

Keys to Clear Communication — How to Improve Comprehension Among Patients With Limited Health Literacy

by **Melissa Ip, MA, RD, CHES**

Playwright George Bernard Shaw once said, “The greatest problem in communication is the illusion that it has been accomplished.”

Every day, dietitians and other health professionals communicate nutrition information to patients, clients, and the general public through one-on-one counseling sessions, workshops, brochures and handouts, websites, magazines, and other media forms. However, according to the Institute of Medicine’s 2004 report “Health Literacy: A Prescription for Confusion,” more than 300 studies show that most health information cannot be understood by the people for which it is intended. A growing body of evidence has linked limited health literacy to poor health knowledge, behaviors, and outcomes. Addressing health literacy is increasingly seen as a way to improve preventive care and reduce health disparities.

Because dietitians are in a unique position to communicate about lifestyle choices that can dramatically impact patients’ health outcomes and quality of life, it is important for them to be aware of their patients’ health literacy to maximize the amount of information that is successfully communicated. This CPE module explains the concept of health literacy, sets forth strategies for assessing patients’ health literacy, suggests strategies for effective communication, and illustrates how some dietitians are addressing the concept of health literacy in their practices.

What Is Health Literacy?

Health literacy is defined as “the degree to which individuals have the capacity to obtain, process, and understand basic health information needed to make appropriate health decisions and services needed to prevent or treat illness.”¹ This capacity includes basic literacy and numeracy skills and the ability to access health information, communicate with healthcare providers, and navigate the healthcare system. Health literacy was assessed nationally for the first time in 2003 as part of the National Assessment of Adult Literacy. Fourteen percent of adults in the United States were found to have below basic health literacy skills, while 22% had only basic health literacy skills.

Health literacy is strongly linked to literacy. Literacy is defined by the National Literacy Act of 1991 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.” According to the National Adult Literacy Survey, about one-quarter of adults in the United States may lack the literacy skills needed to function adequately in modern society. In addition to people with low literacy skills,

limited health literacy is particularly prevalent among older adults, people with limited income, minority populations, and people with limited English proficiency. However, adults with a high level of education can also have limited health literacy.

What does health literacy have to do with dietitians? Karen Chapman-Novakofski, RD, PhD, a professor at the University of Illinois, Urbana-Champaign, recalls what a diabetes patient said to her once after a presentation: “After 15 years of having diabetes and talking to dietitians, what you said made sense to me. It never did before.” Comprehending nutrition information often requires an understanding of complex, scientific concepts. The following paragraph is an example of how nutrition information may be perceived by a patient with limited health literacy:

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Research shows that up to 80% of patients forget what their doctor tells them as soon as they leave the office.² Patients with limited literacy have trouble interpreting nutrition information, identifying normal ranges for blood sugars and blood pressure, interpreting their own numbers, and acting on the information. Given the prevalence of nutrition-related chronic diseases and the necessity of patients to be empowered to manage their own healthcare, it is imperative that dietitians take action to address limited health literacy.

Assessing Patients With Limited Health Literacy

So how do you know which patients have limited health literacy? Various tools have been developed to assess patient health literacy, the most common of these being the Rapid Assessment of Adult Literacy in Medicine and the Test of Functional Health Literacy in Adults. These validated instruments test reading and numeracy skills as they relate to health. The Newest Vital Sign is an assessment tool that uses a nutrition label from an ice cream container. Patients are asked six questions to assess how they interpret and would act on the information provided on the label. These assessment tools are available online in English and Spanish.

Because of the stigma attached to illiteracy, the majority of patients with poor literacy skills hide the fact that they cannot read the written information given to them. Dietitians should be wary of red flags of limited literacy, including statements such as “I forgot my glasses” or “I’ll read this when I get home” or patients having difficulty explaining medical concerns. Poor readers often lift texts closer to their eyes or point to a text with a finger while reading. Their eyes may wander on the page without finding a central focus.

However, says Bridgette Collado, MA, RD, a health and nutrition communication consultant, the ability to understand health information depends on many factors, not just education or reading level alone. “Numeracy, computer literacy, and visual, hearing, and cognitive impairments also have a role in health literacy,” she says. Collado asks clients to demonstrate these skills during education sessions to assess their health literacy skills.

