IMPROVING HEALTH LITERACY

by

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March 30, 2006

A Master's paper submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Public Health in the School of Public Health, Public Health Leadership Program.

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Improving Health Literacy

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Abstract

Research conducted over the past 15 years has begun to unmask the previously hidden issue of illiteracy and its widespread impact on the health and well being of Americans. The effects of limited health literacy are far-reaching and have been linked to poor quality care, health disparities and overall poor health outcomes. It is now widely recognized that literacy issues are difficult to identify. Many of those who struggle with limited literacy skills choose not to disclose their difficulties. Therefore, their battles most often go undetected by the health care community. Because of this some advocate literacy screening in the health care setting so that clearer communication can be assured. However, despite its importance, screening alone is not likely to be sufficient. Instead a more universal approach fostering more effective communication strategies for all may be the more appropriate course of action.
Definition of Health Literacy

The National Literacy Act of 1991 defines general literacy as “an individual’s ability to read, write, and speak in English, and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one’s goals, and develop one’s knowledge and potential” (p. 2). The authors of Healthy People 2010 have further defined health literacy as “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions” (Chapter 11, p. 15). More simply stated, health literacy is “a constellation of skills, including the ability to perform basic reading and numerical tasks required to function in the health care environment” (Ad Hoc Committee on Health Literacy, 1999, p. 553). Unfortunately, a great number of Americans lack the literacy skills to comprehend any of these definitions.

Scope of the Health Literacy Issue

In 2002, the U.S. Department of Education conducted the National Adult Literacy Survey (NALS), providing a clear illustration of the state of literacy in the U.S. Over 26,000 randomly selected adults were surveyed and asked to complete tasks to assess skills in prose, document and quantitative literacy. The resulting scores placed them in one of five proficiency levels (Kirsch, Jungeblut, Jenkins & Kolstad, 1993). Of those surveyed, 21 to 23 percent scored at the lowest literacy level (level one) and were functionally illiterate. An additional 25-28 percent performed at level two and were marginally literate. This extrapolates to approximately 40-44 million functionally illiterate and 50 million marginally literate American adults (Kirsch et al., 1993). Based on this data, it can be expected that nearly half of American adults have limitations in their literacy skills (Ad Hoc Committee on Health Literacy, 1999). A second national survey conducted in 2003, the National Assessment of Adult Literacy (NAAL)
produced results similar to the NALS. Eleven years later, there was an average increase in quantitative literacy of 8 points on a 500 point scale, but no significant changes in prose or document literacy (Kutner, Greenberg & Baer, 2005).

According to the Agency for Healthcare Research and Quality, NALS levels 1 and 2 “correspond to having trouble finding pieces of information or numbers in a lengthy text, integrating multiple pieces of information in a document, or finding two or more numbers in a chart and performing a calculation” (Berkman et al., 2004, p. 2). Extrapolating to the healthcare setting, those with NALS Level 1 skills would likely be unable to determine appropriate pediatric dosing for over the counter medications. Those with level 2 skills would likely be unable to accomplish more complex but important tasks such as comprehending medical consent forms (Mika, Kelly, Price, Franquiz, & Villarreal, 2005). According to Weiss “nearly all doctoral level clinicians fall within NALS level 5, but fewer than 5% of all adults Americans have literacy skills at this level” (2003, p.8). This disparity creates vast opportunities for miscommunication between health care providers and those who seek their care.

Based on the complex and specialized context of health information, the Ad Hoc Committee on Health Literacy (1999) suggests that one’s functional health literacy may be even more limited. They cite the following study results as support for this suggestion.

One third of English-speaking patients at two public hospitals could not read and understand basic health related materials...42% of patients...were unable to comprehend directions for taking medication on an empty stomach, 26% could not understand information on an appointment slip, and 60% could not understand a standard consent form. (Williams, Parker, Baker, et. al., as cited by Ad Hoc Committee on Health Literacy, 1999, p. 552).
Further support for the prevalence of limited health literacy comes from a report released by the Institute of Medicine. In their paraphrasing of this report, Wolf, Gazmararian, & Baker state “48% of the adult population in the United States lack the reading and numeracy skills required to fully understand and act on health information” (2005, p. 1946).

