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IMPROVING PROVIDER-TO-PATIENT COMMUNICATION
BY UNDERSTANDING AND ADDRESSING HEALTH LITERACY BARRIERS

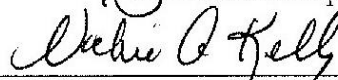
A PROJECT

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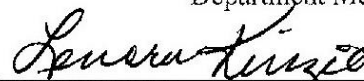
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Abstract

Low health literacy creates barriers that affect communication between health care professionals and patients or family members. Because of these barriers, patients may lack the ability to acquire or receive health-related information, understand the information, and utilize it for making decisions. This affects patients' abilities to navigate the health care system, and impacts patient care and outcomes. Much research and emphasis in recent years has been placed on health literacy, particularly since it has been the topic of study by the Institute of Medicine (IOM) and the focus of the Joint Commission's National Patient Safety Goals. Health literacy tools and education about methods to improve communication and understanding have been developed for health care providers and allied health staff. While these have proved beneficial, they are not "one size fits all" solutions. Through the recognition that health literacy is an issue that in a broader sense impacts communities and population health efforts, the problem is now being viewed by some researchers as being intertwined with cultural and socio-economic barriers that negatively impact patients and health care equity. This awareness could spur solutions to overcome these barriers. Along with this awareness, the support of leadership of health care systems is needed in viewing health literacy as integral to higher standards of patient access and care.

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Improving Provider-to Patient Communication

By Understanding and Addressing Health Literacy Barriers

Health literacy not only impacts the patient, their family and health outcomes, but a review of research and literature shows that providers, the health system, and the health of a community are affected by low health literacy. The impact of low health literacy can be measured in quality of life, untimely deaths, higher health care costs and financial burden to the health system and the community.

Low health literacy in the United States costs health care systems between \$106 billion and \$236 billion annually. People who experience low health literacy have difficulty navigating the health care system, obtaining and accessing health insurance plans, understanding, comprehending and following health care instructions, taking medications as prescribed, and participating in their own health care (Mayer & Villaire, 2009). Basic health literacy has been described as being able to receive or acquire information, understanding that information, and then utilizing it to make health-related decisions. There are at least 17 definitions of health literacy in the literature. Each definition slightly varies and has evolved from definitions that focus on individual skills needed to definitions that highlight the interaction between the demands of health systems and the skills of the individuals involved, both patients and providers (Sorensen et al., 2012). Healthcare providers also need skills and education to address health literacy issues and to be aware of how they communicate with high-risk patients and families about disease progression, diagnostic results, clinical research opportunities, and discussion about treatment or care plans.

The Institute of Medicine (IOM) reports that 90 million American adults lack basic health literacy (IOM, 2012). That may include the lack of knowledge about the human body, the course

of a disease and how lifestyle affects health outcomes. That lack of knowledge has also been linked to poor disease management and increased hospitalizations (Eadie, 2014).

Research has been conducted into how health literacy affects communication between health care professionals and patients or family members, patient care and outcomes. While educational tools and skills have been developed for health care staff to improve communication and understanding, the question is whether it is enough. Recent research indicates that low health literacy is intertwined with cultural and socio-economic barriers, which also create communication gaps in the patient and provider exchange (Singleton & Krause, 2009).

Problem Statement

The current health care system is increasingly dependent on patients and families to seek services, carry out treatments, and manage chronic diseases (Wittenberg-Lyles, Goldsmith & Ragan, 2010). Therefore, it becomes even more imperative that current and future health care professionals have a greater understanding of health literacy and have the skills to assess and work with patients and families who have low health literacy. Low health literacy is recognized as a “silent epidemic,” that causes patients to misunderstand the recommendations of their health care providers (Ingram & Kautz, 2012). Not only does the health of the low health literacy patient then suffer, but the health of the community declines. This issue can have a tremendous impact on the health care delivery system, especially as it moves into a population health model. The issue of health literacy is ripe to be addressed through health policy and reform (Parker & Ratzen, 2010).