Given the difficulties of assessing patient health literacy, it is prudent for dietitians to take steps to promote and confirm understanding of the information taught to all patients. Victoria Hawk, MPH, RD, a researcher at the University of North Carolina at Chapel Hill, recommends that instead of seeking to identify people with limited health literacy, dietitians should take the universal precautions approach that assumes all patients have difficulty understanding nutrition information. Hawk and other researchers at the university have developed a free Health Literacy Universal Precautions Toolkit, which offers tools and guidelines for practices to improve care for patients of all literacy levels.

Strategies for Effective Nutrition Communication

Individuals with limited health literacy cross all ethnic and class boundaries; however, they share common characteristics when it comes to processing information. Some characteristics include a tendency to think in concrete and immediate rather than abstract and futuristic terms, a literal interpretation of information, and difficulty with processing information, such as reading a menu or following medical instructions. Whether working in a hospital, senior center, or private practice, all dietitians can employ the following strategies to enhance patient or client understanding of nutrition information and improve adherence to dietary recommendations.

Speaking With Limited Literacy Individuals

- **Limit the number of messages taught at one time.** Less is more if it is well understood.
- **Use simple, jargon-free language and define technical terms.** According to *Health Literacy From A to Z: Practical Ways to Communicate Your Health Message* by Helen Osborne, MEd, OTR/L, patients often do not understand jargon; for example, in healthcare “unremarkable” generally means “you’re fine,” while the term “positive” means “you’re not fine.”
- **Organize information so that the most important messages stand out.** Repeat important messages.
- **Ask patients to “teach back” what was just taught.** For example, dietitians can ask, “I want to be sure that I did a good job explaining an appropriate diet for high blood pressure because it can be confusing. Can you tell me what foods are high in salt?” If the patient does not repeat the information correctly, rephrase the information rather than simply repeating it. To assess whether patients are able to apply and act after receiving nutrition instruction, you might ask, “What will you prepare for breakfast tomorrow?”
- **Be an active listener.** Encourage patients to share information they feel is necessary for their visit. Ask open-ended questions. For example, instead of asking, “Do you have any questions?” ask the patient, “What questions do you have for me?”
- **Use demonstrations and hands-on activities.** Practice reading food labels with patients and clients or demonstrate portion sizes using food models. Repetition of skills helps build confidence and improve recall.

Selecting Low-Literacy Nutrition Education Material

- **Use materials written at a seventh-grade reading level or below.** Assess the readability of written information using readability tests such as the Fry Readability Formula or Simplified Measure of Gobbledygook test. Readability tests assess reading difficulty by counting the number of words in sentences and the number of syllables in words. Information with long sentences and many multisyllabic words will be assessed at a higher grade level than information using short sentences and one- and two-syllable words. Examples include the 11th grade-level sentence, “Studies show that consuming high quantities of high-fat foods may increase your risk of cardiovascular disease” and the fourth grade-level sentence, “Eating fatty foods can raise your risk of heart disease.” Assess readability using online assessment tools or word processing software.

- **Use visuals.** Including pictures in health education materials can increase attention to and comprehension and recall of health information and adherence to health recommendations.³ For example, LearningAboutDiabetes.org offers free, low-literacy print materials on diabetes care with attractive and informative visuals.

- **For patients with Internet access, refer them to reliable consumer health websites.** Eighty percent of adult Internet users search for health information online, explains Robin Sabo, MLS, MS, RD, a librarian at Central Michigan University, but many websites with nutrition information are inaccurate. Refer patients to consumer health websites that offer up-to-date, reliable information, such as MedlinePlus.gov, HealthFinder.gov, and [Nutrition Navigator](http://NutritionNavigator.gov).

Creating Low-Literacy Nutrition Education Materials

- **Keep written education materials at or below a seventh-grade reading level.** A helpful resource, the [University of Michigan Health Sciences Library](http://UniversityofMichiganHealthSciencesLibrary), provides an online plain language medical dictionary. The National Institutes of Health also provides plain language resources and training at <http://plainlanguage.nih.gov>.