Identifying Those with Inadequate Literacy Skills

Individuals with limited literacy skills come from all backgrounds and sociodemographic groups. The majority of persons with NALS level one and two literacy skills are native-born, white Americans (Weiss, 2003). However, there are those at higher risk of low literacy with a disproportionate number represented in the lower literacy levels.

According to Kirsch et al., those with fewer years of education were more likely to exhibit limited literacy skills and score in the lower levels of the NALS. Specifically, 75-80 percent of adults reporting 0-8 years of education scored in level 1 while only 16-20 percent of those completing high school scored at this level (1993).

Racial and ethnic minorities also appear to be at higher risk of illiteracy. According to Kirsch et al. (1993), Black, American Indian/Alaskan Native, Asian/Pacific Islander and Hispanic adults were more likely to have scored in the lowest two levels of the NALS compared to White participants. The authors hypothesize that again this may be in part due to limited years of education in this country, particularly for Hispanics who average just over 10 years of schooling compared with 11.6 for Blacks and 11.7 for American Indian/Alaskan Natives. Mika et al. identify additional characteristics of those with lower literacy scores as being poor, being a resident of the southern and western regions of the U.S., having physical or mental disabilities, being prisoners, military recruits or homeless (2005).
Of particular concern is the prevalence of low literacy among older adults. According to Kirsch et al., average NALS literacy scores for adults over the age of 65 ranged more than one level below those of adults in the 40 to 54 year age bracket. The authors hypothesize once more that this may be due in part to the fewer years of schooling completed by our nation's older adults (1993). Furthermore, this disturbing finding is duplicated by the 2003 NAAL survey which found that comparing age groups, adults greater than age 65 had the lowest average literacy (Kutner et al., 2005).

Compounding the problem is the finding from the NALS that adults with chronic illness were more likely to have limited literacy skills than younger healthier counterparts. In fact the Center for Health Care Strategies, citing Kirsch et al., state that “75% of Americans who reported having a long-term illness (6 months or more) had limited literacy” (Fact Sheet: Who has health literacy problems?, p. 1). The elderly and the chronically ill are two potentially overlapping subpopulations who have the greatest interaction with the health care system and potentially stand to suffer the most from inadequate health literacy.

Impact of Inadequate Health Literacy

Numerous studies have suggested that poor health literacy has a negative impact on overall health. Baker, Parker, Williams, Clark & Nurrss (1997) studied approximately 2,500 outpatients at two urban public hospitals and found an association between inadequate health literacy and increased likelihood of self reported poor health status. Furthermore, this association persisted after adjustments were made for gender, race, age and socioeconomic markers. Similarly, Wolf, Gazmararian & Baker investigated the relationship between health literacy and self-reported mental and physical health functioning among a sample of over 2,900 new Medicare enrollees. Results indicated that those with inadequate literacy reported worse physical
function and mental health than those determined to have adequate literacy. Furthermore, these results were obtained after adjusting for such potential confounders as sociodemographic factors, chronic health conditions and risk behaviors (2005). Though studies such as these do not prove causality, it can be theorized that low literacy exerts its effects at multiple levels.

Mika et al. illustrate the multidimensional importance of adequate literacy, stating, “The U.S. healthcare system is intricate, disjointed, and specialized, and patients must be able to access information, get health services, communicate with healthcare professionals about their illness, sign consent forms, understand treatment options, and follow through on treatment plans” (2005, p. 351). Inadequate literacy presents barriers at each if not all of these steps.

**Accessing Information and Services**

Low literacy places an enormous barrier in the path of accessing information. This can lead to poor disease knowledge and manifest as poor compliance with preventive care and risk factor modification as well as poor management of chronic disease.

A 2005 study conducted with 210 overweight and obese outpatients found that “patients with low literacy were significantly less likely to understand the adverse health consequences of obesity and the need to lose weight and to report being ready to lose weight” (Kennen et al., p.15). Furthermore, a considerable number of study participants could not read the following words: “obesity (43%), diabetes (39%), nutrition (28%), or calories (22%)” (p. 16). Imagine these patients interpreting food labels, nutritional information or keeping a food diary and it becomes clear how limited literacy can impact one’s ability to modify this important risk factor for morbidity and mortality.