Significance of the Project

The health of 90 million people in the U.S. may be at risk because of the difficulty some patients experience in understanding and acting upon health information. Health literacy is an emerging public health issue. Research shows that most consumers need help understanding health care information, regardless of reading level, and that patients prefer medical information that is easy to read and understand. For those people who do not have strong reading skills, easy-to-read or easy-to-understand health care materials are essential (National Patient Safety Foundation, 2010). Low or limited health literacy increases the disparity in health care access among already vulnerable populations.

Literacy skills are a stronger predictor of an individual's health status and outcome than age, income, employment status, education level, or racial/ethnic group (Egbert & Nanna, 2009). According to the Center for Health Care Strategies, a disproportionate number of minorities and immigrants are estimated to have English-literacy problems: 50% of Hispanics; 40% of Blacks and 33% of Asians. More than 66% of U.S. adults age 60 and over have either inadequate or marginal literacy skills. One out of five American adults reads at the 5th grade level or below, and the average American reads at the 8th or 9th grade level, yet most health care materials are written above the 10th grade level (National Patient Safety Foundation, 2010). By having a greater understanding of the overall impact of low health literacy, a health care organization can better review the health literacy problems and communication barriers it faces, and can determine whether tools and education for providers and staff address these problems or issues. Policies and protocols can also be developed to be proactive for patients and families that may have low or limited health literacy. Once review of the literature concerning health literacy was

completed for this project, the literacy and communication policies and practices of Stormont-Vail HealthCare in Topeka, Kansas, were reviewed as an exercise in determining how one health care system views and addresses the issue.

Project Objectives

Health literacy permeates each community and each health system. The objectives and goals of this project are to gain greater understanding of health literacy issues and to learn how it affects people and systems, specifically in one target health care organization. With this knowledge, solutions can then be developed. Project objectives are to:

- Identify the target population's primary barrier to health literacy.
- Identify the target population demographics.
- Review current health literacy tools available to health care professionals and methods to survey patient education materials for literacy and non-English versions.
- Review educational plans for health literacy awareness, training and materials within the organization.
- Identify alternative plans by creating a stronger link between the organization and the Topeka-Shawnee County Public Library to provide health literacy tools to consumers and providers.
- Increase awareness of tools, education and materials available to providers to lessen impact of low health literacy.

Background of the Problem

What is Health Literacy?

Health literacy is a fundamental, yet often hidden barrier to effective health care communication for patients and families. Literacy encompasses not only reading and writing skills, but listening, speaking, numeracy and the use of everyday technology to communicate, handle information, explore new opportunities and initiate change. Literacy is important to be able to make health care decisions based on an individual's interpretation of the information (Lambert & Keogh, 2014a). The level of health literacy a person has impacts how he or she can access, process, understand, practice and communicate health information using oral, printed and numerical skills. Health literacy skills include performing Internet searches, comprehending health prevention brochures, measuring medication doses, and understanding and complying with verbal or written health care instructions (Kutner, Greenberg, Jin & Paulsen, 2006). Cognitive and social skills may also impact the motivation and ability of an individual to gain access, to understand, and to use information in ways that promote and maintain health (Eadie, 2014).

Literacy can be traced to the times of early Egyptians and Greeks when communication shifted from oral to written delivery (Eadie, 2014). The concept of health literacy was first noted in the United States in the 1970s in a report that raised awareness of health education standards in elementary schools (National Network of Libraries of Medicine, 2011). In the 1980s and 1990s, more emphasis was placed on health education initiatives for patients. Researchers Leonard and Cecelia Doak were the first to conduct research that suggested there were problems with patients' ability in their understanding of health care materials (Osborne, 2011).