- **Know your audience.** Review existing data and, if possible, gather new data about the demographics and nutrition knowledge, attitudes, and behaviors of your target audience. The Institute of Medicine report “Health Literacy: A Prescription to End Confusion” recommends engaging patients and other members of the target audience when developing health communication materials.

- **Use the active voice.** Make recommendations using action verbs.

- **Include pictures and other visuals to support verbal and written information.** Use visuals that directly relate to the information. Circles and arrows are helpful to point out key information.

In her book, Osborne recommends applying the universal design concept—or the design of products and environments that are usable by all people to the greatest extent possible—to the creation of print and Web-based health communications. Easy-to-read brochures and websites are helpful and appreciated by most people.

For more information about how to develop clear and simple print materials for low-literacy readers, read the [Centers for Disease Control and Prevention](#)'s guide for creating easy-to-understand materials.

Thinking Beyond the Brochure

According to the learning pyramid theory, people who learn information from an audiovisual source remember twice as much information than if they simply read the information. Visual aids such as measuring cups and spoons and food replicas are helpful tools when educating patients about portion sizes. The How Much Fat? and How Much Sugar? Test Tubes offer a striking visual depiction of the amount of sugar and fat found in common foods.

Nutrition education in audio or video formats, interactive computer programs, games, and other multimedia can strengthen patients' understanding of nutrition information. As health education multimedia gains a growing presence on the Web, dietitians can take advantage of these online resources to add to their repertoire of nutrition education materials. The American Heart Association's Meet the Fats teaches visitors to distinguish good from bad fats through cartoon renditions of the different fats. The Joslin Interactive Wok developed by the Joslin Diabetes Center allows website visitors to calculate the nutritional content of foods typical in Chinese and Japanese cuisines with relevant translations available. Sesame Street's [Food For Thought: Eating Well on a Budget](#) offers video clips in English and Spanish to educate children and families about healthful eating while offering talking points for providers so they can better assist families to access healthful foods on a budget.

Considering Literacy, Culture, and Language in Nutrition Communication

Dietitians should strive for linguistic and cultural competence while taking health literacy into consideration in their practice.⁴ Almost one-half of patients with limited health literacy are members of racial and ethnic minority groups. In addition, adults with low English proficiency may have limited health literacy in their native language. Dietitians should use written nutrition information that is easy to read, culturally relevant, and translated in the native language of patients with limited English proficiency. There are several websites that provide translated nutrition information, including [MedlinePlus.gov](#), [HealthTranslations.com](#), and [EthnoMed.org](#).

Similarly, when using an interpreter to communicate nutrition information, dietitians should not assume that patients understand complex nutrition concepts in their native language. A 2005 article by Leyva and colleagues in *Ambulatory Pediatrics* found that less than one-third of Spanish speakers were able to fully understand a Spanish-language drug information sheet.⁵ Following the universal precautions concept, whereby all patients are assumed to have limited health literacy, will help ensure patient comprehension of the information provided. Dietitians should also avoid using idioms, or phrases that have figurative meanings different from the literal definition and that are used in particular cultures and countries. Examples of idioms include "piece of cake" and "feeling blue."

Using concrete rather than abstract messages when counseling patients can give patients more realistic options for making dietary changes. The change of the USDA's nutrition guidelines from MyPyramid to MyPlate is an example of translating a more abstract conceptual

tool to a visual recognized by most Americans—the dinner plate—while staying faithful to the underlying principles of the former. However, dietitians should remember to tailor their messages to the unique needs of each patient or client. When using visuals to support their teaching, dietitians should choose examples relevant to their target audience. The plate method may not translate well for some Asian patients who may eat from bowls rather than plates. Always do a dietary recall with your patients to learn more about their food preferences to best tailor your nutrition messages for them.

Training the Trainers on Health Literacy

Giving clients information they can understand and use sounds like common sense; however, doing so is easier said than done. Dietetics educators should take advantage of opportunities to teach aspiring and practicing dietitians effective communication skills while giving them room to practice these strategies.