A 1998 study by Williams, Baker, Parker, & Nuru specifically investigated the relationship between literacy status and patients’ knowledge of their chronic diseases. This study
was conducted with patients of a general medicine clinic at two large public hospitals. 402 patients with hypertension and 114 patients with diabetes were given general literacy assessments as well as hypertension or diabetes questionnaires based on the clinic’s own health education materials. Consistent with prior estimates, 48% of the study population was determined to have inadequate functional health literacy. Further results were as follows:

A total of 92% of patients with hypertension and adequate literacy levels knew that a blood pressure reading of 160/100 mm Hg was high compared with 55% of those in the lowest reading level. A total of 94% of patients with diabetes and adequate functional health literacy knew the symptoms of hypoglycemia compared with 50% of those with inadequate literacy. (p. 166).

A study of 653 new Medicare enrollees investigated the relationship between inadequate health literacy and patients’ knowledge of their chronic diseases, specifically diabetes, asthma, hypertension and congestive heart failure. Again, using questionnaires to assess knowledge, researchers found that those with lower literacy answered fewer questions correctly. These participants were less likely than those with adequate literacy to correctly answer 5 of 11 diabetes questions, 8 of 20 asthma questions, 8 of 25 hypertension questions or 4 of 16 questions about congestive heart failure (p<.05). The authors concluded that “respondents with inadequate health literacy knew significantly less about their disease than those with adequate literacy” (Gazmararian, Williams, Peel, & Baker, 2003, p. 267).

Other studies have examined the relationship between low health literacy skills and knowledge and use of preventive health services. One such study examined the relationship between health literacy and cervical cancer screening knowledge and practices in an ambulatory women’s clinic. Results of this study revealed that the only variable independently associated
with knowledge about the Pap test and its purpose was having a health literacy level $>9^{th}$ grade (Lindau et al, 2002). Furthermore,

Literacy also predicted how a patient would respond if she were informed of an abnormal Pap smear. Nearly 30% of women with below-adequate literacy skills versus 19% of women with adequate health literacy skills said they would not seek medical attention.

(Lindau et al., p. 941)

*Communication with Healthcare Professionals*

Management of many of today's health conditions is complex and requires an increasing degree of patient involvement in his or her care. Fundamental to this involvement is the patient's ability to communicate with his or her physician. However, those with limited literacy may have difficulties with even the simplest tasks, such as naming his or her medications or describing current treatment regimens and their effects.

One of the most complex disease management regimens is that of HIV infection/AIDS. As described by Wolf et al., "Pharmaceutical management of HIV infection is complex, and proper adherence to antiretroviral regimens is contingent on active patient involvement" (2004, p. 747). In their 2004 study of 157 HIV-infected community clinic patients, the authors found 48% of study participants read below a 9th grade level and of these, three out of four were unable to define "viral load" or "CD4 count". Additionally, one out of three patients was unable to state the names of his or her medications (Wolf et al., 2004). This knowledge level is fundamental to a basic understanding of the disease and for effective communication regarding its management and treatment.

With ever present pressures to do more in less time, a greater amount of physician-patient communication is conducted in writing, yet studies have shown that many materials such as
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health education information and consent forms are written at a level exceeding reading levels of most patients. In fact, according to Safer & Keenan, most health care materials are written at a 10th grade reading level--above the 8th grade level at which most literate patients read (2005). A 1989 study examined the American College of Obstetricians and Gynecologists' published health education materials and found them to be generally written at or above the 11th grade level (Zion as cited in Lindau et al., 2002). A similar review of patient education materials published by the American Academy of Family Physicians found a mean grade level of 9.43 +/-1.31, again above the average adult's reading level (Wallace & Lennon, 2004). Studies such as these suggest that informing patients and educating them may not be synonymous.

Understanding Treatment Options and Providing Informed Consent

Low literacy limits patients' ability to understand and effectively participate in discussions of such things as risks and benefits of treatment options or informed consent for clinical trials or procedures (Davis, Williams, Marin, Parker, & Glass, 2002). For example, patients who undergo anticoagulant therapy for conditions such as thromboembolism, atrial fibrillation or stroke, need to understand the risks and benefits of such treatment as well as those of other treatment options. However, a study conducted in 2000 revealed that the majority (88%) of reviewed patient information materials on this subject was written at or greater than a 9th grade level, beyond the comprehension level of their intended audience (Estrada, Hryniewicz, Higgs, Collins, & Byrd).

