Health Literacy in a Vulnerable Population

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Abstract

One of the goals of Healthy People 2020 is to improve health information communication. The objectives listed under this goal include improving health literacy of a population and improving effective communication by health care providers (HealthyPeople 2020, 2014). Making health care providers aware of the local overall literacy rates, methods to assess literacy, and tools to simply written materials will improve communication. The goal of this paper is to identify a population in need of greater support from the health care community in health information comprehension, to explain why it is important to address this need, and to propose a means of addressing the need within one community.

Health Literacy in a Vulnerable Population

Health care literacy is the bedrock of an individual’s ability to access healthcare, understand prescribed treatment plans for existing illnesses, pursue health improvement and maintenance actions, and achieve a higher level of health and wellness. From the moment an individual enters a health care organization, he or she is surrounded by forms for admission, eligibility for assistance, and insurance verification. Clients receive written information on the Health Information Privacy and Portability Act and are expected to comprehend and sign a form stating they have received information regarding the protection of health information. Consent for treatment, health history, and family history forms are presented. The client sits in a waiting room surrounded by pamphlets and posters extolling health initiatives. After seeing a health care provider, a client is presented with prescriptions, written information on vaccines, discharge instructions, and scheduling forms for follow up. For an individual with limited or non-existent prose literacy, the sheer volume not to mention complexity of the written word surrounding health care can cause great confusion and perhaps disinclination to participate in the health care system.

# Risk Assessment

Health literacy is more than the ability to understand prose (written word). Health literacy also incorporates numeric literacy or the ability to understand and use numeric information such as medication measurements or blood glucose measurements, and oral literacy or the ability to listen and understand verbal instruction (Berkham, Sheridan, et al, 2011). The statistics available on literacy in the United States in general and Michigan in specific reflect a population that is stunningly compromised in reading apprehension and implementation. A very small percentage of individuals understand health information as it is currently presented to them by providers (Aspinall, Beschnett & Ellwood, 2012: Berkman et al, 2011: U.S. Department of Health and Human Services, 2010). Koh, Brach, Harris, and Parchman (2013) point to the only health literacy survey completed in the United States in 2003, which shows only 12 percent of the United States population could be considered health care literate. According to the U.S. Census Bureau (n.d.), Newaygo County, Michigan has a higher than state average of individuals living below the poverty level at 18.3%. In a population within Newaygo County of 30,329 adults age 25 or older 6.6 percent or 2,011 individuals have less than a ninth grade education, and 8.3 percent are unemployed (U. S. Census Bureau, n.d.). An estimated nine percent of Newaygo County adults are functionally illiterate (see table 1). The only health literacy survey ever conducted in the United States revealed a correlation between education and health literacy levels, showing that 49 percent of adults with less than or some high school education exhibited below basic health literacy (National Assessment of Adult Literacy, n.d.). This particular survey also showed a correlation between individuals living below the poverty level and low health literacy.

# Gap Analysis

Individuals with limited health literacy are among those experiencing health disparities and experience increased of hospital admissions, increased complications of health issues, and have higher health care costs (Brown, Teufel, & Birch, 2007). Decreased health literacy results in misuse of medication, inability to manage multiple medications, and a disinclination to read extra labeling on prescription medication such as safety warnings and drug interaction warnings (Berkman et al, 2011). Illiteracy results in individuals not seeking help in a timely fashion due to fear or embarrassment, resulting in increased emergency room usage, longer hospital stays, and increased self-reporting of poor health (Liechty, 2011). In a literature review in 2011, the Agency for Healthcare Research and Quality correlated lower health literacy levels with increased hospitilization, increased emergency room use, and decreased use of preventive services. Low health literacy was also correlated with increased mortality, poor medication manangement, and poorer health status in seniors. Koh (2013) reflects that all health care providers should approach interactions with patients in the light that there is a very real probability that the patient will not understand the situation or the language we use.

Nothing is more important to a patient than understanding what is being done, why, and how it will affect them. When health care providers are caring for individuals with a literacy deficit, there must be ways to recognize the deficit as well as address it. The Department of Health and Human Services has initiated the National Plan to Improve Health Literacy as of 2010. The goals of this initiative include developing accessible health information, improving communication and health information, teaching health care related information in schools, improve adult education, increase research into health literacy, and increase health literacy information dissemination (U.S. Department of Health and Human Services, 2010). No further federal level actions have occurred since this initiative. Michigan does not currently have any specific health literacy legislation in process. The health care community must step forward and address the needs of this vulnerable population.

The first step in addressing the needs of this vulnerable population is to recognize its existence. Education to health care providers within the acute care setting and primary care settings would include the statistics for education levels and basic literacy in Newaygo County as well as the detrimental effects on patient outcomes when health information is not disseminated in a meaningful and understandable manner. Education would also provide familiarity with the Rapid Estimate of Adult Literacy in Medicine, Short Form (Agency for Healthcare Research and Quality, 2009). This tool is a simple scoring tool for the assessment of the recognition and pronunciation of written words including exercise, menopause, antibiotics, and anemia (see figure 1). Introduction of pictograms are also an effective way to simplify instructions and create visual cues for individuals (see figure 2).

