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- **Background** Language barriers are significant impediments to providing quality healthcare, and increased stress levels among nurses and physicians are associated with these barriers. However, little evidence supports the usefulness of a translation tool specific to healthcare.
- **Objectives** To evaluate the effectiveness of a novel English-Spanish translator designed specifically for nurses and physicians. The hypothesis was that the translator would be useful and that use of the translator would decrease stress levels among nurses and physicians caring for Spanish-speaking patients.
- **Methods** Novel English-Spanish translators were developed entirely on the basis of input from critical care nurses and physicians. After 7 months of use, users completed surveys. Usefulness of the translator and stress levels among users were reported.
- **Results** A total of 60% of nurses (n = 32) and 71% (n = 25) of physicians responded to the survey. A total of 96% of physicians and 97% of nurses considered the language barrier an impediment to delivering quality care. Nurses reported significantly more stress reduction than did physicians (P = .01). Most nurses and physicians had used the translator during the survey period. Overall, 91% of nurses and 72% of physicians found that the translator met their needs at the bedside some, most, or all of the time. All nurses thought that they most likely would use the translator in the future.
- **Conclusions** The translator was useful for most critical care nurses and physicians surveyed. Healthcare providers, especially nurses, experienced decreased stress levels when they used the translator. (American Journal of Critical Care. 2005;14:545-550)

C ommunication barriers are increasingly common in healthcare today as the population becomes more culturally diverse. Hispanics now account for the majority of all farm workers in the United States. In some areas of the United States, the Hispanic population has increased 60% in the past 3 years, and some census sources suggest that the numbers of Hispanics given in census data are significantly lower than the actual numbers. Current methods of addressing communication barriers in healthcare are incomplete. Even though as many as 11% of patients seeking medical care in the United States primarily speak Spanish, the healthcare system is geared to English speakers. Thus, a language barrier is inevitable. Acute care environments (intermediate care unit, intensive care unit, emergency department) are areas where language barriers are encountered most commonly because interactions with patients in these areas occur at odd hours when hospital interpreters may not be available or numerous. Unfortunately, these areas are also the ones where patients are more likely to experience pain, fear, and
stress. Because communication in healthcare is essential, this barrier adversely affects the quality of, access to, and cost of patients’ care.\textsuperscript{13}

\textit{As many as 11\% of patients seeking medical care primarily speak Spanish.}

Language barriers also contribute to workplace stress for healthcare providers (A. C. Bernard, MD, M. Wagers, RN, BSN, M. Ray, MS, et al, unpublished data, September 2005). Interactions with patients that normally would involve discussions of the plan of care or even informed consent (examinations, administration of medications, procedures) now occur without any such dialogue. A recent survey\textsuperscript{14} of residents at an academic children’s hospital indicated that physicians often rely on suboptimal communication or no communication at all. The language barrier contributes to decreased administration of pain medications\textsuperscript{9} and unnecessary intubation.\textsuperscript{7}

We developed a novel translation tool for the acute care environment that is designed specifically for our population of patients, its needs, and its healthcare providers. Addressing the needs of our largest non–English-speaking population, the Focused Accessible Spanish Translator (FAST) was designed to be concise, easily accessible, portable, and contain the phrases that nurses and physicians must use in their daily practice. In this way, the FAST is most likely to address the needs of both healthcare professionals and patients.

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Methods

FAST Development

The FAST was developed by using phrases provided by the staff in the areas in which the translator was to be implemented. First, staff members were asked to list phrases without which they simply could not complete a shift at work. The list was then edited to the most common phrases on the list. Complex phrases and questions were eliminated because the complex responses to those phrases and questions would not be understood by non–Spanish-speaking staff. Editing kept the cards focused, small, and easy to read and use. The selected phrases were then translated by the healthcare-trained translator, who used the most appropriate dialect for the institution or geographic area. Finally, the phrases were printed on durable, pocket-sized plastic cards and distributed to the staff during an in-service training session.

The FAST was designed to be portable and accessible (see Figure). Thus, the FAST is a cue card 128 mm × 77 mm, small enough to be held in a pocket. The FAST was not designed to be all inclusive and did not supplant interpreters because the quality of communication obtained with interpreters is considered the reference standard. Professional interpretation is important for in-depth discussion such as detailed history taking, discussing complex treatment options, preoperative planning for surgery, discussing prognosis, addressing social issues, ensuring informed consent, and so on. The FAST provides essential information for routine acute care practice environments when interpreters cannot be continually present and interrupting care to refer to a conventional translation tool is impractical. Two specialty-specific cards were developed. The FAST used by physicians consisted of 51 phrases most used by staff physicians and surgeons. The FAST for nurses consisted of 42 phrases most needed by the nursing staff.