This same trend holds true for the issue of informed consent for research or procedures. In fact, a cross-sectional study found that Institutional Review Boards (IRB's) commonly provided sample text for consent forms that exceeded their own readability standards by up to 2.8 grade levels (Paasche-Orlow, Taylor, & Brancati, 2003). A similar level of complexity has
been described for surgical/procedural informed consent forms. A 1998 study examined the content of procedural/surgical consent forms used by a sample of U.S. hospitals. Findings from this study revealed that the “mean grade level required to understand these consent forms was 12.6 (+/-3.1)” (Hopper, TenHave, Tully, & Hall, p. 496). Again these forms exhibit a level of complexity greater than what the average U.S. adult patient can comprehend.

Compliance with Treatment

"Poor compliance with medical recommendations, long the bane of well-intentioned physicians, may not be so much a matter of willful disobedience as one of failure to understand the clinicians’ instructions and expectations” (Davis, Meldrum, Tippy, Weiss, & Williams, 1996, p. 95). One of the most potentially dangerous manifestations of this failure to understand is the incorrect use of medications.

In order to take medications correctly, one must be able to read, comprehend and execute written instructions or at least understand those instructions given verbally. This can be an impossible exercise for those who face the challenges of low literacy. A 1996 study by Hanchak et al. found that 11.8% of 500 prescriptions filled at an outpatient pharmacy were misinterpreted by patients (cited by Davis et al., 1996). This risk for medication errors is further supported by another 1996 study in which 60 patients with low literacy skills were interviewed as individuals and in focus groups about their experiences interacting with the health care system. The authors of this study state “many patients recounted serious medication errors resulting from their inability to read labels” (Baker et al., 996).

As medical care and medication regimens become more complex it is imperative that patients understand the proper dosing of their medications. One such regimen is that of anticoagulant management which requires frequent dose adjustments and regular monitoring of
anticoagulant effects by measuring the international normalized ration (INR). A 2004 prospective study investigated the relationship between literacy and numeracy skills and anticoagulation control among 143 patients at two anticoagulation outpatient units. Results showed that “the INR variability was higher among patients with lower literacy (p=.009) and lower numeracy skills (p=.004)” and “patients with lower numeracy spent more time above their therapeutic range (p=.04)” (Estrada, Martin-Hryniewicz, Peek, Collins, & Byrd, 2004). This has important implications as anticoagulation within the therapeutic range achieves the optimal balance between effectiveness and bleeding complications. Furthermore, this study again supports earlier reports regarding the prevalence of lower literacy. Of 143 participants, “only 75 (52.4%) were able to read health-related words at the eighth grade level or less” (p. 88).

In Wolf et al.’s (2004) study of HIV patients, results indicated that of those classified as having lower literacy (reading level below the 9th grade), two thirds did not know how to properly take their medications (p<.05). This has implications for the management of this disease as the authors state “the long-term efficacy of HAART [highly active anti-retroviral therapies] regimens are dependent on the ability of the patient to have a near perfect rate of adherence to complex medication regimens” (p. 747).

A 1998 study examined the relationship between literacy skills of patients presenting for acute asthma care and their asthma knowledge and skills in using their metered dose inhalers. The authors found that compared to literate patients, those with lower literacy were less likely to correctly answer questions about asthma correctly (Williams, Baker, Honig, Lee, and Nowlan). One example from this study is the finding that “only 31% of all patients reading at a third-grade level or less, compared with 90% of those reading at the high-school level, knew that they need to see their physician even when not having an asthma attack” (p. 1010). Overall results of this
study indicate that “in multivariate analysis, patients’ reading level was the strongest predictor of asthma knowledge and MDI skills” (p. 1012).

Limited literacy and low levels of disease knowledge have a strong impact on patient self management of chronic disease. Poor self management can be expected to lead to less optimal health outcomes, particularly among those with chronic diseases requiring higher degrees of patient involvement, such as diabetes.

In a 2002 study of public hospital primary care clinic patients, the relationship between outcomes in type II diabetics and health literacy was examined. Results from this study revealed that “patients with inadequate health literacy were less likely to than patients with adequate health literacy to achieve tight glycemic control and were more likely to have poor glycemic control and to report having retinopathy” (Schillinger et al., p. 475).

