Improving the State of Health Literacy amongst American Adults: Why Community Outreach Methods are More Effective than Literacy-Level Screenings

Lydia Simpson
Health Literacy Defined

“The degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions.”


• Media literacy
• Electronic literacy
• Print literacy
• Numeracy
• Cultural knowledge
• Motivation & Empowerment
Confronted by Health Literacy Daily

- Signs
- Consent forms
- Websites
- Hospital entrances
- Medication labels
Current Statistics

90 million American adults struggle with health literacy.² At-risk groups include:

- Adults 65 and up
- Racial and ethnic minorities (not including Asian/Pacific Islander)
- Non-native English speakers
- People with compromised health status
- People with lower income levels
- Less than high school degree or GED

What is the link between health literacy and health outcomes?

**Low Health Literacy**
- Less access to health care
- Less access to health information
- Language barriers
- Existing health conditions
- Cultural differences
- Decreased motivation

**Poor Health Outcomes**
- Increased use of emergency care
- Decreased use of preventive practices
- Higher insurance/care costs
- Lack of informed consent
- Wariness of health providers
- Unhealthy behaviors and habits remain unchanged
Approaches to Health Literacy

Don Nutbeam conceptualized the two approaches to health literacy, those of risk versus asset. The risk approach has been more widely researched and used to support individual clinical screenings for low literacy levels. The asset approach is deeply rooted in adult education and health promotion techniques, although it has not been as widely researched. This approach emphasizes the importance of building patient empowerment.
Conceptual Model of Health Literacy as a Risk

In this model, the patient’s health literacy level is viewed as a risk that needs to be managed in the clinical setting. This approach views the process of improving health literacy in a very linear fashion.

Conceptual Model of Health Literacy as an Asset

In this model, the patient’s health literacy is seen as an asset, regardless of how adequate it may be. This approach focuses on developing knowledge and skills in the patient, which are essential parts of building up patient empowerment. This approach also views health literacy as a part of a large, complex web involving many other factors including communication, societal factors, and health behaviors.

Intervention Methods

Intervention methods are techniques that can be used by health providers at any point during the clinical interaction with the patient to mitigate the negative effects of low health literacy. These methods can be used on:

- Individuals with adequate health literacy
- Patients who have been identified as low health literacy via screening tools
- Patients the provider suspects has low literacy skills
- Essentially, anyone!
Universal Precautions & Teach-Back

**Universal Precautions**

- Adapted from treatment of infectious diseases
- Impossible to know a patient’s health literacy simply by looking at them
- Providers should communicate in a way that is easily understood by all patients
- Does not require health literacy screening

**Teach-Back**

- Helps physician to ensure that the patient understands health information
- Physician asks patient to essentially repeat information that has been given to them to check for understanding
- Can be applied to medication adherence, diagnosis, prognosis, description of surgery
Simplified Health Messages

• Removing medical jargon from conversations with patients helps those with low health literacy to understand more of the information they are given.

• Several studies have shown that combining animations with spoken communication is the best method for educating patients, regardless of health literacy levels.\textsuperscript{6,7}

• Subjects in these studies with high health literacy were not negatively effected by the addition of animations.

• All health care providers can benefit from increased training on health literacy, both in medical school and during their time as medical professionals.


\textsuperscript{7} Meppelink, C., Smit, E., Buurman, B., & van Weert, J. (2015, September 15). Should We Be Afraid of Simple Messages? The Effects of Text Difficulty and Illustrations in People with Low or High Health Literacy [Electronic version]. Health Communication, 30(12), 1181-1189.
Measuring Health Literacy

Physicians measure patient health literacy for various reasons, although it is usually to tailor intervention methods according to the patient’s needs.

