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TRENDS IN HEALTH CARE QUALITY

Using Professionally Trained Interpreters to Increase Patient/Provider Satisfaction: Does It Work?

by Ann D. Bagchi, Stacy Dale, Natalya Verbitsky-Savitz, and Sky Andrecheck

Research has suggested a link between the use of professional interpreter services during emergency department (ED) visits and higher levels of patient and provider satisfaction with the care provided. However, evidence remains scant on whether the type of interpreter services used is actually causally linked to satisfaction ratings. Mathematica's study addressed this evidence gap through a randomized controlled design, considered the most reliable and statistically valid approach for examining the question of causality. The study used random assignment to compare the reported satisfaction of patients and providers during 424 ED visits, roughly half of which included interpreter services from a professionally trained medical interpreter (the "treatment group") and roughly half of which relied on the ED's usual language services, that is, a telephone language line or ad hoc interpreter services (the "control group"). The study found that use of professional interpreter services dramatically increased satisfaction with patient-provider communication during the ED visit, not only for patients but for all types of providers—including triage nurses, doctors, and discharge nurses.

The Need for Interpreters

The inability of patients and health care providers to communicate in the same language can create serious barriers during medical encounters. Patients

ABOUT THE STUDY

Mathematica's study examined the impact of the use of professionally trained medical interpreters for limited English proficient (LEP), Spanish-speaking patients on the cost-effectiveness of services and patient and provider satisfaction levels in hospital emergency departments. The study was conducted in two central New Jersey hospitals from October 2008 through April 2009 using a randomized controlled design to assign patients to control or treatment time blocks. Patients seen in the control time blocks were provided with the usual language services available in the ED (including a telephone language line and ad hoc interpreter services provided by bilingual staff and family members). During treatment time blocks, professionally trained medical interpreters were available, along with the usual language services. All treatment interpreters were certified bilingual in Spanish and English and had completed (1) at least 40 hours of training in medical terminology, ethics, patient privacy, and basic interpreting skills; and (2) an online course in protection of human subjects.

may be less likely to understand discharge instructions, adhere to recommended treatments, and return for follow-up visits. Similarly, providers may order more diagnostic tests and compromise patients' access to quality care when language barriers are present. Using interpreters may alleviate these and other problems associated with language barriers in health care settings and is associated with greater patient/provider satisfaction with communication and care. However, the type of interpreter used can affect satisfaction levels and the perceived quality of care. Research has shown that use of trained interpreters is associated with higher satisfaction levels than other

types of language services and may result in satisfaction levels equivalent to those of patients who are language concordant with their providers. This study used random assignment in two hospital emergency departments (EDs) to examine the satisfaction levels of patients and providers who used a professionally trained medical interpreter versus those who used the hospitals' usual language services.

Background on Study Design

The study involved assigning eligible patients to treatment and control groups and collecting data from patients and providers about the encounters.

Patient Participation. ED staff identified eligible patients at the time of registration or triage. All LEP, Spanish-speaking patients seen during the treatment and control time blocks were invited to participate in the study. Bilingual field interviewers were stationed near the ED reception area and obtained informed consent from 484 patients (262 treatments and 222 controls) out of 531 approached, for a participation rate of 91 percent. Because some patients were seen more than once during the study period, this brief includes only data for first-time visits by each patient (424 in total).

Patient and Provider Surveys. In addition to collecting cost data through billing records, a survey was administered to patients, triage and discharge nurses, and attending physicians following the medical encounter. Patients completed the survey prior to discharge and providers completed their surveys immediately after treating the patient. The patient survey asked, "How satisfied were you with the way you and hospital staff were able to communicate?" The provider survey asked, "How satisfied are you that language issues were adequately addressed to assess and treat this patient's condition?" This brief examines their responses to determine satisfaction levels with the communication process. Overall response rates were 95 percent for patients, 96 percent for triage nurses, 83 percent for discharge nurses, and 95 percent for doctors. Discharge nurses had lower response rates because many patients were still awaiting discharge when interviewers' shifts ended for the day.

