Applying Health Literacy Principles: Strategies and Tools to Develop Easy-to-Read Patient Education Resources

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Health literacy is an important construct in health care that affects patient outcomes and overall health. The impact of limited health literacy in cancer care is wide, and it can affect patients’ ability to make treatment decisions, follow directions on a prescription label, or adhere to neutropenic precautions. This article describes strategies and tools for nurses to use when developing written patient education resources in their daily practice.

At a Glance

- Health literacy refers not only to the skills and abilities of patients, but also of those providing health education and care, including nurses.
- Oncology nurses play an important role in patient education and can reduce the negative impact of limited health literacy by assessing patients for learning barriers, providing verbal teaching, and evaluating comprehension.
- Nurses must have the skills to apply health literacy principles to written patient education resources.

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Health literacy, or “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions,” is a relatively new construct in the healthcare field; however, its impact on health is undeniable (Nielsen-Bohlman, Panzer, & Kindig, 2004, p. 4). Although this definition focuses on the ability of the patient, health literacy also depends on the skills, preferences, and expectations of those providing health education and services (Nielsen-Bohlman et al., 2004).

Advances in cancer therapies and the trend toward shared decision making have resulted in wider acceptance of health literacy as a valued component of patient-centered care. Patients with cancer face steep learning curves throughout the care continuum. They must learn about a new disease, complex treatment options, and self-care strategies. Effective communication about risks, benefits, and prognosis is essential to ensure that patients make informed treatment decisions.

Limited health literacy poses a significant challenge in the United States. More than 90 million people have limited health literacy skills, which means they have difficulty with common health tasks, such as following directions on prescription labels (Kutner, Greenberg, Jin, & Paulsen, 2006; Nielsen-Bohlman et al., 2004). The prevalence of limited health literacy is higher among older adults, ethnic minorities, individuals with lower education levels, and those with chronic diseases (Kutner et al., 2006). People with limited health literacy skills may use fewer preventive services, participate less in treatment decisions, adhere less to medication and nonmedication therapies, and have poorer health outcomes (Aboumatar, Carson, Beach, Roter, & Cooper, 2013; DeWalt, Berkman, Sheridan, Lohr, & Pignone, 2004; Miller, 2016; Scott, Gazmararian, Williams, & Baker, 2002).

Evidence from research has shown that nurses and physicians are often not effective at estimating a patient’s health literacy skills (Dickens, Lambert, Cromwell, & Piano, 2013). Many tools are available for nurses to use to assess their patients’ health literacy and adapt print resources accordingly; each tool has strengths and limitations. For example, the Rapid Estimate of Adult Literacy in Medicine has excellent reliability (with a Cronbach alpha of 0.99), uses health-related terms, and requires only two minutes to administer (Friedman & Hoffman-Goetz, 2006). However, it only measures reading skills, not comprehension, so patients who can pronounce words well may score highly even if they do not understand what the words mean (Friedman & Hoffman-Goetz, 2006). The Test of Functional Health Literacy in Adults measures comprehension, not reading skills, and has high reliability (with a Cronbach alpha of 0.92), but it requires 22 minutes to
complete (Badarudeen & Sabharwal, 2010; Friedman & Hoffman-Goetz, 2006). Although the Newest Vital Sign only measures comprehension and has relatively lower reliability (with a Cronbach alpha of 0.76), it requires just three minutes to complete (Badarudeen & Sabharwal, 2010; Weiss et al., 2005).

Nurses may not have time to routinely assess health literacy or tailor written patient education resources to each patient’s needs. Consequently, consistently using easy-to-read patient education resources may be a more effective strategy. Evidence from research suggests that all patients, regardless of health literacy skills, education level, age, or socioeconomic status, benefit from easy-to-read resources (Centers for Disease Control and Prevention [CDC], 2009). Figure 1 lists the health literacy principles for written patient education resources that nurses should routinely apply to reduce the risk of misunderstanding (DeWalt et al., 2010).

### Health Literacy Principles and Patient Resources

Oncology nurses have many roles in patient education. They assess patients for learning barriers, provide direct patient education, and evaluate comprehension (Brant & Wickham, 2013). Nurses often use written patient education resources, such as booklets or fact sheets, to reinforce verbal teaching. Some nurses are involved in the development of resources, and others select the resources used during teaching. Nurses must have the skills to effectively apply health literacy principles to written patient education resources, increasing the overall quality of care. The following iterative process can help nurses, regardless of their role, apply these principles.

#### Planning

Planning a written patient education resource begins with a needs assessment or identification of learning gaps. A needs assessment should include surveys, interviews, or focus groups with the target patient population that identify (a) what patients want to know about a topic, (b) what language patients use to describe a topic, and (c) how patients interpret existing resources. By involving patients and their families in the planning process from the beginning, nurses can ensure that their perspectives are included and that the resource is patient-friendly (CDC, 2009). Figure 2 lists important points to consider when planning written patient education resources.