**Needs Statement**

The first step in addressing the needs of this vulnerable population is to recognize its existence. Education to health care providers within the acute care setting and primary care settings would include the statistics for education levels and basic literacy in Newaygo County as well as the detrimental effects on patient outcomes when health information is not disseminated in a meaningful and understandable manner. Education would also provide familiarity with the Rapid Estimate of Adult Literacy in Medicine, Short Form (Agency for Healthcare Research and Quality, 2009). This tool is a simple scoring tool for the assessment of the recognition and pronunciation of written words including exercise, menopause, antibiotics, and anemia (see figure 1). Introduction of pictograms are also an effective way to simplify instructions and create visual cues for individuals (see figure 2). In order to better serve the individuals seeking health care in Newaygo County, Michigan, specifically those with lower health literacy, education must be provided to health care providers on the topics of recognizing health literacy issues, identifying those at risk for poor health care outcomes secondary to low health literacy, introduction of pictograms to supplement written documents, and exploring methods to reduce complexity of written documents. This aligns with Ferris State University Core Values (2008) of collaboration, diversity, excellence, learning, and opportunity.

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Tables

Table 1

Basic Prose Literacy

|  |  |  |
| --- | --- | --- |
| **Area** | **Population** | **Percent lacking basic prose literacy** |
| **United States of America** | 315,549,157 | 14 |
| **Michigan** | 7,629,134 | 8 |
| **Kent County, Michigan** | 435,012 | 8 |
| **Mecosta County, Michigan** | 30,946 | 8 |
| **Newaygo, Michigan** | 37,200 | 9 |

(caliteracy.com, 2008. U.S. Department of Commerce, 2013. Institute of Education Sciences, 2003).

Figures

Figure 1

## Rapid Estimate of Adult Literacy in Medicine—Short Form (REALM-SF)

The Rapid Estimate of Adult Literacy in Medicine—Short Form (REALM-SF) is a 7-item word recognition test to provide clinicians with a valid quick assessment of patient health literacy. The REALM-SF has been validated and field tested in diverse research setting, and has excellent agreement with the 66-item REALM instrument in terms of grade-level assignments.

Select for PDF file [PDF version](http://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy/realm.pdf) - 25.28 KB .

**REALM-SF Form**

Patient name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date of birth \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Reading level \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Examiner \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade completed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| **Word** |  |
| Menopause | ☐ |
| Antibiotics | ☐ |
| Exercise | ☐ |
| Jaundice | ☐ |
| Rectal | ☐ |
| Anemia | ☐ |
| Behavior | ☐ |

**Instructions for Administering the REALM-SF**

1. Give the patient a laminated copy of the REALM-SF form and score answers on an unlaminated copy that is attached to a clipboard. Hold the clipboard at an angle so that the patient is not distracted by your scoring. Say:

"I want to hear you read as many words as you can from this list. Begin with the first word and read aloud. When you come to a word you cannot read, do the best you can or say, 'blank' and go onto the next word."

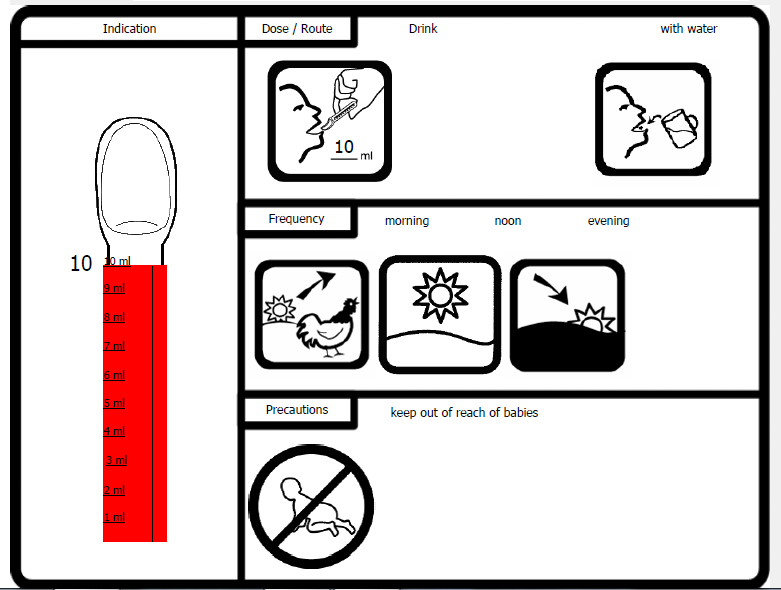
1. If the patient takes more than five seconds on a word, say "blank" and point to the next word, if necessary, to move the patient along. If the patient begins to miss every word, have him or her pronounce only known words.

**Scores and Grade Equivalents for the REALM-SF**

|  |  |
| --- | --- |
| **Score** | **Grade range** |
| 0 | Third grade and below; will not be able to read most low-literacy materials; will need repeated oral instructions, materials composed primarily of illustrations, or audio or video tapes. |
| 1-3 | Fourth to sixth grade; will need low-literacy materials, may not be able to read prescription labels. |
| 4-6 | Seventh to eighth grade; will struggle with most patient education materials; will not be offended by low-literacy materials. |
| 7 | High school; will be able to read most patient education materials. |

(Agency for Healthcare Research and Quality, 2009).

Figure 2



(retrieved from http://www.fip.org/files/fip/pictograms/Storyboard2.png)