

## Methods

Between December 2008 and January 2009, we recruited a convenience sample of 140 adults (ages 18–64) who have Medicaid or a child who has Medicaid. Respondents were recruited through public housing and social service organizations in Lane County, Oregon. Participants were given a pencil and paper survey and received a \$5 gift certificate for their participation.

Participants were given two literacy assessments (self-assessed and objective) and a task requiring them to identify high or low quality health plans. As done in similar studies, participants were first asked the single self-assessed health literacy screening question, “How confident are you filling out medical forms by yourself?” with responses scored on a Likert scale (0=always to 4=never). Next, we measured participants’ health literacy skills using a subset (passage B only) of the Test of Functional Health Literacy in Adults (TOEFLA).<sup>5</sup> This literacy measure assesses reading skills using a modified Cloze procedure.

To measure the ability to synthesize health care information, which is known to be highly correlated with literacy skills, participants were shown a chart with comparative health plan quality information.<sup>6</sup> Participants were asked four comprehension questions based on the chart. An example of one of the questions is: “Which plan has the worst customer service?” We developed a comprehension index based on the number of correct responses to these questions.

Using SPSS 17.0, we tested correlations between the three measures. Significance was set at  $P<.05$ . This study was approved by the University of Oregon Institutional Review Board, and all participants completed written informed consent.

	<i>Self-assessed Literacy</i>	<i>TOEFLA</i>	<i>Comprehension Index</i>
Self-assessed literacy	1.00	0.15	0.13
TOEFLA		1.00	0.59**
Comprehension Index			1.00

\*  $P<.05$

\*\*  $P<.01$

TOEFLA—Test of Functional Health Literacy in Adults

## Results

We found that the screening question was not a predictive measure of health literacy (Table 1). While there was a trend of positive correlation between the screening question and the TOEFLA, it did not meet standard significance thresholds ( $P=.09$ ). With 140 participants, we should have been able to detect a correlation as small as .25 with 80% power. Additionally, we found no relationship between the screening question and the comprehension index. As expected, the TOEFLA assessment was highly correlated with the comprehension index ( $r=0.59$ ).

## Discussion

In this sample of low-income adults, we did not find the single self-assessed screening question to be predictive of either a standard literacy measure or a task that was dependent on literacy skills. Due to the potential negative consequences that result from having limited health literacy, we believe that there is a great need for future research to develop a relatively fast, practical, and respectful way for physicians to assess patients’ health literacy, especially for low-income populations.

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## Analyzing the Obstacles to an Effective Evaluation Process

### To the Editor:

Evaluations are increasingly used throughout medical education as a means of assessment. Despite an emphasis upon evaluations, little is known about the psychological

factors that contribute to accurate cooperation with this process. Littlefield and Terrell identified obstacles to objective evaluation of residents by faculty. One obstacle was potential adverse consequences of future working relationships and another was the concern of the faculty that the evaluation process would not lead to administrative action anyway.<sup>1</sup> Collins in 2003 discussed several obstacles to resident evaluations, including the "halo effect" in which the evaluator rates a resident uniformly positively or negatively depending on his or her global assessment of the resident.<sup>2</sup>

To learn more about the potential obstacles to the evaluation process, the medical education and general education literature was reviewed, and it was noted that there were three potential factors affecting people's attitudes toward the evaluation process. The first is the importance the person assigns to the evaluation process. The second is the anxiety felt by a person about the evaluation process. The third factor is the person's thoughts about the quality of the evaluation process regarding how information is gathered and feedback presented.

### Methods

A 14-item questionnaire was created that asked more specific questions in each of these three areas. An example of a question in the anxiety category is "I prefer receiving honest feedback even if it might be considered tough." Questions were asked about participants' feelings about both being evaluated and evaluating others. Participants, who included medical students, family medicine resident physicians, and family medicine faculty physicians at a community-based residency program, responded to the questionnaire on a 6-point Likert scale. There were also three open-ended questions at the end of the questionnaire that asked participants what they have liked and disliked about

prior evaluations and what suggestions they would have to improve the evaluation process.

### Results

Of the 14 statements, respondents most agreed that they like verbal feedback combined with written evaluations. They most disagreed with the statement that they have enough time to complete evaluations. The greatest dispersion of answers was in regard to a preference for on-line evaluations. Participants felt equally comfortable evaluating others and being evaluated themselves. The open-ended answers revealed that people like specific focused evaluations of themselves.

Statistical analysis revealed that the areas of importance and anxiety were inversely correlated ( $P=.001$ ). Those participants who were more anxious about the evaluation process rated it as significantly less important. Statistical analysis also demonstrated that those who felt the evaluation process was more important said that they had more time to complete evaluations ( $P=.000$ ). Medical students felt that the evaluation process was more important and interestingly had less anxiety about the process than did residents and faculty, and those differences were statistically significant ( $P=.005$ ).

### Discussion

This study revealed some interesting relationships but is limited in that it had only 31 participants. Although statistical differences were seen between medical students, resident physicians, and faculty physicians, questions from the areas of importance, anxiety, and quality had to be put together in each category for statistical analysis. I am planning to replicate this study on a larger scale to be able to compare medical students, resident physicians, and faculty with each question in the

questionnaire. It is satisfying that the questionnaire passed statistical analysis in that each question in the areas of importance, anxiety, and quality was statistically related to the other questions in the same category. I wonder if the higher level of anxiety seen at the resident level in this study correlates with an overall more anxious state in residency training. I also wonder if physicians in other specialties have the same feelings about evaluations as do family physicians.

Obtaining a more detailed understanding of the anxieties present at different levels of training might begin the process of finding ways to help relieve those anxieties and thus result in a more active and accurate participation in the evaluation process at all levels. I feel the solution to better participation in the evaluation process is not to emphasize the importance of the evaluation process. The theory of cognitive dissonance says that overemphasizing the importance of evaluations will result in more anxiety and thus less active participation on the process. Pending further studies, I postulate that encouraging an open dialogue between all involved in the evaluation process will decrease anxiety, which will directly increase participants' importance in the process and then people will make more time for evaluations.

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