According to a comprehensive study published in 2014, most health literacy tests measure through\(^3\):

- Objective measurement approach
- Subjective measurement approach (self-reporting)
- Mixed measurement approach

Medical Term Recognition Test (METER)

- Short test
- 80 terms
- Clinical setting
- Patient must identify as many medical terms as possible in time allotted.
Short Assessment of Health Literacy-Spanish and English (SAHL-S&E)

- Similar to METER
- 18 medical terms to associate with another word that is similar in meaning
- Available in many languages, including Spanish
- Researchers found it “highly reliable for individuals with a low level of health literacy.”

Example of the SAHL-E Test

SAHL-E Word Sets & User's Guide

<table>
<thead>
<tr>
<th>Stem</th>
<th>Key or Distractor</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. kidney</td>
<td>__urine</td>
<td>__fever</td>
</tr>
<tr>
<td>2. occupation</td>
<td>__work</td>
<td>__education</td>
</tr>
<tr>
<td>3. medication</td>
<td>__instrument</td>
<td>__treatment</td>
</tr>
<tr>
<td>4. nutrition</td>
<td>__healthy</td>
<td>__soda</td>
</tr>
<tr>
<td>5. miscarriage</td>
<td>__loss</td>
<td>__marriage</td>
</tr>
<tr>
<td>6. infection</td>
<td>__plant</td>
<td>__virus</td>
</tr>
<tr>
<td>7. alcoholism</td>
<td>__addiction</td>
<td>__recreation</td>
</tr>
<tr>
<td>8. pregnancy</td>
<td>__birth</td>
<td>__childhood</td>
</tr>
<tr>
<td>9. seizure</td>
<td>__dizzy</td>
<td>__calm</td>
</tr>
<tr>
<td>10. dose</td>
<td>__sleep</td>
<td>__amount</td>
</tr>
<tr>
<td>11. hormones</td>
<td>__growth</td>
<td>__harmony</td>
</tr>
<tr>
<td>12. abnormal</td>
<td>__different</td>
<td>__similar</td>
</tr>
<tr>
<td>13. directed</td>
<td>__instruction</td>
<td>__decision</td>
</tr>
<tr>
<td>14. nerves</td>
<td>__bored</td>
<td>__anxiety</td>
</tr>
<tr>
<td>15. constipation</td>
<td>__blocked</td>
<td>__loose</td>
</tr>
<tr>
<td>16. diagnosis</td>
<td>__evaluation</td>
<td>__recovery</td>
</tr>
<tr>
<td>17. hemorrhoids</td>
<td>__veins</td>
<td>__heart</td>
</tr>
<tr>
<td>18. syphilis</td>
<td>__contraception</td>
<td>__condom</td>
</tr>
</tbody>
</table>

Directions to the Interviewer:

Before the test, the interviewer should say to the examinee:

"I'm going to show you cards with 3 words on them. First, I'd like you to read the top word out loud. Next, I'll read the two words underneath and I'd like you to tell me which of the two words is more similar to or has a closer association with the top word. If you don't know, please say 'I don't know'. Don't guess."

Show the examinee the first card.

The interviewer should say to the examinee:

"Now, please, read the top word out loud."

The interviewer should have a clipboard with a score sheet to record the examinee's answers. The clipboard should be held such that the examinee cannot see or be distracted by the scoring procedure.

The interviewer will then read the key and distractor (the two words at the bottom of the card) and then say:

"Which of the two words is most similar to the top word? If you don't know the answer, please say 'I don't know'."

The interviewer may repeat the instructions so that the examinee feels comfortable with the procedure.

Continue the test with the rest of the cards.

A correct answer for each test item is determined by both correct pronunciation and accurate association. Each correct answer gets one point. Once the test is completed, the interviewer should tally the total points to generate the SAHL-E score.

A score between 0 and 14 suggests the examinee has low health literacy.
All Aspects of Health Literacy (AAHLS)

- Subjective measurement
- Based on Nutbeam’s health literacy frameworks
- Integrates functional, communicative, and critical literacy into its assessment
- The assessment is based on a 14-part scale aimed at measuring “skills in using written health information; communicating with health care providers; health information management and appraisal assertion of individual autonomy with regards to health”

Reviewing Measurement Tools

- No assessment can ever be completely valid or totally predictive of all aspects of an individual’s health literacy.

