



Model Programs to Improve Transitions of Care

Improving Communication Using
Teach-Back Methods in Patients
With Limited Health Literacy



Improving Comprehension of Discharge Instructions Among Patients With Limited Health Literacy

- Health literacy is defined as “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.”¹
- The Institute of Medicine recognizes that approximately half of the adult population in the United States struggles to understand and act on health information they receive.²
- Limited health literacy is closely linked to a person’s health, and is associated with worse health outcomes.³ Furthermore, health literacy is a predictor of readmission following discharge.⁴
- It is essential that health care providers make an effort to communicate with patients and caregivers in an effective and easy-to-understand manner,^{1,5} especially when patients are transitioning from hospital to home.⁴
- The teach-back method is an effective technique for improving patient and caregiver understanding about medications, discharge plans, and disease-related information.^{6,7}

Case Study: Improving Comprehension of Discharge Instructions at a St. Louis, MO, Hospital Emergency Department

While health care providers generally accept the utility of communication interventions to improve patient comprehension and/or patient outcomes, such interventions are often underutilized.^{8,9} The Institute of Medicine has recognized that high-risk situations, such as transition of care from the emergency department (ED) to home, are an area in which to make improvements to provider–patient communication and patient understanding.¹⁰

Main Objective: Evaluate the efficacy of the teach-back method in improving comprehension at the time of discharge among patients with limited health literacy in the ED setting.¹¹

Study Methods

- **Setting:** ED and level 1 trauma center in St. Louis, MO, with >95,000 visits/year, with a high proportion of patients with limited health literacy.^{11,12}
- **Design:** Randomized trial comparing standard discharge instructions versus the teach-back method.¹¹
- **Patient population:** Patients aged ≥ 18 years with limited health literacy who were discharged from the ED between June 27 and August 15, 2012, between 6 AM and 12 AM.¹¹
- **Health Literacy Assessment:** Patients with limited health literacy were identified using the Rapid Estimate of Adult Literacy in Medicine-Revised (REALM-R).¹¹ Patients with a REALM-R score ≤ 6 were eligible to participate.¹¹
- **Teach-Back Intervention:** All nurses received formal training and demonstrations on the teach-back method.¹¹ All study participants to be discharged from the ED received discharge instructions from a nurse.¹¹ Patients in the teach-back group were asked to repeat back instructions in their own words. Nurses corrected any misunderstandings.¹¹
- **Assessment of Comprehension of Discharge Instructions:** After discharge, patients participated in structured interviews by medical student research assistants to assess comprehension of information about their ED visit and their discharge instructions (including 4 domains: diagnosis, ED care, post-ED care, and return instructions).¹¹ Patients' perceptions of how well they comprehended the instructions were also assessed.¹¹ Senior emergency medicine residents reviewed audiotapes of the interviews to determine the concordance between the discharge instructions and the patient's report of the instructions.¹¹ Concordance was ranked on a 5-level scale (most accurate to least accurate): no concordance, minimal concordance, partial concordance, near concordance, complete concordance.¹¹

Assessment of Patient Satisfaction:

During the structured interview, satisfaction with ED care and satisfaction with discharge instructions was also assessed.¹¹ Patient satisfaction was evaluated using 4 items from the Agency for Healthcare Research and Quality's (AHRQ) Consumer Assessment of Healthcare Providers and Systems Questionnaire, all questions had 3-level responses.¹¹

- Did the medical team explain things in a way that was easy to understand?
- Did the medical team spend enough time with you?
- What is your satisfaction with the quality of the discharge instructions provided?
- Would you recommend this ED to friends and family?

Results

In total, 408 patients were randomized to standard discharge instructions (n=196) or the teach-back method (n=212); 254 patients completed the study.¹¹

Demographics were similar between groups in terms of age, gender, and education level; however, the groups differed in racial composition (**Table 1**).¹¹

Table 1: Demographic Characteristics¹¹

Characteristic	Standard discharge n=127	Teach-back n=127
Age (years), mean (SD)	34.7 (12.8)	36.0 (13.2)
Female, n (%)	75 (59.1)	76 (59.8)
Education level, n (%)		
Less than high school	50 (39.4)	44 (34.7)
High school diploma	50 (39.4)	61 (48.0)
Some college or higher	27 (21.3)	22 (17.3)
Race, n (%)		
White/other	9 (7.1)	22 (17.3)
Black	118 (92.9)	105 (82.7)

SD=standard deviation.

