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## Who Gets a Teach-Back? Patient-Reported Incidence of Experiencing a Teach-Back

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*To ensure comprehension, clinicians have been urged to use “teach-backs”—explicitly asking patients to repeat back key points of instruction—with every patient receiving new care management instructions. Yet, it is not known whether certain patient groups are more likely to receive teach-backs than others. This study used results from the patient survey of the Communication Climate Assessment Toolkit to examine patient-reported incidence of teach-back by patient education level, age, language preference, race/ethnicity, and perception of sufficient time with doctors. In a multivariable model, patients had significantly greater odds of reporting a teach-back if they were of African American race/ethnicity, had non-English language preference, less education, increased age, or perceived that they had sufficient time with their doctor. This study concludes that some physicians seem to be directing teach-back efforts at certain patients, including those from demographic groups where lower literacy is more common, potentially leading patients who could benefit from teach-back to be overlooked. In addition, the strong correlation between reporting receiving a teach-back and reporting having enough time with a doctor merits further study.*

Many patients have difficulty understanding and following health messages (Davis et al., 2006). Health literacy, defined as “the degree to which individuals have the capacity to obtain, process, and understand basic health information needed to make appropriate health decisions,” is considered low for approximately 80 million Americans (Nielsen-Bohman, Panzer, & Kindig, 2004), and a large and growing body of evidence shows low health literacy to be related to a variety of adverse health outcomes (Berkman, Sheridan, Donahue, Halpern, & Crotty, 2011; Nutbeam, 2008; Peterson et al., 2011; Wolf, 2009).

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At the same time, health and health care disparities are also prevalent within the United States, with patients of minority race/ethnicity often receiving poorer quality health care and experiencing poorer health outcomes than traditionally advantaged groups (Nielsen-Bohlman et al., 2004; National Quality Forum, 2010). It has been suggested that limited English proficiency and low health literacy might be bases for discrimination, both in general and in health care settings (Lyles et al., 2011). Moreover, lower health literacy has been shown to be correlated to certain demographic categories, including minority race/ethnicity (Kutner et al., 2007), as well as education, limited English proficiency, and advanced age. In some studies, racial and ethnic disparities have been fully explained by differences in health literacy and, as a result, health literacy has been called the “missing link” to understanding and addressing disparities (Hasnain-Wynia & Wolf, 2010).

To address the intertwined problems of low health literacy and health disparities, the American Medical Association and others have recommended that clinicians use plain language and visual aids, focus on the most important part of a health message, and use the teach-back method, in which clinicians explicitly request that patients repeat instructions using their own words (Weiss, 2007). In particular, the National Quality Forum has endorsed the teach-back method as one of 34 proven “safe practices” (National Quality Forum, 2010).

Experts have recommended that clinicians adopt a “universal precautions” approach to using the teach-back method, in light of the difficulty of identifying patients who have low health literacy (The Joint Commission, 2007; DeWalt et al., 2010; Nielsen-Bohlman et al., 2004; National Quality Forum, 2010; Schwartzberg, VanGeest, & Wang, 2005; Weiss, 2007). Despite correlations between low health literacy and minority demographics, the most common profile for a person with low health literacy is a “White” native-born American who is a speaker of English as a first language (Kutner et al., 2007). In addition, medical encounters can be stressful and confusing for any patient, and it has been found that “even highly skilled individuals may find the [health] systems too complicated to understand, especially when these individuals are made more vulnerable by poor health” (Nielsen-Bohlman et al., 2004). Therefore, virtually any patient might benefit from the use of teach-back.

Despite recommendations that clinicians use teach-backs with all patients, physicians cite time constraints and other considerations as barriers to this task (Turner et al., 2009). In recognition of this, it has been recommended that clinicians beginning to use the teach-back method “start slowly” by choosing a subset of patients with whom to use teach-back (DeWalt et al., 2010). However, it is unknown whether physicians use teach-back more often with patients they perceive to be at greater risk of misunderstanding (e.g., patients from the demographic groups correlated to lower health literacy).

In this study, we examined the characteristics of patients who reported receiving teach-backs from their physicians. In particular, we used patient survey data from the Communication Climate Assessment Toolkit (C-CAT), a validated set of tools for measuring the communication climate in health care organizations, to determine whether patients in demographic groups with higher rates of low health literacy were more or less likely to report receiving a teach-back.