#### Development

During resource development, nurses must remember that patients may not have the same understanding of medical language that they do. To ensure that the resource is effective, they must aim to develop a resource that uses plain language with helpful and appropriate graphics and visuals (Plain Language Action and Information Network [PLAIN], n.d.). Plain language is “communication your audience can understand the first time they read or hear it” (PLAIN, n.d., para. 1).

Development of written patient education resources is an iterative process that typically requires multiple rounds of reviews and revisions. Formative evaluations are useful ways to evaluate a resource throughout development and early implementation (Issel, 2009). Once a draft has been developed, nurses should consider implementing the resource with a small cohort of patients. They should then evaluate effectiveness with this small group and revise accordingly before widely implementing the resource.

#### Implementation

All nurses who provide direct patient care also provide direct patient education and are involved in the implementation or use of written patient education resources. During patient teaching, nurses should make sure to use language free from medical terminology and jargon. They also should present the most important information first. Nurses should be familiar with the resource, and they should highlight, circle, or underline key sections as verbal instruction is provided. The teachback technique should be considered as a quick way to assess their teaching and the effectiveness of the resource (DeWalt et al., 2010).

#### Evaluation

Formative evaluations are ongoing, and nurses play an important role in this process to improve written patient education resources. Nurses can assess the readability of a written resource. A general goal for written patient education is to be at or below a sixth grade reading level. A variety of readability assessment tools are available to assess a resource’s content, reading level, layout, typography, learning stimulation,

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**FIGURE 1. Health Literacy Principles for Written Patient Education Resources**

Note. Based on information from Communicate Health, 2013; Doak et al., 1996; McGee, 2010; Osborne, 2011.

- Use a font size of 12 points or higher.
- Left justify the text, and leave the right margin uneven.
- Use a font size of 12 points or higher.
- Left justify the text, and leave the right margin uneven.

**Design**

- Create an obvious path for the eye to follow.
- Include illustrations that aid comprehension. The illustrations should be clear and effective, whether printed in color or in black and white.
- Use color sparingly. Remember that dark letters on a white background are easier on the eyes.
- Use icons or images to call out important content.
- Make the resource appealing at first glance.
and cultural appropriateness. Tools include the following: Dale-Chall Readability Formula, Flesch-Kincaid grade level formula, Fry Readability Graph, Gunning Fog Index, Patient Education Materials Assessment Tool, SMOG grading, and Suitability Assessment of Materials (Badarudeen & Sabharwal, 2010; Friedman & Hoffman-Goetz, 2006; Shoemaker, Wolf, & Brach, 2013). Each tool has strengths and limitations, and no one tool is recommended for all purposes.

Nurses who provide direct patient education can conduct brief user testing to evaluate the effectiveness of a written patient education resource. This can be as simple as asking 10 patients 3–5 questions about the resource. Nurses should document whether patients can find the answer and if they can restate the answer in their own words (Payne, 2014). Even if nurses are not part of a formal user testing process, they can still collect data from their experience using the resource and share this feedback with colleagues, leadership, or other patient educators. Formative evaluation is essential to further the iterative process and inform improvements to written patient education resources.

Application

Although following an iterative process to develop a written patient education resource takes time, the result is a clear and easy-to-read resource for patients. The following paragraphs describe this process as applied to the development of new patient education fact sheets on graft-versus-host disease (GVHD). This process was led by the National Marrow Donor Program®/Be The Match® in collaboration with the Chronic GVHD Consortium.

Chronic GVHD is a serious condition affecting as many as half of all patients undergoing allogeneic blood and marrow transplantation (BMT) (Arai et al., 2015). The need for patient education fact sheets at the time of GVHD diagnosis was identified through unpublished surveys of BMT health professionals and patients. Content was drafted by the Chronic GVHD Consortium. A series of iterative reviews were completed, and content was added based on survey results. Readability scores were calculated before and after iterative reviews. An ongoing evaluation process is underway to gather feedback from health professionals, patients undergoing BMT, and caregivers. The feedback will inform biennial revisions.

Collaborating with clinical experts, as well as patients, ensures accuracy and usefulness. In the current example, a nurse, in the role of patient educator, applied clinical knowledge and health literacy principles to successfully facilitate this iterative process and create an easy-to-read written patient education resource. In any setting, nurses can adapt and use this process to apply health literacy principles and develop written patient education resources.

Conclusion

Nurses are essential to the effective delivery of patient education. Helping patients comprehend complex health information reduces the risk of negative outcomes and is an optimal approach to patient-centered care. Regardless of the setting or role, oncology nurses are experienced patient educators who teach patients about treatment options, oral chemotherapy, side effect management, and other topics. Nurses reinforce verbal patient education with written patient education resources. All patients benefit from simple and easy-to-read health information. As a result, to further improve patient comprehension and health outcomes, nurses must also understand and apply health literacy principles to the development of written patient education resources.

References


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