

HEALTH LITERACY IN ACTION: A REVIEW OF A HEALTH LITERACY ASSESSMENT TOOL IN PRACTICE

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AIM

To determine the efficacy of implementing a health literacy assessment tool into Dallas County Public Health Nursing Services with a specific focus on home health practice, maternal and child health, and patient navigation programming.

INTRODUCTION

Dallas County, Iowa has a population of approximately 72,000 residents and is among the fastest growing counties in the U.S. Between 1990 and 2010, Dallas County experienced a 122% increase in population; people of color and/or Hispanic heritage grew from representing 1% of the population to over 11%. The county is also aging, with persons age 60 or older growing 12% from 2000 to 2010, and expecting to nearly double by 2030. Dallas County's growth represents a shift from an agricultural to suburban commuter community. The change brings opportunities and access to services for many, but also exacerbates inequities between the more affluent eastern side of the county and the rural and ethnically diverse communities to the north and west.

Dallas County Public Health Nursing Services (DCPHNS) is a county public health agency, providing a wide array of public health and community services. The Iowa Healthcare Collaborative is a patient safety and quality improvement organization aimed at equipping and assisting healthcare providers and systems to drive continuous improvement.

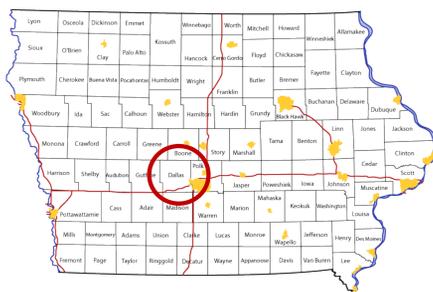


Figure 1. County map of Iowa, with Dallas County circled.

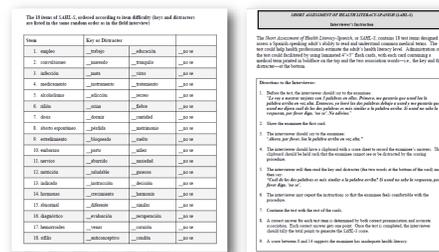


Figure 2. SAHL-S&E form and accompanying instructions.

BACKGROUND

A lack of health literacy is a growing problem in the United States. Nearly half of all American adults—90 million people—are considered to have limited health literacy. Only 12% of Americans have the health literacy skill to perform the complex health tasks that can be demanded by the care of chronic conditions and acute illness.

Inadequate health literacy is a major obstacle for patients as it limits ability to understand health information and follow medical instructions. Ability to recognize limited health literacy in the population is of significant importance in healthcare and public health as low literacy levels have been linked to poor health outcomes such as higher rates of hospitalization and less frequent use of preventative services. Successful intervention to assess and address health literacy has the potential to improve all aspects of health care, including improved the quality of care, better patient experiences of care, and reduced costs.

The Short Assessment of Health Literacy – Spanish and English (SAHL-S&E) is an assessment tool developed by researchers at the University of North Carolina – Chapel Hill. The tool consists of a selection of 18 test health terms, a comparable set in both languages. Each term has a corresponding key word relating to the term meaning and a distractor word unrelated to the test term meaning. Each test term is put forth to the patient or client to test comprehension through their identification of the proper association between the test term and the key word or distractor. Recipients are additionally able to indicate they do not know as an acceptable response.

Completion of the test is intended to require 3-5 minutes, making it ideal for healthcare and service settings without necessitating extensive additional time with patients and clients (as often unavailable). The bilingual availability and cross-comparability along with the ease of administration of the SAHL – S&E tool are additional features influencing the selection of the SAHL – S&E tool for the pilot project among others available. The tool is included in the Agency for Healthcare Quality & Research (AHRQ) revised health literacy measurement tools (2014).

APPROACH

To ascertain the benefit of incorporating health literacy assessment as part of public health services, a pilot project was developed to test the use of the tool in a time-limited and voluntary format. The tool was disseminated among DCPHNS staff, focusing on those staff persons who provide direct patient care or client service. Staff were educated on the purpose of the pilot and instructed in the administration of the tool itself and the scoring process. A score of 14 or below (out of 18 possible) is identified as having limited health literacy.

To facilitate efficacy testing of the tool in operation, a selection of brief evaluation questions were developed and added to the form. The Test Assessment Evaluation questions were built upon the diffusion of innovation theory and the five characteristics which determine the rate of adoption for innovations: relative advantage (perceived advantage beyond existing processes); compatibility with current procedures or systems; complexity in implementation or learning difficulty; trialability or testability; and observability or capacity for visible effects. Responses were provided on a 5 point Likert scale (see Figure 3). The evaluation section was completed independently by the administering staff person and was not included as part of the distinct SAHL – S&E recipient examination.

Figure 3. Tool Assessment Evaluation questionnaire as provided to participants.

RESULTS

In total, there were 36 assessments completed during the pilot period: 22 patient and client assessments and 16 staff-based assessments. Of the patient and client assessments, 18 were performed in English and 4 in Spanish.