In 2006, the Institute of Medicine convened a Committee on Health Literacy, made up of experts from a wide range of academic disciplines and backgrounds. The committee was asked to assess the problem of low health literacy and to consider potential solutions. It also addressed the scope of the problem of health literacy and the root problem, identified the obstacles to creating a health-literate community, assessed approaches to increase health literacy, and determined goals for health literacy efforts. The IOM committee accepted the definition of health literacy presented by the National Library of Medicine in 2000, which was the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions (Parker & Ratzen, 2010). Health literacy was viewed as a shared function of social and individual factor. Individuals' health literacy skills and capacities were considered mediated by their education, culture and language. Equally important was the communication and assessment skills of the people with whom individuals interact regarding health. Other interactions included were those with the media, the marketplace, and government agencies in providing health information in a manner appropriate to the audience, the patient and family.

The IOM committee developed a framework for health literacy that identified areas of potential intervention. The framework illustrates the potential influence of health literacy as individuals interact with educational systems, health systems and cultural and social factors, and suggests that these factors might ultimately contribute to health outcomes and costs. Low health literacy in the United States is linked to race, ethnicity, income, gender, educational attainment, and age (Kutner et al, 2006).

- White and Asian/Pacific Islander adults were found to have higher literacy levels than Black, Hispanic, American Indian/Alaska natives and multiracial adults.
- Hispanic adults had lower average health literacy than adults in any other racial/ethnic group
- Women had higher basic health literacy compared to men; and 16 percent men were ranked at below basic health literacy compared with 12 percent of women.
- People over the age of 60 have difficulty reading and understanding the instructions for future appointments and for taking medications (Eadie, 2014; Lanning & Doyle, 2010).

Culture does give significance to health information and messages, and can shape perceptions and definitions of health and illness, preferences, language and cultural barriers, care process barriers, and stereotypes. These culturally influenced perceptions, definitions, and barriers can affect people's interactions with the health care system and can help to determine the adequacy of health literacy skills in different settings. Because of the nature of culture, health care encounters may be filled with differences that continually are changing. The differing cultural and educational backgrounds between patients and providers, as well as between those who create health information materials and those who use it, can result in problems in health literacy (Nielsen-Bohlman, Panzer, Kindig, & Institute of Medicine Committee on Health Literacy, 2004).

Socioeconomic status, education level, and primary language all affect whether individuals will seek out health information, where they will look for information, what type of information they prefer, and how they will interpret or understand that information. Limited health literacy decreases the likelihood that health-related information will be accessible to all

(Houston & Allison, 2002; Nielsen-Bohlman et al, 2004). Health literacy has been found to be intrinsically linked to both an individual's and a community's socio-economic context and is a powerful mediator of the social determinants of health (Logan et al., 2015).

The IOM committee has continued to organize and support discussion to advance a national agenda for the improvement of health literacy. It has twice a year roundtables at which stakeholders who have a role in improving health literacy meet and publish their discussions covering awareness and education of health literacy, quality of care, medication labels, public health strategies and research (Parker & Ratzen, 2010). IOM released a report in 2015 called *Health Literacy: Past, Present, and Future*, 10 years after the release of IOM's *Health Literacy: A Prescription to End Confusion*, noting that health literacy efforts have expanded and are no longer viewed as just a function of individual skills and abilities, but also include the demands and complex processes of the systems in which individuals provide and receive care. There has been additional research that has highlighted the relationship between health literacy and health outcomes. U.S. health care organizations have also responded to the challenge of increasing the level of health literacy, drug and food labels have improved, health care professionals have explored creative ways of communicating with patients, and academic medical centers have increased their focus on health literacy, particularly in the way health professionals are trained (IOM, 2015).