Economic Impact/Utilization of Resources

The Center for Health Care Strategies estimates that low functional literacy resulted in additional health care expenditures of $32 to $58 billion in 2001. In addition, adults in the lowest level of literacy skills (<20%) were more than 1.5 times more likely to visit a physician and had three times as many prescriptions filled than those with higher level literacy skills (Fact Sheet: Impact of low health literacy, n.d.). The Center further poses that “after adjusting for health status, education level, socio-economic status, and other demographic factors, people with low functional literacy have less ability to care for chronic conditions and use more health care services.” (p. 1). They further claim that after adjusting for age, gender, income, health status and insurance status, “low functional literacy results in 3-6% greater health care expenditures” (p.2). The potential relationship between literacy level and use of resources is supported by findings from several previously introduced studies.
In their study of asthma patients, Williams et al. (1998) note that “while 31% of patients reading at the high-school level reported they usually need to go to the ED when they have an asthma attack, 54% of all patients reading at a sixth-grade level or less said they usually do (p<.001)” (p. 1012). Lindau’s study of patients at a women’s clinic found that “patients with below average health literacy were more likely to state that they would seek care in an emergency room or acute care facility for illness than patients with adequate health literacy (11% vs 3%; p<.001)” (2002, p. 941). This is contrasted with those patients with adequate literacy who were more likely to state they would opt for care by a continuity care provider (2002).

A prospective cohort study of Medicare managed care enrollees investigated the relationship between health literacy and risk of hospital admission. The results were as follows:

After adjustment for differences in age, sex, race/ethnicity, language, years of school completed, and income, the adjusted relative risk of hospitalization was 1.27 (95% CI=1.07, 1.52) for individuals with inadequate functional health literacy and 1.22 (95%CI=1.00,1.50) for those with marginal literacy, compared with those of adequate literacy. (Baker et al., 2002, p. 1281)

The authors concluded that inadequate literacy was an independent risk factor for hospitalization in this patient population (Baker et al., 2002).

A suboptimal understanding of health and the health care system leads to greater health care expenditures. Inadequate literacy impedes this understanding and translates into greater financial costs. Weiss illustrates this point in his following statement:

The combination of medication errors, excess hospitalizations, longer hospital stays, more use of the emergency department, and a generally higher level of illness results in
an estimated excess cost for the US healthcare system of $50 billion to $73 billion per year attributable to low literacy alone. (2003, p. 13)

Assessing Health Literacy

Despite the presence of high risk groups, it is imperative to realize that limited literacy can affect anyone and as Weiss (2003) cautions, “persons with limited literacy skills do not fit into easy stereotypes” (p. 8). He cites a study of functional health literacy conducted with affluent geriatric retirement community residents that found 30% scoring poorly (Gausman, B. & Forman, W., 2002 as cited in Weiss, 2003). Furthermore, he reminds us of those high functioning members of society whose literacy is limited by dyslexia (Morris, 2002 as cited in Weiss, 2003).

Despite the pervasiveness of limited literacy, many patients with low literacy remain unidentified by the health care community. This is in part due to their reluctance to admit their difficulties to their health care providers or in some cases they may not realize the extent of their problem. According to Kirsch et al’s report of NALS results, 66-75 percent of those who performed in level one described themselves as being able to read “well” or “very well” as did 93-97 percent of those exhibiting level two literacy skills (1993).

Several studies have illustrated that physicians cannot accurately determine the literacy levels of their patients. One notable study conducted by Bass, Wilson, Griffith, & Barnett (2002) investigated resident physicians’ ability to accurately identify patients with low literacy among a sample of 182 of their continuity care clinic patients. Based on their clinical interactions, residents identified 10% of their patients as having literacy limitations. Of the 90% not suspected, 36% (59) exhibited inadequate literacy skills on formal screening.
This finding of this study is echoed by that of Lindau et al. (2002) who studied patients in an ambulatory women’s clinic and found that “physician estimation of patients’ reading levels was poorest for the lowest readers, with physicians overestimating the reading level 80% of the time” (p. 941). In other words, only 20% of the lowest readers were identified correctly by their physicians. Based on the results of this study “the sensitivity of the routine clinical encounter for detecting low literacy was poor (40.4%)” (p. 942).