Teach-back Effectiveness

Patients randomized to the teach-back method had better comprehension of post-ED self-care instructions ($P<0.02$ from Chi-square analysis; **Figure 1**) than those who received standard instructions.¹¹ Of those who received teach-back, 62.0% were rated as demonstrating complete accuracy, whereas 48.1% of those who received standard instructions demonstrated complete accuracy.¹¹

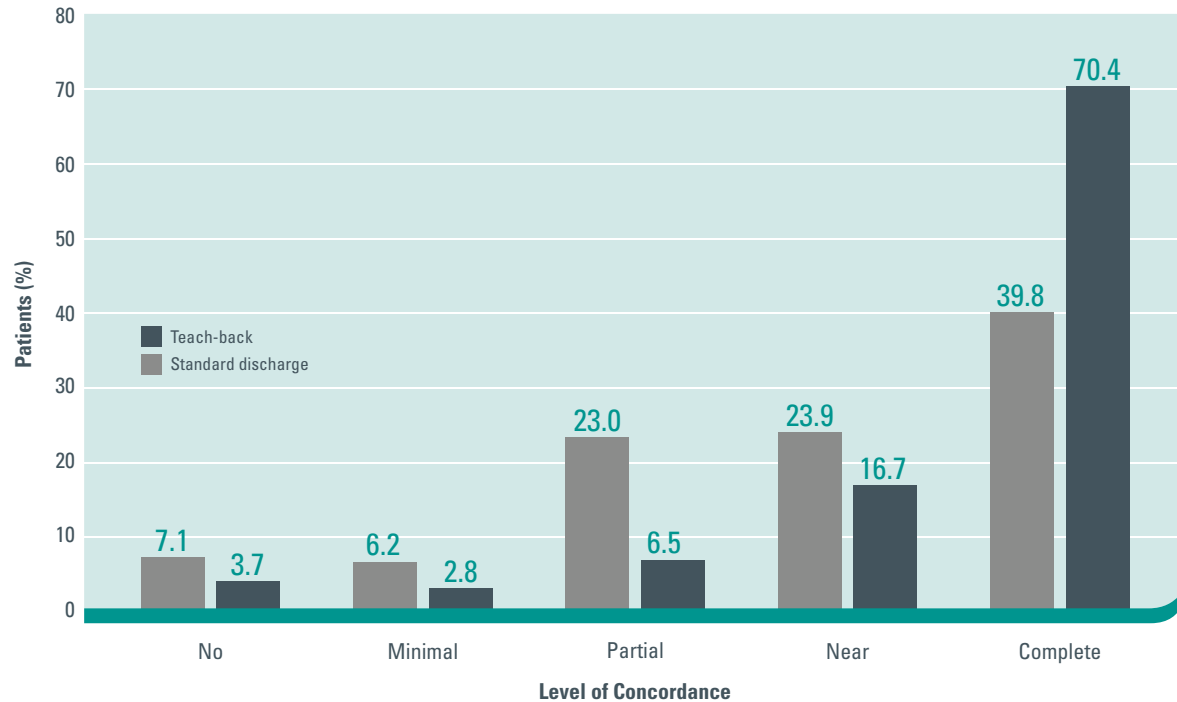
Figure 1: Comprehension of post-ED self-care instructions when provided with standard discharge instructions versus teach-back¹¹



Note: “Complete” concordance means the patient reported the instructions accurately. “No” concordance means the patient reported the instructions very poorly.

Similarly, patients in the teach-back group had much better comprehension of post-ED follow-up instructions ($P < 0.0001$ from Chi-square analysis; **Figure 2**) than those in the standard group.¹¹ Of those who received teach-back, 70.4% demonstrated complete accuracy, whereas 39.8% of those who received standard instructions demonstrated complete accuracy.¹¹

Figure 2: Comprehension of post-ED follow-up instructions when provided with standard discharge instructions versus teach-back¹¹



Note: "Complete" concordance means the patient reported the instructions accurately. "No" concordance means the patient reported the instructions very poorly.

The teach-back group had marginally better comprehension of post-ED medications than the standard instruction group ($P=0.054$ from Chi-square analysis).¹¹ There were no significant differences between groups for perceived comprehension or for comprehension of diagnosis, testing, or treatment.¹¹ In a multivariate regression analysis that controlled for patient race, the teach-back group had significantly greater comprehension of post-ED medications, self-care, and follow-up instructions than the standard instruction group.¹¹

Receiving standard vs teach-back instruction had no impact on patient satisfaction.¹¹

Study Conclusions

- In this study, teach-back improved patient comprehension of 3 components of post-ED care: self-care, follow-up, and medications.¹¹
- These findings support the implementation of teach-back during discharge in a busy ED setting, with a patient population that has limited health literacy.¹¹
- Limitations of the study include the following:¹¹
 - Only one hospital site was included in the study¹¹
 - Nurses' level of experience with teach-back may not have been equivalent across the intervention groups¹¹
 - Raters of the audio recordings could not be blinded to conditions, and therefore, may have been biased in their ratings of comprehension.¹¹

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