## **Method**

Patient data from the field-testing of the C-CAT were analyzed to determine the incidence of patient-reported teach-back for several demographic groups that have been correlated with lower health literacy and health care disparities (Beach, 2009;

Schillinger et al., 2004). The field-testing and validation of the C-CAT have been described in detail previously (Wynia, Johnson, McCoy, Griffin, & Osborn, 2010). In brief, 16 diverse organizations were selected to participate in field testing of the patient surveys and other tools in the C-CAT. Of these, nine eventually provided patient survey data through two rounds of assessment that took place in 2008 and 2009. Sites providing patient survey data included seven hospitals (four large/urban and three small/rural, including two pediatric centers and three academic teaching centers) and two federally qualified health centers. Sites were located throughout the continental United States, with all geographic regions represented. A list of the sites that participated in the field testing is available in an article describing the instruments' validation (Wynia et al., 2010). The nationwide field test protocol was reviewed by the Western Institutional Review Board, Olympia, Washington. Several sites that incorporated additional substudies, such as staff focus groups, also underwent additional local institutional review board review, depending on the specifics of their protocols.

Surveys were distributed to potential patient respondents in a variety of ways depending on the site: some sites mailed the surveys to patients' homes, some distributed them in waiting rooms at inpatient clinics, and some opted to distribute the survey to patients at discharge from hospital. As such, the data should be considered as representing a convenience sample. To protect patient privacy, no individual health information, such as health status or medical history, was collected on the patient survey.

### *Analyses*

All patient data were aggregated for our analyses. We conducted bivariate frequency and multivariate regression analyses, using patient-reported incidence of teach-back ("Did doctors ask you to repeat their instructions?") as the dependent variable. Possible responses to this question were as follows: "never," "sometimes," "always," or "not sure." For the multivariate regression model, results were dichotomized to compare those who "never" received teach-back with those reporting "sometimes" or "always" receiving teach-back, and robust standard errors were employed. Robust standard errors are used to account for clustering of responses by site, while allowing for the use of the same slope as traditional regression analysis (Cameron & Trivedi, 2010). Predictor variables analyzed included patient-reported race/ethnicity, age, years of education, and language preference. In addition, because not having enough time is sometimes cited as a reason not to complete a teach-back (Turner et al., 2009), we examined a variable measuring patient perception of having spent sufficient time spent with their doctor ("Did you have enough time to talk with your doctor?" with response options of "never," "sometimes," "always," or "not sure"). For the regression model, we performed listwise deletion of cases with any missing data in the variables analyzed. Bivariate analyses were performed using IBM SPSS Statistics, 19 and the regression analysis was performed using Stata.

### **Results**

A total of 3,462 patient surveys were collected across the nine sites. After deleting respondents with missing data, results from 2,741 patient respondents were included in the multivariable model.

Demographic data on the survey respondents are presented in the first two columns of Table 1 and illustrate the racial and ethnic diversity of the patient populations at these sites. Across all sites, 47% of patients self-identified as Hispanic or Latino/Latina, 14% as Black or African American, and 32% as White. Regarding education, 18% reported 8 or fewer years of formal schooling, and 42% reported between 9 and 12 years of education. The majority of respondents reported a preference for speaking English with their doctors, while 26% reported a preference for speaking Spanish, and 4% reported a preference for a language other than English or Spanish; 9% of patients completing the surveys reported being 65 years or older. The majority of patients (60%) reported visiting the hospital or clinic three or fewer times over the past 6 months, and the mean number of visits reported was 4.18 ( $SD = 4.83$ ).

