).

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instructions has also been correlated with unmet care needs, medication dosing errors, and readmissions (4,5).

Unfortunately, data from studies show that current communication strategies at discharge are ineffective, with multiple studies showing a high percentage (40–78%) of patients having deficits in at least one standard discharge domain (diagnosis, medications, follow-up instructions, return precautions) (6–8). In addition, discharge providers clarify patient comprehension < 25% of the time (2,5,9–13). More importantly, studies show that patients do not perceive their own comprehension deficit at least 20% of the time (2,11,14). There is no standardization in discharge teaching or assessing patient comprehension, despite discharge planning being a Joint Commission requirement (5). Studies have investigated the use of an electronic template of written instructions, different strategies for delivering instructions at the time of discharge, as well as telephone follow-ups addressing areas of uncertainty in an attempt to increase comprehension and compliance (8,10,15,16). It seems imperative to find a more effective method of communication in the ED, with implications regarding treatment plan adherence and outcome management.

The teach-back method, also known as "closing the loop," is a communication method where patients are asked to demonstrate their level of understanding by repeating back in their own words the information that has been provided to them. It has been advocated as a means to monitor and increase comprehension of information, especially in populations with low levels of health literacy (12,17). This gives the discharge provider the opportunity to confirm understanding and correct any inaccuracies (4,12,13). The teach-back method has been shown to increase understanding and information retention of participants in educational settings (17).

Goals of This Investigation

Although teach-back has been advocated in discharge from the inpatient setting, there is limited research on using teach-back in ED discharges. We aim to determine whether teach-back used in the ED to supplement the standard written and verbal discharge instructions can increase patient retention of instructions at a follow-up phone call.

MATERIALS AND METHODS

Study Design and Setting

This quality-improvement project was designed as a before-and-after study to evaluate and possibly improve knowledge deficits of discharged ED patients. This study was conducted at an urban academic ED with an approximately 39,000 annual patient volume and 30% admit rate. The university's institutional review board approved this study.

Study Protocol

There are two phases of the study: the preintervention phase and the postintervention phase. The preintervention phase investigated patient retention of discharge instructions after standard verbal and preformatted written discharge from the ED were provided. The postintervention phase utilized the teach-back method, in addition to the standard verbal and written discharge instructions. Data were collected for 1 week prior to and 1 week after the intervention was implemented. A 1-week period was used for training and practice behavior adoption for discharge providers at our institution. The nursing and ED administration fully supported this initiative. The intervention consisted of teaching 68 ED nurses how to conduct the teach-back method by a study investigator (BS) using demonstrations and practice role modeling/role playing after a 10-min presentation. Nurses were instructed to create a shame-free environment for teach-back and to use plain language to encourage understanding. Thus, nurses were tasked to ask patients to re-state in their own words the four domains (diagnosis, medications, follow-up, and return precautions) of the discharge instructions until understanding was achieved. Four sessions were held to cover weekday and weekend day and night nurses. Reminder cards were given to all nurses with detailed instructions. This study was specifically addressing nursing discharge process because the practice pattern at this institution is for nurses, not physicians, to go over the discharge paperwork.

Selection of Participants and Phone Interview

The phone surveys were done during the month of October 2012. One study author identified all patients who were discharged from the ED 6–30 h prior to the phone interview via electronic medical record (EMR) during each of the two phases. Times of calls varied from morning, afternoon, and evening in an attempt to decrease self-selection. For example, if a callback was done at 6:00 PM, then people discharged from noon the previous day to noon that day were pulled from the EMR and were called in chronological order. Every third patient discharged was called in an attempt to reach 15 patients for each day of the week, for a goal of 100 participants in each of the phases. Exclusion criteria, ascertained from the medical record, included age < 18 years old, nonnative English speakers, blind or deaf persons, a diagnosis of altered mental status, intoxication, psychiatric complaints, and cases of sexual abuse.

Demographics and discharge instructions were retrieved from the EMR for each eligible patient and recorded on a data sheet. A standardized phone interview, utilizing a