To teach health literacy to both undergraduate dietetics students and practicing dietitians, University of Delaware professors Nancy Cotugna, DrPH, RD, and Connie Vickery, PhD, RD, designed a health literacy module in a three-credit nutrition education course. In this module, students developed and presented a three-hour workshop to dietetics professionals on the topic of health literacy.⁶ The 24 junior and senior students conducted a learning needs assessment, wrote behavioral objectives, and developed the content, methods, and evaluation for the workshop. The workshop included interactive breakout sessions facilitated by the students to teach dietetics professionals how to identify low-literacy clues, assess literacy level, and access low-literacy resources.

In collaboration with a patient education specialist at Hamilton Hospital in Ontario, Canada, the Hamilton Health Sciences dietetic internship program trains its interns on health literacy through a workshop and patient education project. The interns develop nutrition education material following Hamilton Health Sciences' process for developing patient education materials with an interdisciplinary team, including patients and families.

Health literacy is also becoming an increasingly popular topic of education for other healthcare professionals. The Mayor's Office of Adult Education in New York City hosts a health literacy fellowship for medical students where fellows work in community-based adult education programs to teach adults to improve their functional literacy skills while learning more about health.

Partnering with local schools, social services, and adult literacy programs offers another opportunity for dietitians to promote nutrition literacy in their communities. These programs are often eager to connect students to local resources; at the same time, dietitians have an opportunity to promote their private practice or outpatient nutrition services. In addition, adult educators can observe nutrition education from an expert source that can inspire future lessons on the topic.

Foodservice as a Venue for Improving Nutrition Literacy

Dietitians working in hospital foodservice have an opportunity to promote their patients' nutrition literacy. According to a profile of University of Pittsburgh Medical Center's (UPMC)

foodservice program by the Agency for Healthcare Research and Quality, hospitalization is often an unrealized opportunity for education. In an effort to improve patient care at UPMC, a nonprofit health system, the menu for patients on a therapeutic diet was expanded to include popular food items such as hamburgers and chicken fingers. This liberalization gave patients more freedom to make meal choices under guidance from the food and nutrition department while improving meal intake and patient satisfaction.

Patients that are ordered to follow a “liberalized” therapeutic diet are visited by a member of the food and nutrition department, who informs them of their diet order and educates them about appropriate food choices. Patients choose from a menu that also serves as an educational tool, with symbols highlighting heart-healthy items and notations of the number of carbohydrate exchanges, if relevant. Menu selections are not edited by nutrition staff. Rather, they are monitored for diet compliance and, if noncompliant, patients are visited by clinical nutrition staff and offered relevant diet education.

This skills-based educational approach offers patients an opportunity to apply the nutrition knowledge taught by their dietitian just as case studies teach dietetic interns to apply knowledge taught in the classroom in the provision of nutrition care to actual patients. In addition to promoting nutrition literacy, offering UPMC patients more menu choices has led to higher patient satisfaction, less plate waste, and fewer calls for second trays or additional items.

Using Volunteers to Reinforce Nutrition Messages

Limited time and budgets often prevent dietitians from providing the comprehensive nutrition education and counseling that patients need. Utilizing volunteers in healthcare settings can help reinforce nutrition messages and promote health literacy.

At the Lincoln Medical and Mental Health Center in the South Bronx in New York City, bilingual student volunteers deliver one-on-one diabetes education in the waiting room to patients waiting to see their physicians. These sessions offer opportunities to discuss issues with patients that might not be covered during the physician encounter. Using props and oral presentations, volunteers instruct patients and families on diabetes self-management, nutrition, and physical activity. Patients with limited math and numerical skills are taught how to read nutrition labels and calculate the number of calories per serving size. Volunteers also address traditional foods and health beliefs in the community.

Volunteers are equipped with props to help improve patients’ health literacy, such as measuring cups, nutrition labels, examples of serving sizes, prescription labels, and hemoglobin A1c charts. To assess patient comprehension, volunteers use the teach-back method, orally testing the patient before and after he or she is taught a topic. One example of how they do this is to ask a patient to look at a nutrition label of a bagel and calculate how many carbohydrates are in half a bagel. The volunteer will conduct this test before and after teaching about food labels.

Student volunteers are recruited from local universities and complete 20 hours of training with a health literacy expert and certified diabetes educator. An advisory committee of

endocrinologists and internist ensures that the information received from physicians and volunteers is consistent, such as what to do when glucose levels are too high or too low. Pre- and postimplementation tests delivered over six months of the program showed that 92% of patients demonstrated improvement in health literacy skills. More information about Lincoln's diabetes education program can be found on the [Agency for Healthcare Research and Quality Innovations Exchange profile](#).