The results of our bivariate and multivariable analyses on how often different patient groups reported teach-backs are also presented in Table 1. Among all patients ( $N = 3,462$ ), more than 60% reported ever (i.e., “always” or “sometimes”) being asked to repeat physicians’ instructions. Patients whose self-reported race was Black/African American had nearly 90% greater odds ( $OR = 1.89$ , 95%  $CI [1.34, 2.67]$ ,  $p < .001$ ) of reporting teach-back compared with White patients. Hispanic/Latino patients reported teach-back more frequently than White patients (62% vs. 55%,  $p = .03$ ), but Hispanic/Latino ethnicity was not found to be a significant predictor in the multivariable model. However, compared with English speakers, patients who prefer to speak Spanish were found to have 90% greater odds of reporting receiving teach-backs ( $OR = 1.87$ , 95%  $CI [1.36, 2.57]$ ,  $p < .001$ ), and reporting a preference for a language other than English or Spanish resulted in a nearly three-fold increase in the odds ( $OR = 2.71$ , 95%  $CI [1.64, 4.48]$ ,  $p < .001$ ) of reporting teach-back. Also, patients who indicated fewer years of formal education reported “always” or “sometimes” being asked to teach-back instructions more often than those with more education: each additional year of education resulted in an approximately 5% lower odds of reporting teach-back ( $OR = 0.95$ , 95%  $CI [0.91, 0.98]$ ,  $p < .01$ ). A weak, albeit statistically significant, correlation between advanced age and reporting teach-back was also found, with respondents self-identifying as 65 years of age or older reporting “always” or “sometimes” being asked to teach-back instructions slightly more frequently than younger respondents (63% vs. 60%,  $p = .03$ ). This finding was corroborated in the multivariate model: a 10-year increase in age resulted in an 8% increase in the odds a patient would report a teach-back ( $OR = 1.08$ , 95%  $CI [1.05, 1.11]$ ,  $p < .05$ ). Last, the strongest predictor of patient-reported teach-back was patient-reported time with the doctor: those patients who reported “always” having enough time had nearly three-times greater odds ( $OR = 2.81$ , 95%  $CI [1.57-5.03]$ ,  $p < .01$ ) of reporting teach-back compared with those who reported “never” having sufficient time with their doctors.

## Discussion

### Implications

While the National Quality Forum and other expert groups have recommended the universal use of the teach-back method, our data suggest that some physicians are using teach-back selectively, directing their efforts at groups of patients who are more likely to have lower health literacy. In particular, patients who speak a language other than English, are of Black/African American race/ethnicity, those with advanced age, and those with fewer years of formal education all report more often that doctors asked them to repeat back their instructions.

**Table 1.** Incidence of patient-reported teach-back, by patient demographics and time with doctors

Predictor variable	n (%)	Asked to repeat doctors' instructions					p	OR	95% CI
		% Never	% Sometimes	% Always	% Not sure				
<b>Race/Ethnicity</b>									
Black or African American	501 (14)	26	33	34	7	.06	1.89***	1.34-2.67	
Hispanic or Latino/a	1,627 (47)	30	26	36	8	.3	1.03	0.81-1.33	
White [R]	1,107 (32)	33	28	27	11	—	—	—	
<b>Language/reference</b>									
English [R]	2,275 (66)	34	29	28	10	—	—	—	
Spanish	888 (26)	24	26	41	8	.06	1.87***	1.36-2.57	
Other language	150 (4)	25	29	43	3	.02	2.71***	1.64-4.48	
<b>Education</b>									
8 or fewer years	626 (18)	25	27	39	10	.17	—	—	
9 to 12 years	1,462 (42)	29	28	33	9	.48	0.95**	0.91-0.98	
13 or more years	1,143 (33)	36	31	25	8	—	—	—	
<b>Age</b>									
Younger than 65 years	2,979 (86)	31	28	32	9	—	1.08*	1.05-1.11	
65 years or older	320 (9)	26	31	33	11	.03	—	—	
<b>Enough time with doctors</b>									
Never [R]	474 (14)	41	20	33	6	—	—	—	
Sometimes	914 (26)	41	41	15	4	.3	1.32	0.89-1.94	
Always	1888 (54)	25	26	41	9	.16	2.81**	1.57-5.03	

*Note.* [R] is the referent group—education and age used incremental increases instead of a referent group. Odds ratios for education are for each additional year of educational attainment. Odds ratios for age are for 10-year intervals of increased age.  
\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

*Health care disparities*, defined as “differences in the quality of health care that are not due to access-related factors or clinical needs, preferences and appropriateness of intervention” (Smedley, Stith, & Nelson, 2003) have persisted despite the attention they have received following the Institute of Medicine’s landmark report, *Unequal Treatment*, in 2003 (U. S. Department of Health and Human Services, 2011). Health care has been shown to be of lesser quality for disadvantaged groups, “particularly individuals who belong to racial/ethnic minority groups, with LEP [limited English proficiency], and with less educational attainment” (Hasnain-Wynia et al., 2010). It is remarkable that these are also the characteristics of patients with greater odds of reporting that their doctor asked them to teach-back instructions.

A potential implication of this correlation is that some practitioners might be making efforts to address disparities in care by ensuring that patients they perceive as most likely to not understand instructions are more often asked to repeat their instructions. However, the most common profile for a patient with low health literacy is a White native-born American who speaks English as a first language. Given the size of this population, it is likely that many patients who could benefit from the use of teach-backs are not receiving them, perhaps based in part on clinicians’ perceptions of who most needs such an intervention.