- Results of individual testing tools cannot be applied to specific subgroups such as racial minorities, genders, or age groups.

- Administration of tools will always tend to favor some test-takers over others, depending on how well people respond to differing methods of examination.

- Health literacy does not affect individuals solely in a clinical setting, so why is it only tested clinically?
Why Community Outreach Methods are more Effective than Individual Interventions

• Measuring health literacy on an individual basis gives no information about the state of health literacy on a larger scale.
• Broad health literacy initiatives must be backed by evidential support, which individual interventions cannot provide.
• Individual screening methods largely ignore relevant influences on health literacy, such as cultural differences, language, and societal norms.
• The definition of “health literacy” that is being measured is not the same for every researcher, measurement tool, or physician.

## Scale of Interventions

<table>
<thead>
<tr>
<th>Levels at which health literacy can be measured</th>
<th>Potential purposes for measuring health literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health service settings</strong></td>
<td></td>
</tr>
<tr>
<td>1. Individual patients</td>
<td>• To problem solve for complex patients</td>
</tr>
<tr>
<td></td>
<td>• To train staff in responding to differing health literacy needs</td>
</tr>
<tr>
<td>2. Patient groups</td>
<td>• To identify common factors that contribute to poor access and health outcomes</td>
</tr>
<tr>
<td></td>
<td>• To plan for services to respond to health literacy needs</td>
</tr>
<tr>
<td>3. Individual health services</td>
<td>• To inform advocacy activities</td>
</tr>
<tr>
<td></td>
<td>• To diagnose health literacy strengths and limitations of the target population and how these strengths and limitations contribute to known inequalities of access, participation in health and health outcomes</td>
</tr>
<tr>
<td><strong>Community and population settings</strong></td>
<td></td>
</tr>
<tr>
<td>4. Local areas (both health and community services/authorities)</td>
<td>• To plan marketing and education strategies across services</td>
</tr>
<tr>
<td></td>
<td>• To assess the ability of community members to participate in community-based health planning activities (critical health literacy) and develop suitable approaches to enable their participation</td>
</tr>
<tr>
<td>5. National surveys (to compare regions and groups)</td>
<td>• To identify relationships between health literacy and access, equity and outcomes, in order to develop appropriate health service and public health policies and strategies</td>
</tr>
<tr>
<td></td>
<td>• Plan health education campaigns, or campaigns to support the introduction of new services, screening initiatives (e.g., bowel or skin cancer) or vaccination programs.</td>
</tr>
<tr>
<td></td>
<td>• Assess regional ‘patient difficulty’ for planning and funding purposes (assuming that it takes more intensive resources to improve health outcomes for people with low health literacy than it does for people with higher health literacy)</td>
</tr>
<tr>
<td><strong>6. Countries (international comparisons)</strong></td>
<td>• Advocacy for governments in countries where there is systemic low health literacy</td>
</tr>
<tr>
<td></td>
<td>• Identify countries that are role models for how to improve health literacy levels of populations</td>
</tr>
</tbody>
</table>

Community outreach methods reach a wider audience than individual screenings. This may be in the form of:

- Health education
- Preventive medicine
- Information about healthy behaviors, especially regarding chronic illnesses such as diabetes and COPD
- Cancer screening clinics

These techniques are also more feasible for those who

1. are uninsured
2. lack access to a primary care physician
3. are geographically distant.
Final Recommendations

1. More research into the benefits of treating health literacy as an asset rather than a risk.

2. Increased health care provider education regarding how to interact with patients who have inadequate health literacy (and to know the warning signs).

3. Less individual health literacy interventions.

4. An increased emphasis on making signs, brochures, consent forms, and other documents easier to understand.

5. Community health initiatives that emphasize patient empowerment and motivation along with improved health literacy.
A special thanks to Dr. Lewis-Ginebaugh & Dr. Ravotas of the Interdisciplinary Health Services Program for all of their guidance.
References