The Joint Commission, an accreditation body for health care organizations, created a report in 2007 calling for improvement in health literacy to protect patient safety (Parker & Ratzen, 2010) and it later incorporated health literacy into its national safety goals to address issues that might cause harm to patients or interrupt the continuum of care. The Joint

Commission noted when a patient has difficulty in understanding health care information or is unable to effectively communicate issues to the health care provider, then patient safety is compromised. This cumulative awareness of health literacy provided health care professionals the opportunity to support patients and families in overcoming barriers to health and well-being while empowering patients to take control of their health care needs (Eadie, 2014). Low health literacy, cultural barriers and limited English proficiency have been coined the “triple threat” to effective health communication by the Joint Commission. Nurses, who work with patients from increasing diverse cultural groups, experience daily how these threats offer a challenge to effective provision of care at the system, provider and patient levels. Over the past 15 years health care providers in the United States have begun to address threats of culture and language to effective care (Singleton & Krause, 2009). However, the nursing professional’s knowledge of health literacy and an understanding of the role health literacy plays in patient health outcomes are limited. It was identified that 59% of nurses had never had any formal education or training about health literacy, while 72% were not aware whether their health organization had a health literacy program in place, and 53% reported that health literacy was a low priority compared with other problems. Nursing textbooks and literature commonly used in the U.S. nursing education programs (undergraduate and graduate) don’t adequately address information about health literacy and health literacy strategies more than 14 years after the Joint Commission initially addressed the issue (Cafiero, 2013; Johnson, 2014).

Health literacy efforts began gaining attention and support in several national programs and organizations. In Healthy People 2020, guidelines were developed for individuals to make high quality health care decisions including health literacy awareness (DHHS, 2010).

The Agency for Healthcare Research and Quality (AHRQ) also commissioned the University of North Carolina at Chapel Hill to develop a health literacy precautions toolkit to guide health providers in assessing patients on all literacy levels, raise awareness of the health literacy problem, and remove barriers to learning (AHRQ, 2010). In 2010, the National Action Plan to Improve Health Literacy initiative was launched in the United States and it included goals and numerous suggested strategies that organizations and professionals could utilize to improve health literacy. This plan called for partnerships and policy changes to focus on health literacy issues to improve the accessibility, quality and safety of health care (Osborne, 2011).

Today's health care systems make complex demands on the health consumer. As self-management of health care increases, patients are asked to take responsibility for seeking information, understanding rights and responsibilities, and making health decisions for themselves and others. Underlying these demands are assumptions about people's knowledge and skills. Even people who deal effectively with other aspects of their lives may find health information difficult to obtain, understand or use (Nielsen-Bohlman et al., 2004). Those who have low literacy skills or who are confused about health care may be embarrassed to discuss the problems they encounter with an increasingly complex health system (Baker et al., 1996).

Low health literacy is an enormous cost burden on the American healthcare system, with annual health care costs for individuals with low literacy skills are four times higher than those with higher literacy skills. Problems with patient compliance and medical errors may be based on poor understanding of health care information. Only about 50% of all patients take medications as prescribed (Brown & Brussel, 2011) and those with low literacy are more apt to make medication or treatment errors. Patients with low health literacy and chronic diseases, such as

diabetes, arthritis or hypertension, have less knowledge of their disease and its treatment and fewer follow self-management skills than literate patients. Research suggests that people with low literacy are less able to comply with treatments, lack the skills needed to successfully negotiate the health care system, and are at a higher risk for hospitalization than people with adequate literacy skills. Patients with low literacy skills were observed to have a 50% increased risk for hospitalization, compared with patients who had adequate literacy skills (National Patient Safety Foundation, 2010).

The Health Care System and Health Literacy

The health care system in the United States is very complex and often confusing. This complexity derives from the nature of health care and public health itself, the mix of public and private financing, and the variations across states and between types of delivery settings. An adult's ability to navigate these systems may reflect this systemic complexity in addition to individual skill levels (Nielsen-Bohlman et al, 2004). Even highly functioning individuals may find the health systems too complicated to understand, especially when they are more vulnerable because of poor health. Directions, signs, and official documents such as informed consent forms, social services forms, public health information, medical instructions, and health education materials, often contain jargon and technical language that makes them difficult to understand (Nielsen-Bohlman et al, 2004). In addition, cultural differences may affect perceptions of health, illness, prevention and health care. The lack of understanding of health, illness, and treatments, and risks and benefits, may impact the behavior of both providers and patients, and could have legal implications for providers and health systems. An imbalance between the skills of the people and the demands of the health care system has the effect of

causing many people to experience difficulty in understanding and using health information and health services (Eadie, 2014).

