

## Letters to the Editor

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Editor, Letters to the Editor Section

*Editor's Note:* Send letters to the editor to [jscherger@ucsd.edu](mailto:jscherger@ucsd.edu). 858-232-8858. We publish Letters to the Editor under three categories: "In Response" (letters in response to recently published articles), "New Research" (letters reporting original research), or "Comment" (comments from readers).

### New Research

#### Learning Outcomes of a Web Module for Teaching Interpreter Interaction Skills to Pre-clerkship Students

##### To the Editor:

Effective use of interpreters by health care providers in the clinical encounter is associated with improved outcomes and patient satisfaction.<sup>1</sup> Yet this cultural competency is inadequately addressed during training according to a recent national survey of residency training programs.<sup>2</sup> Web-based curricula have the advantage of not competing for limited curricular time.<sup>3</sup> However, generalizability of Web modules for interpreter interaction skills beyond the knowledge domain and for a single institution has not yet been adequately documented. We sought to examine the impact of such a module<sup>4</sup> developed for one school and at two additional schools where the predominant languages of limited English proficiency (LEP) patients were Spanish, Vietnamese, Chinese, and Russian.

##### Methods

The three medical schools had similar 4-year curricula consisting of 2 years' basic and preclinical sciences followed by 2 years' clinical clerkships. Between 2005 and 2007 we implemented the Web module<sup>4</sup> in preclinical Patient-Doctor courses at all three schools during year

1 or 2 of training, after the teaching of basic communication skills. Our respective institutional review boards approved the study.

The interactive Web module consists of six patient-physician-interpreter video vignettes that compare and contrast common pitfalls of and effective strategies for working with interpreters. For each vignette, students respond to open-ended questions and submit an open-text analysis of the pitfalls or the effectiveness of the interpretation strategies used. Immediate formative feedback is given.<sup>4</sup>

At school 1, the Web module was administered as a stand-alone activity (1 hour). At schools 2 and 3 the Web module complemented standardized patient teaching involving role plays with patient and interpreter (2.5 to 3 hours total). A standardized knowledge test with 10 multiple-choice questions, using similar pretest/posttest items, was embedded into the Web module and completed by students at all schools.

Schools 2 and 3 also conducted a standardized clinical station testing skills using validated behavior checklists for effective interaction with interpreters<sup>5</sup> in four different languages, within 4 months of Web-module completion.

##### Results

The Web module and knowledge test was completed by 169 (school 1), 65 (school 2), and 70 (school 3) students, corresponding to 100%,

68%, and 81% of the three classes respectively. Pretest mean scores ranged from 5.9 to 7.0 (out of 10 maximum) with no significant difference among schools. Posttest mean scores ranged from 8.3 to 9.2, with no significant difference among schools. The pretest to posttest difference in aggregate mean score (6.5 to 8.5) was 2.0 points ( $P<.001$ ). The greatest improvements were seen for the questions "The best way for a provider to ensure that interpretation is accurate is to . . ." (mean score improved from 5.7 to 9.1), "If a patient and an interpreter engage in a separate conversation, the provider should . . ." (mean score improved from 5.7 to 8.9), and "Other things being equal, the best interpreter would most likely be . . ." (mean score improved from 5.4 to 8.7).

A self-selected group of 30 students (32% of the class) from school 2 did not participate in the Web module but took a paper version of the knowledge test. This subgroup showed no score improvement (mean score 6.9 to 7.8, difference was nonsignificant).

At schools 2 and 3, skill scores for students as rated by patient and interpreter did not correlate with the magnitude of knowledge gain.

##### Discussion

A multimedia Web module with diverse instructional features and synchronous feedback to learners designed for one school produced similar learning outcomes in two

other US schools. Requisite knowledge for working effectively with interpreters can be improved with this brief intervention. However, the Web module, even when added to practice in a standardized setting, is inadequate for improving skills. A more comprehensive and intensive approach may be needed that requires greater and more diverse curricular investment.

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## Implementation of Handheld Procedure Tracking in a Family Medicine Residency

### To the Editor:

Evaluation of procedural skills is a challenging aspect of training in family medicine. Using a personal

digital assistant (PDA) to track procedures could benefit family medicine residents if it contributes to evaluation of learning objectives. A dossier of logged procedures could help to identify gaps in training if procedures logged by residents were compared against a core procedure list. In Canada, a core procedure list has been defined as those procedures that family medicine residents should learn and be capable of performing following residency.<sup>1</sup>

During a study of a PDA-assisted evidence-based medicine course, we implemented an electronic procedure tracking system. In 2003, all 44 incoming first-year McGill family medicine residents at four training sites were invited to participate and were offered a new PDA along with software training. All residents attended at least one training session to learn about Praxis procedure tracking software, version 2.5. Following this session, residents were asked to begin logging procedures and were told they would not be evaluated on the basis of their logged procedures. Midway through the project (April 2004), midterm reports were distributed to each resident, for feedback on the number of procedures they had logged in comparison to their peers.

Of 44 eligible first-year residents in July 2003, 37 consented and received a Dell Axim X5 PDA. From 2003–2005, four consenting residents withdrew from the project, four others went on maternity leave, and three went on leave of absence. By July 1, 2005, 5,428 procedures were documented, with a mean of 148 (range=6–746) per resident. Three hundred or more procedures were logged each month during the first 7 months of the study, with the highest number (n=640) in September 2003. There was a substantial decrease in number of procedures logged by January 2004 (n=360). The highest number of procedures logged throughout all clinical rota-

tions was reported in OB-GYN and family medicine, and the lowest was in surgery.

Our results indicate computerized procedure tracking is feasible in family medicine residency. The handheld procedure tracking system permitted collection of a large procedural dataset. From July–October 2003, we observed a novelty effect as reflected in a large number of procedures logged per month. However, beginning in January 2004, there was a substantial decrease in usage of Praxis software. This observed decrease in the number of logged procedures was likely related to low motivation, a problem that could be confirmed by interviews in future research. In addition, procedures such as venipuncture may have been considered so routine they were not logged. We do not know if the number of logged procedures was related to low motivation or a low number of procedures performed. Increasing resident usage of any procedure tracking system would likely result from integrating the findings of tracking in formative and summative evaluation. This would help to “close the feedback loop,” whereby data entered should provide residents with relevant feedback, thus encouraging further software use. However, procedure tracking is not sustainable when it is optional. Assuming preceptors guide residents to reflect on gaps in their training using a dossier of logged procedures, a mandatory system for procedure tracking should be implemented.

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