

Health Literacy: Implications for Athletic Trainers and Therapists

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Health literacy is the degree to which a person can obtain, process, and understand basic health information needed to make appropriate health decisions.¹ Unfortunately, an increasingly complex health care system and confusing medical terminology can overwhelm some patients, especially those with limited English language comprehension and a low level of education. Differentiating valid information from poor information is difficult for many patients, regardless of educational background or country of origin. Athletic trainers and therapists (ATs) have long been at the forefront of providing high-quality medical information and educational resources to assist athletes, patients, and clients with varied backgrounds and abilities in making sound health care choices. The purposes of this report are to provide an overview of health literacy and to identify strategies that ATs can employ in a variety of health care settings.

Repercussions of a Lack of Health Literacy

Lack of health literacy has numerous implications. A systematic review estimated that 80 million U.S. adults (36%) had limited health literacy, with some population subgroups having a higher rate.² One published report suggested that only 12% of U.S. adults are health literate.³ According to Vernon, et al.,⁴ a lack of health literacy is responsible for approximately \$106–\$236 billion of financial loss annually in the U.S.

Examples of low health literacy may include misinterpretation of appointment scheduling and

procedures, giving consent when uninformed, poor compliance with treatments, failure to use of preventive care services, and poor quality of interactions between patient and provider, due to anxiety or shame. Health literacy has primarily been examined in the U.S. and Canada, but worldwide interest has grown over the last decade,⁶ and it has been identified as a priority by the European Commission's Health Strategy 2008–2013.⁷ A lack of health literacy can be related to gaps in information technology. Statistically, the content of 4 out of 5 web sites is presented in English, whereas only 1 in 10 people speak English.⁷ 88% of Internet users are in industrialized countries but those countries account for only 15% of the world population.⁸ Furthermore, 90% of global health resources are consumed in developed countries.⁷ Health literacy is particularly important to ATs, because 50% of Americans suffer from a musculoskeletal disorder requiring medical attention thereby substantially expanding practice opportunities.

ATs need to become more adept at identifying cultural and language barriers that may be limiting information dissemination and delivery of care for both domestic and international athletes. As the growth of ATs working in diverse clinical settings continues, we will be called upon to work with increasingly diverse patient populations.

Health Literacy Scenario

To help illustrate a potential need for health literacy in athletic training, consider an international soccer camp in the Midwest U.S. that includes participants

from different countries. In this scenario, an AT notices that a Jamaican male soccer player has a swollen ankle that is coated with a purple substance. The AT may ask a bilingual teammate to serve as an interpreter and learn that the athlete has applied gentian violet as a self-administered treatment for an ankle injury sustained at the camp.

With sensitivity to potential cultural differences, the AT should start by attaining informed consent. Next, the AT might ask questions about the athlete's injury history, allergies, and whether ice or any other treatment had been self-administered. Before proceeding with administration of any new treatment, the AT should explain that gentian violet is a potentially effective antifungal medication that is not an adequate treatment for an ankle sprain. The AT may be able to establish a rapport with the athlete through the bilingual teammate. Alternatively, the AT may use an electronic item for language translation.

This scenario demonstrates an area which is crucial to increasing health literacy.¹⁶ First, the AT began by obtaining informed consent for evaluation and treatment. It is a process of communication between a patient and physician that results in the patient's authorization or agreement to undergo a specific medical intervention. Informed consent is important because when the AT acquires it, the consent helps to ensure the patient's (1) legal rights, (2) an understanding of the treatment, and (3) higher level of compliance. Language barriers, however, may prove difficult for obtaining consent. Therefore, seeking out a bilingual teammate (as described in the scenario), using an online language translator, or other technologies can help to facilitate attainment of consent.

Obtaining consent and employing relevant strategies for enhancing health literacy also may improve patient autonomy. The principle of patient autonomy holds that an individual's physical, emotional, and psychological integrity should be respected and upheld. This principle also recognizes the human capacity to self-govern and choose a course of action from among different alternative options. Autonomous, competent patients assert some control over the decisions which direct their health care.¹² Autonomous patients are able to make logical choices without controlling influences. By including the patient in the treatment process, being sensitive to cultural differences, and making treatment recommendations, patient satisfaction increases, as well as compliance to treatment. A patient's ability to

successfully grasp information is fundamental to care outcomes. Thus, the ability of the AT to work through potential barriers is vital to the patient's recovery as research suggests that people with low health literacy are less able to comply with treatments.¹⁴ According to results of a quiz provided by Pfizer,⁴ 80% of patients forget what the doctor told them as soon as they leave the office.

Practical Strategies for Athletic Trainers

HealthyPeople 2020 has identified improving the health literacy of the population as a primary objective.¹⁸ The Institute of Medicine (IOM) roundtable on health literacy defines a health literate organization as one that makes it easier for people to navigate, understand, and use information and services to take care of their health.¹⁴ Further, in the report, the IOM identified patient-centered care, quality improvement, and informatics as critical competencies across health professions.¹⁶ All are heavily involved with health literacy.

Given what ATs know about health literacy, patient communication and potential complications of communication barriers are important educational opportunities. The following constitute some practical strategies for patient interactions. Many of these ideas are not necessarily new or dramatically different from what members in the profession do on a daily basis. However, thinking about them in this new context and revisiting them is of value (Table 1).