The strong correlation between patient reports of having “enough time” with their doctors and patient-reported teach-back suggest at least two possible explanations. First, the use of the teach-back method might take extra time, so physicians with more time per visit might be more able to implement it. We have no data from this study to examine this possibility. Some studies of patient-doctor communication suggest that techniques like teach-back can be incorporated into routine visits while adding one or fewer minutes, (National Quality Forum, 2005; Schillinger et al., 2003) but others suggest that conducting an adequate teach-back can involve repeating instructions multiple times, which may be prohibitively time consuming (Bazaldua, 2011).

A second and more intriguing possibility, however, is that carrying out a teach-back might influence patients’ perceptions of having spent sufficient time with their doctors. One way to read our bivariate results, for example, is to note that among patients who reported receiving a teach-back, 70% said they always had enough time with their doctor, while among those not receiving a teach-back, only 44% said they always had enough time. It is possible that patients who experience a teach-back are more likely to feel that their expectations, including regarding the desired length of time spent with their physician, have been better met than patients who do not experience a teach-back. To our knowledge, use of teach-back has not previously been correlated with measures of patient satisfaction with their visit, but this possibility should be explored.

Last, initial bivariate frequency analysis showed that more Hispanic/Latino than White patients reported being asked to repeat instructions, but in the multivariate regression model, which also included language preference, the effect of Hispanic/Latino ethnicity disappeared. Given the strong correlation between Spanish language preference and Hispanic/Latino ethnicity, this suggests that language preference is a better predictor of reporting teach-back than is ethnicity.

### **Limitations**

Although this is a national study of a diverse patient sample, it has several important limitations. First, the study relies on a single-item, patient-reported measure of

“receipt of teach-back” that has strong face validity and that is part of a validated measure of organizational efforts to address health literacy (Wynia et al., 2010), but we did not have independent observations of patient–clinician encounters nor could we match patient respondents with specific physicians; as such we cannot confirm the accuracy of these patients’ reports of receiving teach back. It is likely that some respondents who reported teach-backs did not experience them, while others probably failed to reports teach-backs that took place. However, there is no *a priori* reason to believe that patients from racial/ethnic minority demographic groups or those with lower levels of educational attainment would be more likely to overreport their receipt of teach-backs. In fact, insofar as reporting a teach-back might signify general visit satisfaction, some studies have found that racial/ethnic minority patients and those from lower socioeconomic strata tend to provide lower satisfaction ratings in health care settings (Chou, Finny-Rutten, Wang, Moser, & Hesse, 2010; Sorkin, Ngo-Metzger, & De Alba, 2010), though this finding is not consistent (Lurie, Zhan, Sangl, Bierman, & Sekscenski, 2003). Second, the patient data analyzed do not provide information on what other cues, beyond the predictors discussed earlier, might be driving providers’ decisions on when to use teach-back. It is possible, even likely, that physicians are using more nuanced information than race, language, and educational attainment to determine when to implement teach-backs with specific patients. Third, while we provided guidance on survey distribution, sites followed disparate sampling methodologies, and we are unable to report reliable refusal rates for each site. Thus, although care was taken to ensure that patient samples were consistent with the broad demographic make up at each site, the data should be considered to represent a convenience sample. Last, the sites included in this study were not chosen at random but were selected for geographic variability and patient diversity, hence they have higher proportions of racial/ethnic minority patients and limited English proficiency patients than the national patient population. Because we analyze our data by these same demographic variables, in theory this should not affect the generalizability of our findings. Still, larger studies using more representative samples would be desirable to confirm our results.

### **Conclusions**

Experts have recommended that physicians adopt a “universal precautions” approach when using teach-back (that is, use it with every patient, since one cannot tell by looking whether a patient has low health literacy). Our results suggest that using teach-back might not only improve patient understanding, but it might also positively influence patient perceptions of whether they had enough time with their doctor. However, our results also suggest that some physicians are directing their teach-back efforts at certain patients. In particular, limited English proficiency patients, those with fewer years of formal education, and patients who self-identify as being of African American race/ethnicity are more likely to report receiving a teach-back. These findings raise concerns that some patients who could benefit from teach-backs are not getting them, including patients in the most common demographic group of those with low health literacy—White, native English speakers. Given the general benefits of using teach-back and the prevalence of low health literacy among patients from every demographic group, further efforts are needed to urge a “universal precautions” approach in the use of teach-back by clinicians.



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