It cannot be assumed that patients will inform their healthcare providers of their literacy difficulties. Several studies have shown that shame is a strong deterrent to patient disclosure. One such qualitative research study was conducted using focus groups and individual interviews with patients at two large public hospitals who were determined to have low literacy. These interviews revealed that “patients with low literacy harbor a deep sense of shame, which is reinforced by hospital staff who become frustrated or angry when someone cannot complete a form or read instructions” (Baker et al., 1996). The relationship between health literacy disclosure and shame was explored further in a second study of 202 acute care patients at a large urban hospital. Of these patients, 42.6% were determined to have low functional literacy, and of these, 67.4% (58) admitted their literacy difficulties (Parikh et al., 1996). With regard to disclosure, the following results were found:

Of the 58 patients who had low functional literacy and admitted having trouble reading, 67.2% had never told their spouses, and 53.4% had never told their children of their difficulties reading. 19% of patients had never disclosed their difficulty reading to anyone. (Parikh et al., p. 33)
Baker et al. further pose that because of this shame and patients’ reluctance to disclose their literacy difficulties, it may be necessary to employ screening tests to identify those who may benefit from additional attention or resources (1996).

**Screening for Health Literacy**

It may seem logical to take a simple approach and screen patients by simply asking them the number of years of schooling they have completed. However, the number of years of formal education is a poor surrogate for literacy level (Weiss, 2003). The inaccuracy of this measure is illustrated by numerous studies.

In their study of health literacy and anticoagulation management, Estrada et al. (2004) found poor concordance between patients’ self-reported completed years of schooling and measured literacy grade level, finding reported years to be greater. For example, they found “while 79% had completed at least eight grades, only 47.6% had a score at that grade level” (p. 88). In Lindau et al.’s study of health literacy and cervical cancer screening, 25% of those who reported completing high school had marginal literacy or lower (2002). In their study of asthma patients, Williams et al. (1998) found similar discrepancies. They report “only 27% of patients read at the high-school level, although two thirds reported being high-school graduates” (p. 1008). Perhaps the most important data come from the National Adult Literacy Survey itself which revealed that 24% of those scoring at level one were high school graduates (Kirsch et al. as cited in Weiss, 2003).

If patients are reluctant to disclose their literacy difficulties and health care providers cannot accurately identify them, then how can these patients be detected? Given the wide prevalence of limited health literacy and its seemingly occult nature, it has been suggested that formal screening for its existence be undertaken among patient populations. This would allow
targeted interventions to improve comprehension and communication with affected individuals and hopefully provide for more effective health care. Two formal assessment instruments are the Test of Functional Health Literacy in Adults and the Rapid Estimate of Adult Literacy in Medicine.

The Test of Functional Health Literacy in Adults (TOFHLA) is an instrument developed to assess both the use of numerical information and reading comprehension skills. It can be applied in both English and Spanish and comes in a longer version that requires 22 minutes to administer and a shorter 7 minute version (Mika et al., 2005).

The Rapid Estimate of Adult Literacy in Medicine (REALM) is a shorter assessment tool, requiring only 2-3 minutes to complete. It is comprised of a list of 66 common health-related English words listed in order of increasing complexity. It is a test of word recognition and pronunciation that provides a general idea of one’s reading level (Mika et al., 2005). It does not, however, measure comprehension skills.

It is important to note that no standardized assessment tools have been developed to measure actual health literacy. Though it is tempting to widely implement tools such as the TOFHLA and REALM in the health care setting, it is important to note that thus far they have been used only in the setting of research and are at best a proxy of actual health literacy (Davis & Wolf, 2004).

Though some abbreviated and modified version of either the TOFHLA or REALM could theoretically be implemented in a clinical practice, some have objected to the use of formal literacy assessments in the clinical setting (Chew, Bradley, & Boyko, 2004). Some raise concern that testing would be a potential source of embarrassment for patients who might feel intimidated or “quizzed” by their health care providers (Chew et al., 2004). As has already been described,
illiteracy is a source of shame for many who struggle with it and fight to keep it hidden (Parikh et al., 1996). These individuals may have concerns regarding confidentiality of their literacy issues and be reluctant to have their issues formally identified (Chew et. al., 2004). However, it is precisely this group that stands the most to gain from improved communication and understanding.