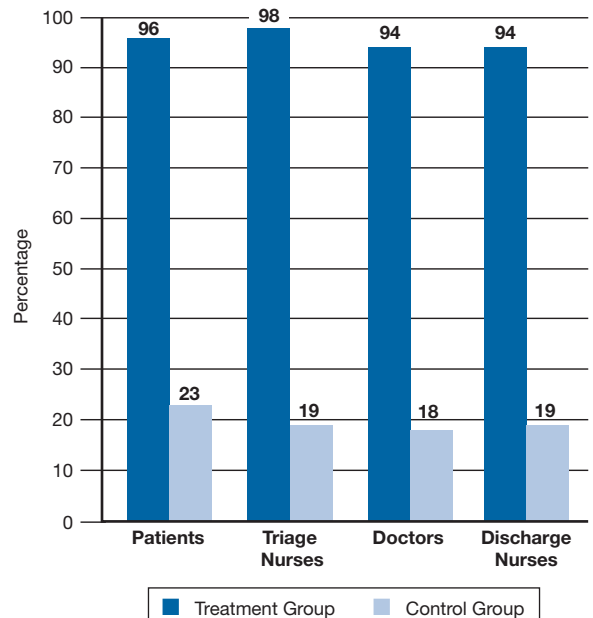
Access to Interpreters. A professional interpreter was available only during the treatment time blocks; however, because of high patient volume in the ED and interpreter scheduling, 17 patients seen during treatment time blocks used a professional interpreter for

part of their ED visit and some other type of language service for another portion. For 12 of these patients, the other language service was a Spanish-speaking provider; therefore, there was no difference in satisfaction levels between patients who only used the professional interpreter and those seen in treatment time blocks who received language services in addition to those from the professional interpreter. Three patients seen during the treatment time blocks did not receive the services of the professional interpreter because the interpreter was with another patient at the time. Nine patients seen during the control time blocks reported receiving services from a professional interpreter; however, we assumed that these patients mistook some other hospital staff member for a trained interpreter. Another 84 patients in the control group did not receive any interpreter services. Overall, 22 patients (5 percent of the entire sample) turned in forms that were incomplete and did not specify the type of interpreter used.

Satisfaction by Treatment Group

Patients, triage nurses, physicians, and discharge nurses completed satisfaction surveys following the medical encounter. Striking differences were apparent between treatment and control groups in the percentage of patients and providers who reported being "very satisfied" with their ability to communicate during the ED encounter (Figure 1). Across

Figure 1: Respondents "Very Satisfied" with Patient-Provider Communication



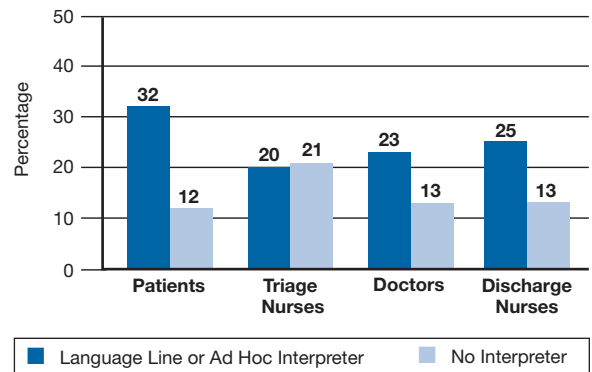
all four groups, treatment respondents were significantly more likely to report being “very satisfied” than control respondents. On average, 96 percent of respondents in the treatment group said they were very satisfied with patient-provider communication, compared with only 20 percent of those participating in the control group. Specifically,

- 96 percent of patients seen in the treatment group reported being “very satisfied” with their ability to communicate with their provider, versus only 23 percent of patients seen in the control group
- 98 percent of triage nurses in treatment time blocks were “very satisfied” that they were able to communicate adequately to assess patients versus only 19 percent of triage nurses in control time blocks; the results were similar for doctors and discharge nurses (94 percent versus 18 percent and 94 percent versus 19 percent, respectively)

Satisfaction with Language Services in the Control Group

Based on the findings reported above, patients and providers were clearly more satisfied with professionally trained medical interpreters than with other types of language services available to them. For comparison, we examined satisfaction levels by use of language services for patients seen in the control group, 114 of whom received the hospital’s usual language services and 84 of whom did not use any type of interpreter (another 7 patients were missing information on interpreter type and were excluded from this analysis). Consistent with prior studies, overall satisfaction levels were significantly higher for those who received the ED’s usual language services (25 percent) than for those who did not use an interpreter (15 percent). Patients were significantly more likely than providers to be satisfied with communication when using the ED’s usual services. About 32 percent of patients said they were “very satisfied” when using these modes of communication, compared with around 23 percent among health care providers (Figure 2). However, among triage nurses there was no significant difference in satisfaction level across the two groups; 20 percent of those who used the ED’s usual language services were satisfied

Figure 2: Patients and Providers “Very Satisfied” by Interpreter Type, Control Group



with their ability to communicate versus 21 percent among those who did not use an interpreter. Although assignment to language services within the control group was not randomized, the results suggest that, in some cases, use of telephone language lines and ad hoc interpreters does not necessarily improve satisfaction relative to using no interpreter services at all.