\textit{The Focused Accessible Spanish Translator (FAST) provides essential information when interpreters cannot be present.}

FAST Introduction and Training

To assess the effect of the language barrier on nurses and physicians in our institution and to determine the effectiveness of the FAST at bridging that barrier, we introduced the FAST in a controlled manner. Informed consent was provided by all participants through a protocol approved by the University of Kentucky’s medical institutional review board. A 15-minute training session was conducted to introduce the FAST. Staff members were instructed to use this tool solely for their daily routine, and it was emphasized that the FAST was to be used as an adjunct to, rather than an alternative to, formal interpretation. The content of the card was discussed, and proper pronunciation of Spanish phrases was demonstrated by a professional medical interpreter at the University of Kentucky Medical Center (M.R.).

FAST Assessment/Survey

A survey was distributed 7 months after the training session to staff members who had attended the
Focused Accessible Spanish Translator for nurses (A) and for physicians and surgeons (B). Each 2-sided card is small enough to fit in a shirt pocket.

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session. The survey was used to assess the following:

- significance of the language barrier as reported by the hospital staff,
- usefulness of the FAST,
- stress levels reported by the nurses and physicians, and
- use of alternative translation tools.

Respondents were also asked whether they speak

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Spanish (defined as ability to speak more than 10 words). Statistical analyses were performed by using SAS software (SAS Institute Inc., Cary, NC). 2-sample t tests, the Fisher exact test, the $\chi^2$ test, and the McNemar test as specified. Significance was set at $P < .05$.

**Results**

A total of 60% of the nurses ($n = 32$) and 71% of the physicians ($n = 25$) responded to the follow-up survey. The physicians and nurses did not differ significantly in their ability to speak Spanish ($P = .80, \chi^2$ test). A total of 96% (24/25) of physicians and 97% (31/32) of nurses considered the language barrier a significant or very significant impediment to delivering quality care. Overall, 94% (30/32) of nurses and 88% (22/25) of physicians still had their FAST at 7-month follow-up. A total of 72% of nurses and 78% of physicians reported that they had used the FAST during the study period ($P = .44$, Fisher exact test).

**Usefulness and Portability**

Nurses were significantly more likely than physicians to indicate an intent to use the FAST in the future ($P = .008, \chi^2$ test). The McNemar test was used to determine whether intent to use the FAST was associated with the ability to speak Spanish. Correlation was not attempted for nurses because 100% reported future intent to use the FAST. Physicians’ lack of intent to use the FAST (16%) was marginally correlated with their ability to speak Spanish ($P = .06$).

A total of 97% (31/32) of the nurses and 88% (22/25) of physicians surveyed found the FAST easy to use and portable ($P = .43$, Fisher exact test). Most of the respondents found the content of the FAST to be “about right”: 69% (22/32) of nurses and 64% (16/25) of physicians. A total of 28% (9/32) of nurses and 24% (6/25) of physicians found the content “too little.” No nurses or physicians found the content to be “too much.” Overall, 91% (29/32) of the nurses and 72% (18/25) of the physicians surveyed found that the FAST met their needs at the bedside some, most, or all of the time.

**Most nurses and physicians found the FAST easy to use and portable and said that it met their needs at the bedside.**

**Alternative Translation Tools**

Nurses and physicians were asked to report use of the FAST and other communication tools (colleagues, the patient’s family or friends, on-site interpreters, telephone interpreters, computer-based programs, pocket computers, and pocket translation cards other than FAST) and to rate the ease of use of each (Table 1). Among the nurses, 81% used colleagues for translation; nurses were significantly more likely to use colleagues than any other form of translation tool ($P = .007$ or less vs all other tools, McNemar test). A patient’s family or friend (59%) was the translation tool used next most often ($P = .01$ or less vs all translation tools except a colleague and FAST). The FAST (53%) was used more often than all other communication tools except colleagues and the patient’s family or friend ($P = .05$ or less vs all tools except a colleague or the patient’s family or friend).

For physicians, the most common translation tools used were the interpreter on site (72%), a colleague (56%), the patient’s family or friend (52%), the telephone interpreter (40%) and the FAST (36%). Frequency of use did not differ significantly between FAST and other translation methods, except for interpreters on site. Interpreters on site were more likely than the FAST to be used by physicians ($P = .007$).

Ease of use of each communication method was rated on a linear scale of 1 to 4 (1 = easiest, 4 = hardest), and mean values were calculated. Nurses reported colleagues (1.47), FAST (1.81), and the patient’s family or friend (2.00) as the easiest methods to use (Table 2). Nurses reported that the FAST was easier to use than were telephone interpreters, pocket or desktop computers, and other translation cards ($P = .004$ or less).
Physicians reported that the interpreter on site (1.67), a colleague (1.68), the patient’s family or friend (2.05), and FAST (2.07) were the easiest methods to use. Physicians found the FAST less easy to use than most other tools, although the response rate to this question was low.