Empowering Patients Through Communication

Health literacy “means more than being able to read pamphlets and successfully make appointments. By improving people’s access to health information and their capacity to use it effectively, health literacy is critical to empowerment.”⁷ With the public barraged with often-conflicting messages about nutrition and health from advertising and mainstream news sources, dietitians can help patients and clients decipher and pick the most relevant information for them to maintain a healthful lifestyle. According to the Academy of Nutrition and Dietetics, RDs are “in a position to continuously consider nutrition literacy in our role as translators of the science of nutrition into practical solutions for healthy living.”

In addition to employing the strategies described in the article, dietitians should convey respect, compassion, and sensitivity to all patients and clients to empower them to participate in their own healthcare. Nutrition education strategies tailored to the diverse learning needs of individuals are essential to ensure understanding and adherence to dietary recommendations. “The better one understands the messages they receive about their health,” says Collado, “the more likely they are to be successful in taking steps toward behavior change and a healthier lifestyle.”

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Additional Resources and Continuing Education

Further Reading

- *Health Literacy From A To Z: Practical Ways to Communicate Your Health Message* by Helen Osborne, MEd, OTR/L
- *Teaching Patients With Low Literacy Skills*, 2nd edition, by Cecelia C. Doak, Leonard G. Doak, and Jane H. Root

Online Resources

- [Harvard School of Public Health Health Literacy Studies](#)
- [US Department of Health and Human Services Quick Guide to Health Literacy](#)
- [World Education Health Literacy Special Collection](#)

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Examination

1. Limited health literacy is prevalent among:

- A. the elderly.
- B. people with limited English proficiency.
- C. people with low literacy skills.
- D. All of the above

2. Which statement best uses low-literacy principles?

- A. Hypertension can be controlled with gradual lifestyle changes.
- B. Try walking the stairs to your apartment. It can help you lose weight and lower your blood pressure.
- C. Food labels are a helpful resource for finding out the nutritional content of a food.
- D. Thirty minutes of moderate physical activity each day can reduce your risk of cardiovascular disease.

3. To best assess a patient's comprehension of an instruction of food label reading, you can:

- A. assume that your instruction was adequate.
- B. ask the patient, "Do you have any questions?"
- C. ask the patient whether he or she knows how to read a food label.
- D. ask the patient for the sodium content of food using a sample food label.

4. Health literacy does not refer to a person's ability to:

- A. choose healthful foods by reading food labels.
- B. access reliable nutrition information on the Internet.
- C. read and write English.
- D. identify normal ranges for blood sugar levels.

5. Written low-literacy educational materials should:

- A. use the active voice when making recommendations.
- B. not include visuals, as patients may perceive the materials as being for children.
- C. be written at or below a 10th grade reading level.
- D. offer comprehensive explanations of the pathophysiology of chronic conditions.

6. Which of the following nutrition professionals should be attentive to health literacy needs of their patients and clients?

- A. Foodservice managers
- B. Clinical dietitians
- C. Nutrition educators
- D. All of the above

7. When using visuals to supplement nutrition instruction, you should:

- A. include simple visuals that support key verbal or written messages.
- B. choose attractive visuals such as borders and frames to make printed materials more appealing.

- C. choose abstract images that serve as metaphors for the messages you are trying to convey.
- D. reserve the use of visuals for patients with limited health literacy.

8. What is the best tool to demonstrate portion sizes to a patient or client with limited health literacy?

- A. A written handout in the patient's native language
- B. A measuring instrument (eg, cup) or actual-size models of food
- C. A chart listing recommended portions for the patient's age, gender, BMI, and physical activity level
- D. A smartphone application

9. Nonnative English speakers will comprehend complex health information as long as the information is in their native language.

- A. True
- B. False

10. Which of the following tools can help dietitians better address the health literacy needs of their patients and clients?

- A. Health Literacy Universal Precautions Toolkit
- B. Centers for Disease Control and Prevention's guide for creating easy-to-understand materials
- C. Simplified Measure of Gobbledygook
- D. All of the above