Lessons Learned

Overall, Spanish-speaking patients seen during treatment time blocks were significantly more likely to be “very satisfied” with their ability to communicate with their providers. Similarly, medical staff were “very satisfied” that language issues had been adequately addressed to assess and treat patients. Because high levels of satisfaction increase the likelihood that a patient will return to the same ED, the study’s results may influence hospitals’ decisions about whether to hire interpreters. Future reports from this study will examine the value of providing language services by looking at the cost-effectiveness of professional interpreter services in ED visits.

In addition to improving satisfaction, professional interpreters may improve other outcomes related to quality of care. Rigorous future research should examine the effects of interpreters on quality of care measures, both in this setting and in other health care settings and with other patient populations (for example, children, adolescents, and other language groups).

References

- Diamond, Lisa C., Yael Schenker, Leslie Curry, Elizabeth H. Bradley, and Alicia Fernandez. "Getting By: Underuse of Interpreters by Resident Physicians." *Journal of General Internal Medicine*, February 2009.
- Gany, Francesca, Jennifer Leng, Ephraim Shapiro, David Abramson, Ivette Motola, David C. Shield, and Jyotsna Changrani. "Patient Satisfaction with Different Interpreting Methods: A Randomized Controlled Trial." *Journal of General Internal Medicine*, November 2007.
- Garcia, Estevan A., Lonnie C. Roy, Pamela J. Okada, Sebrina D. Perkins, and Robert A. Wiebe. "A Comparison of the Influence of Hospital-Trained, Ad Hoc, and Telephone Interpreters on Perceived Satisfaction of Limited-English-Proficient Parents Presenting to a Pediatric Emergency Department." *Pediatric Emergency Care*, June 2004.
- Hampers, Louis C., and Jennifer E. McNulty. "Professional Interpreters and Bilingual Physicians in a Pediatric Emergency Department." *Archives of Pediatric and Adolescent Medicine*, November 2002.
- Jacobs, Elizabeth A., Laura S. Sadowski, and Paul J. Rathouz. "The Impact of an Enhanced Interpreter Service Intervention on Hospital Costs and Patient Satisfaction." *Journal of General Internal Medicine*, November 2007.
- Karlinger, Leah S., Elizabeth A. Jacobs, Alice Hm Chen, and Sunite Mutha. "Do Professional Interpreters Improve Clinical Care for Patients with Limited English Proficiency? A Systematic Review of the Literature." *Health Services Research*, April 2007.
- Lee, Linda J., Holly A. Batal, Judith H. Maselli, and Jean S. Kutner. "Effect of Spanish Interpretation Method on Patient Satisfaction in an Urban Walk-in Clinic." *Journal of General Internal Medicine*, August 2002.
- Ramirez, Dorian, Kirsten G. Engel, and Tricia S. Tang. "Language Interpreter Utilization in the Emergency Department Setting: A Clinical Review." *Journal of Health Care for the Poor and Underserved*, May 2008.
- Sun, Benjamin C., James Adams, E. John Orav, Donald W. Rucker, Troyen A. Brennan, and Helen R. Burstin. "Determinants of Patient Satisfaction and Willingness to Return with Emergency Care." *Annals of Emergency Medicine*, May 2000.
- Waxman, Matthew A., and M. Andrew Levitt. "Are Diagnostic Testing and Admission Rates Higher in Non-English-Speaking Versus English-Speaking Patients in the Emergency Department?" *Annals of Emergency Medicine*, November 2000.
- For more information, contact senior researcher Ann Bagchi, (609) 716-4554, abagchi@mathematica-mpr.com. This research was funded by the Robert Wood Johnson Foundation under its national program *Hablamos Juntos: Improving Patient-Provider Communication for Latinos*.
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