"The ability to identify patients with potential literacy problems is important if health care providers are to attempt to overcome the adverse effects of low health literacy" (Chew et al., 2004, p. 588). Routine screening could be of value for the purpose of identifying those who may have difficulty receiving information in written form. It can be argued, however, that a formal screening test is less desirable and that a more simple approach would be better tailored to the physician-patient relationship—that of simply asking patients about their literacy skills in a manner that is open, nonjudgmental and compassionate.

Chew et al. have developed three screening questions that were effective for identifying patients with inadequate health literacy. These questions were as follows:

- "How often do you have someone help you read hospital materials?"
- "How confident are you filling out medical forms by yourself?"
- "How often do you have problems learning about your medical condition because of difficulty understanding written information?" (2004, p. 590)

According to Chew et al., screening questions such as these offer several advantages over formal screening assessments or tools. One of these is the ease with which they can be asked discreetly by health care providers and/or staff. Additionally, the questions can be asked and answered quickly which is important in today's busy health care settings. Furthermore, these questions may be less likely to create shame or anxiety in patients since they are not directly assessing skills via
formal testing (2004). Perhaps most importantly, questions such as these open the line of communication between health care providers and their patients so that the issue of health literacy and its impact can be addressed.

The value of any screening tool vastly diminishes in the absence of effective interventions for the condition it identifies. Identifying patients with literacy limitations offers the advantage of modifying the information provided and the style in which it’s delivered to more appropriately meet specific needs. It also offers an important opportunity to connect patients with literacy resources, such as adult literacy programs or other similar interventions.

Assessing a patients’ literacy level does not need to be a formal process, and in fact, can be viewed as falling under a wider process of skilled communication. Though patients may not directly disclose their difficulties, they often leave clues, and with time and effort clinicians can learn to uncover them. Weiss describes behavioral clues exhibited by patients that may indicate their underlying literacy problems. For example, incomplete or incorrectly completed forms, noncompliance with medical treatment, missed appointments or lack of follow through with referrals or diagnostic studies could all be signs of difficulties with literacy skills. Likewise, patient behaviors such as “forgetting one’s glasses” or having others read materials for them can be an indication of low literacy. Medication reviews also are an opportunity to learn about patient literacy as those with limited skills are often unable to name their medications by reading labels and may have difficulties describing their purpose or dosing instructions (2003).

However, identifying those with low literacy skills is not likely to be enough to solve this widespread problem. Instead a more universal approach may be needed that will involve more effective communication with all patients as it is likely that nearly all patients can benefit from clearly, more simply stated health information.
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Weiss (2003) illustrates this point with the following statement:

It is important to emphasize that limited understanding of health concepts is not solely a problem of persons with low literacy skills...Highly literate, well-educated individuals also report difficulty understanding information provided to them by clinicians because clinicians often use vocabulary and discuss physiological concepts unfamiliar to those who do not have a medical education (p. 10).

Means for Improvement:

There are many simple steps that can be taken to improve communication of health related information. Underlying many of these steps is one theme, that of simplification. In his Manual for Clinicians, Weiss outlines several actions that can be taken by clinicians and health care staff, most of which are relatively easy to implement. First and foremost he recommends that health care providers and their staff behave in a manner that is helpful and freely offer assistance when needed, providing such things as assistance with simpler forms, providing directions to office visits, and reviewing medications and instructions (2003). Weiss also advises that interpersonal communication can be improved with clearer messages, using plain, nonmedical language and pictures when possible. Perhaps most importantly, health care providers should “slow down” to ensure patient understanding as it “will help foster a patient-centered approach to the clinician-patient interaction” (2003, p. 25).

Over a decade of research has brought the issue of health literacy and its impact on the health of Americans closer to the forefront and onto the agendas of organizations such as the Institute of Medicine, the American Medical Association, the Agency for Healthcare Research and Quality and the Department of Health and Human Services. However, there is still much work to be done to improve the health literacy of those who seek care in the U.S. healthcare
system. The solution to this problem begins with recognizing its existence nationwide, and identifying it in patient populations. Most importantly, efforts need to be taken to simplify communication styles and "fine-tune" skills to meet the needs of those who seek care (Davis, et al., 1996).
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