- Average overall health literacy score for patients and clients was 16. Two scores were below the limited health literacy threshold of 14, one English-language and one Spanish-language.
- Majority of patients and clients assessed fell within the 18-30 years age group, followed by 45-60 years, 76-90 years, and 61-75 years respectively. Two patients fell within the 31-45 years and 91-105 years age ranges.
- Use of an interpreter was reported on seven patient and client assessments, including on four English-language assessments. All translation and interpretation was performed by the tool administrator or other staff.
- Average health literacy score for DCPHNS staff was 18. Four staff scores were below the average: one score of 16 and three of 17.

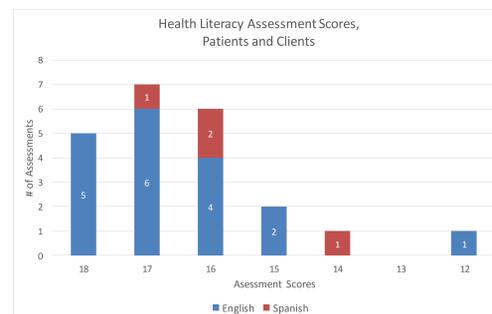


Figure 4. Health literacy assessment scores for patient and client subjects.

Fit of Tool and Process in Current Workflow

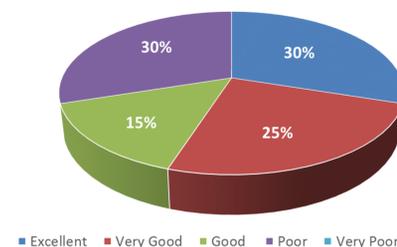


Figure 5. Responses to evaluation questioning regarding fit of tool and process in existing workflow.

RESULTS, CONTINUED

Evaluations of the assessments and process were overall in positive in relation to simplicity of the tool and value of health literacy.

- 95% of responses indicated the tool was “Very Easy” or “Easy” to perform.
- Indications for fit of tool or process in existing workflow varied; significant range among “Excellent”, “Very Good”, and “Poor”.
- All respondents indicated health literacy as “Essential” or as a “High Priority” in working with patients and consumers
- Effect of tool in interventions following assessment, such as use of Teach-Back, motivational interviewing, etc., was divided between reports of “Major Effect” and “Minor Effect” or “No Effect”.
- Participant reports regarding likelihood of full integration of the SAHL-S&E tool was similarly divided on the spectrum between the “Likely” and “Unlikely”.

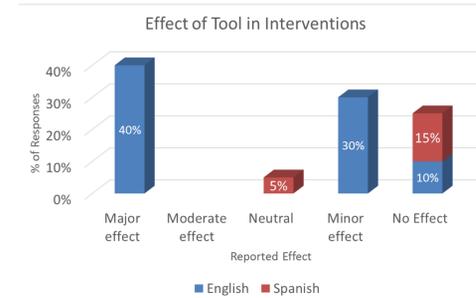


Figure 6. Responses to evaluation questioning regarding perceived effect of tool in post-assessment interventions.

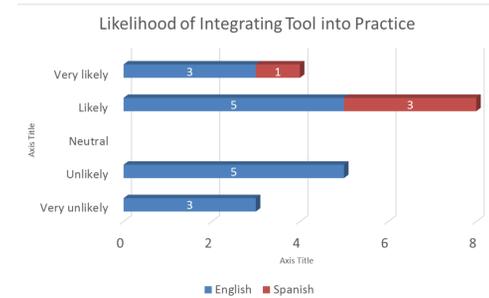


Figure 7. Participant responses regarding potential for integration of tool into services or practice beyond the pilot period.

CONCLUSION

The health literacy assessment tool pilot project yielded a great deal of valuable information, both in terms of health literacy scores and in potential efficacy of implementation of a health literacy assessment tool as part of ongoing services. In order to operationalize the SAHL-S&E tool, DCPHNS would first need to address the perceived usefulness of the tool, emphasizing the impacts on practice and potential patient and population health outcomes. By expanding on initial evaluation and enabling staff to provide a second level of input related to the Assessment Evaluation Questions used in this pilot, possible ongoing concerns and perceived barriers of using the tool, and prioritization for health literacy within their daily work can be addressed.

The results of the SAHL-S&E pilot together with DCPHNS related experiences, will be used to develop protocols for interventions based on participant scores. These protocols will take into account not only assessed health literacy scores, but also the linguistic competency of the patient or client, their cultural beliefs, and their cognitive abilities. It will be important to note the use of Teach Back and motivational interviewing techniques within these protocols along with a continuum of interventions designed to increase literacy related to the patient's condition and lend themselves to meaningful engagement in their care. Through staff education, modification of written materials (specific diagnosis-related education materials) and procedural changes, the tool can be fully integrated with few changes to current workflows.

Using the SAHL-E at each admission could assist DCPHNS nurses and public health professionals in initializing the level of intervention required to address the patient's understanding of their condition, the clinical strategies being used to support their health, and the expected outcomes that result from their adherence to plans of care. It is important to note that unless the staff member values the process and views the results as a catalyst for refining their interactions with the patient, the SAHL-S&E and other health literacy tools will not attain full integration and health literacy will remain just one more unused patient metric and solitary interaction.