One example of taking a common practical strategy and using it in new context is the history taking process. The AT can use targeted history taking questions to gain insight into the patient's immediate environment (e.g., cultural and family dynamics). For example, the Explanatory Model of Health and Illness framework helps patients to understand their injury or illness through a series of specific open-ended questions (e.g.,

TABLE 1. STRATEGIES FOR PROMOTING HEALTH LITERACY

- Expand the history taking process to include cultural and family dynamics
- Assist patient in clarifying medical information
- Use of appropriate learning and visual aids
- Ask patient to give an explanation in his or her own words for "teaching back"
- Address language discrepancies through the use of interpreters, technology, and other resources

“What caused the illness?”; “How does the illness work inside the body?”). These questions address relevant social and environmental factors, fears and concerns, and treatment plan.¹⁹ Gathering this information helps the AT to gain a more complete picture of the unique opportunities and challenges the patient faces. For example, if the patient faces a lack of reinforcement and support in the living environment, this could be potentially damaging, thus the AT needs to be aware of this environmental condition. In many high school and college settings, previously learned family dynamics intertwined with poor health habits and peer pressure may diminish the strength of health promotion messages. At home, other family members may not be as connected to health-promoting practices. For instance, a student-athlete engaging in sound nutritional practices given the presence of the “training table” may have a different experience when returning home and possibly eating less healthy foods.

Another issue is the organization of information involved with a physician/healthcare provider visit. In many settings (professional, college/university, high school), ATs see their patients regularly; therefore, incomplete information can be rather quickly and seamlessly addressed. Since physician visits may not be regular visits, ATs need to be diligent about preparing the patient about what to expect in the visit, what to bring, and what type of information the provider may ask for. Many patients assume that “the AT will take care of it.” Thus, if the patient has not thought about it ahead of time or has not been properly prepared, he or she may fail to inform the physician of key signs and symptoms and not know what questions to ask. In many cases, helping to simplify and clarify the message, as well as focusing on the most pertinent information, is an important start for ATs as they assist patients. The Agency for Health Research and Quality (AHRQ) recommends the following for patient visits to the physician’s office: (a) asking questions, (b) repeating information back, (c) having another adult present, and (d) informing the provider if an interpreter will be needed.²

Another suggestion involves using supplemental materials such as written handouts. Handouts with diagrams for exercise and home care instructions can be invaluable, particularly in settings where there may be gaps of days, if not weeks, between provider visits. There are many culturally appropriate educational

materials that are readily available from physician’s offices and the Internet. If an AT decides to develop a new handout, some thought needs to go into development. The reading level that many health-related materials require far exceeds the average reading ability of U.S. adults.⁵ The Centers for Medicare and Medicaid Services (CMS) toolkit suggests using plain language, organizing information so the most important points come first, tailoring to the audience, avoiding jargon, and explaining medical and technical terms.²⁰

Using a “teach back” method is also helpful. One positive strategy that has been identified is asking the patient repeat or reteach instructions as though they were conversing with a friend.¹¹ For example, the AT could state, “Please summarize the instructions I have given you.” When providing home treatment instructions, ATs who provide specific directions such as at 8:00 am, 12:00 noon, 4:00 pm, and 8:00 pm may be more successful than ATs who explain directions simply as “go home and make sure to ice for 20 minutes 3 or 4 times before tomorrow.” The use of common language is also critical. For instance, using language such as “lengthening muscle” might be preferable to “increasing tissue extensibility.” Also, limiting the amount of information provided is critical, because it is estimated that less than half of the information provided during a visit is retained.¹⁶

Another consideration to promote health literacy is to maximize technology. Many college and university athletic training departments post information such as preparticipation physical exam (PPE) forms on the Internet. There are numerous free applications for patient education about anatomy, pharmaceuticals, herbal remedies, exercises, and other topics. Some healthcare systems have created apps and web interfaces to facilitate patient interaction with their personal information. Further, the Internet can provide opportunities for patients to chat with their providers. Texting can be used to provide reminders and gain feedback about the effectiveness of treatment sessions. The use of the Internet does present its problems, however; some socioeconomic demographics have barriers to accessing the Internet. For example, older individuals and individuals with less education identify lack of user training, while younger and more educated people cite cost.²¹ HIPAA presents challenges as well.

Various approaches may be used to address language gaps and barriers. Translators are one option. It

is not uncommon that ATs working in particular environments (e.g., professional baseball) may encounter multiple languages. If translators are not available, then multilingual teammates or additional language training for the practitioner may be beneficial. As noted previously, technology also can help reduce barriers. For example, innovative devices such as the Phrazier (Geacom, Inc., Duluth, MN, USA), which is a handheld device used for communicating across cultures and languages, can identify a patient's native language, and then respond in the same language.²²

Conclusion

A lack of health literacy is a well-chronicled challenge in today's healthcare. The implications are clear in terms of magnitude, costs, and quality of treatment. While many of the implications may directly apply to populations that ATs have historically underserved or not served, there are, nonetheless, strategies ATs need to be employing as ATs continue their professional evolution as holistic, patient-centered, evidence-based, and team delivery oriented clinicians. Using effective communication strategies are critical to reversing the trends of increasing physical inactivity and musculoskeletal disorders, as well as improving clinical outcomes such as improved strength, function, and quality of life. ■

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