**Stress Reduction**

The degree of stress reduction when using the FAST was reported by the respondents on a linear scale from 1 to 4 (1 = no elimination of stress, 4 = complete elimination of stress). Overall, 81% (26/32) of nurses and 72% (18/25) of physicians reported some degree of stress reduction. The average stress reduction score was 2.66 (SEM 0.151) for nurses and 2.10 (SEM 0.169) for physicians (P = .01, 2-sample t test).

**Discussion**

Current methods of crossing the language barrier in healthcare are many, and each method has attributes and limitations. On-site interpreters are considered the reference standard and were the preferred method of addressing the language barrier for physicians in our study. Physicians are more likely than other healthcare providers to require interpretation for complex interactions, as in detailed discussions of diagnosis, plans of care, and complex decision making. Compared with physicians, nurses have more frequent interactions with patients and must assess pain control, comfort, and other needs of patients while giving notice of procedures, administering medications, and performing the daily routine. These frequent but less complex interactions make using an on-site interpreter less practical for nurses than for physicians in intermediate or intensive care units. Colleagues and tools such as the FAST become more valuable resources than interpreters during such frequent, less complex interactions.

Pocket translators provide a cache of terms and phrases with translations, but the large size and breadth of the devices often make them impractical to carry and difficult to find specific phrases in quickly. Most translators do not contain language for practice in specialized areas (eg, critical care nursing, anesthesia, trauma, surgery). Institutions may differ slightly, but many needed phrases are specific, used repeatedly, and predictable. Special areas and practices in patients’ care require special translation tools; this principle has been previously reported. Specially designed translation cards with pictures have been used for communicating with non–English-speaking parents of children in the neonatal intensive care unit, resulting in improved communication with the family, encouraged parental participation, and perceived appreciation by parents.

Survey respondents in our study considered the language barrier an impediment to delivering quality care. As institutions are increasingly subject to objective measures of quality, the adverse effects of the language barrier and the benefits of strategies such as the FAST will become more pronounced. At least 88% of physicians and nurses still had their FAST after 7 months, indicating its usefulness. Most respondents found the FAST user friendly, and 100% of nurses will use it in the future. Although fewer physicians reported intent to use the FAST again, this sentiment appeared to be correlated with the physicians’ ability to speak Spanish.

Most respondents experienced some degree of stress reduction. Nurses considered the FAST easier to use and more effective than any other translation tool except a colleague or the patient’s family. The fact that nurses considered the FAST more effective than physicians did may be related to differences in the 2 card designs. However, this difference is perhaps more a result of fundamental differences in the needs of physicians and nurses with respect to the language barrier. Physicians have brief encounters that are often of great depth, whereas nurses have frequent routine contacts. For both groups, an unmet need is apparent: no respondent indicated that the card’s content was excessive. Two thirds of physicians and nurses reported that the card’s content was about right; one quarter said it was too little.
Nurses considered the FAST more useful than any other translation tool except a colleague or the patient’s family.

Most respondents reported that their stress levels were decreased when they used the FAST when caring for Spanish-speaking patients. Nurses reported more frequent and greater degrees of stress reduction than did physicians, and this difference may be due to the card’s design or to practice-specific issues.

The concise content of the FAST makes it easy to use. In this study, we examined only the interactions of physicians and nurses with patients. However, other medical professionals—anesthetists, radiology technologists, respiratory therapists, and rehabilitation professionals (physical, occupational, and speech therapists)—are all faced with the same barriers. All of these providers interact with patients who do not speak English, realize a communication barrier exists, and thus may ultimately benefit from this novel translator design.

Our study was the first development, use, and objective evaluation of a pocket translation card for the English-Spanish language barrier specifically designed for use in the acute care environment. The phrases that were translated for this purpose were those identified as important by staff, making the FAST specific and unique. Translation was done by a healthcare-trained interpreter. The phrases were interpreted from English to Spanish in the most direct, easy-to-pronounce form; this feature is an important aspect of this translation tool. Translations should be determined by geographic area or dialects in the relevant community, as well as by institution-specific needs. The study is limited by its sample size, the survey response rate, and the validity and reliability of survey data, but it lays an important foundation for future development and evaluation of translation tools. Quality and cost of care and satisfaction of both patients and medical professionals must be considered as we strive to bridge the language barrier in our practices. Further objective comparisons of translation tools are needed.

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The pocket translation card described here was designed exclusively by the authors at the University of Kentucky. At the time this article was written, it had not been reproduced for commercial sale.

Commentary courtesy of Mary Jo Grap (see shaded boxes).

REFERENCES