Addressing health literacy by health systems is critical to transforming health care quality and patient experience. Goals for safe, patient-centered, and equitable care cannot be achieved if patients cannot access services and make informed health care decisions. Health systems seeking to accommodate people with varying levels of health literacy were provided with guidelines for ten attributes of a health literate organization in a recent research report. These attributes make it easier for patients and families to navigate, understand and use information and services to take care of their health (Brach, Schyve, Hernandez, Baur, Lemerise, & Parker, 2012). The attributes Brach, Schyve, Hernandez, Baur, Lemerise, and Parker (2012) identify are guidelines for organizations that seek to ensure that everyone gets the greatest benefit possible from health care information and services, but not all must be met. Each organization must determine its own path. The ten attributes of a health literate organization are:

- Has leadership that makes health literacy integral to its mission, structure, and operations.
- Integrates health literacy into planning, evaluation measures, patient safety, and quality improvement.
- Prepares the workforce to be health literate and monitors progress.
- Includes populations served in the design, implementation, and evaluation of health information and services.
- Meets needs of populations with a range of health literacy skills while avoiding stigmatization.

- Uses health literacy strategies in interpersonal communications and confirms understanding at all points of contact.
- Provides easy access to health information and services and navigation assistance.
- Designs and distributes print, audiovisual, and social media content that is easy to understand and act on.
- Addresses health literacy in high-risk situations, including care transitions and communications about medicines.
- Communicates clearly what health plans cover and what individuals will have to pay for services (Brach et al, 2012).

Health Literacy Interventions

Reviews of health literacy research suggest that health literacy interventions are associated with improvements in clinical outcomes and health care utilization. Health literacy interventions and practices contribute to reducing health disparities, which fosters health equity and social justice, though there seems to be little recognition within the literature that the concepts of health literacy and health equity, getting the access and appropriate care, are related. The Institute of Medicine noted that the researchers and practitioners, who advance health literacy and health equity, while not necessarily working at cross purposes, may not be seeking opportunities to collaborate (Logan et al, 2015).

Health literacy interventions offer health care systems, providers and those working in the community, new approaches to use in addressing disparities that extend beyond the conventional view of screening, treatment and care delivery. A growing body of evidence

suggests that these practices may improve outcomes, and that advancing health literacy can be a necessary and promising component of how health equity can be realized (Logan et al, 2015).

Providers need a skill set to address health literacy issues and be cognizant of how they communicate with high-risk patients and families about disease progression, diagnostic results, involvement in clinical research, administration of treatment or description of a care plan. Health literacy permeates all areas of the provider-consumer information exchange, and provides a common pathway for the successful transfer of information. A number of emerging areas are likely to increase the burden of limited health literacy on those entering and using the health care system. These include demands inherent in chronic disease management, increased use of new technologies, decreased time for patient/provider discussions, and legal and regulatory requirements (Nielsen-Bohlman et al, 2004).

Tools available to assist health care professionals include both assessment and communications-based approaches. Experts recommend assuming everyone may have difficulty understanding and creating an environment where all patients can thrive. Only 12% of U.S. adults have the health literacy skills needed to manage the demands of our complex health care system, and even these individuals' ability to absorb and use health information can be compromised by stress or illness (Eadie, 2014).

The AHRQ Health Literacy Universal Precautions Toolkit available on the AHRQ website provides a step-by-step guide and tools to assess and evidence-based guidance for adult and pediatric practices to work with patients of all literacy levels (Lambert & Keogh, 2014b). These tools include improving spoken communication, improving written information, improving self-management and empowerment, and improving supportive systems. Universal

precautions should be taken to address health literacy because providers do not know which patients are challenged by health care information and tasks at any given time. The toolkit information notes that as healthcare provider and patient have more understandable communication, patients will build trust with the provider, and the care, quality, safety and satisfaction will improve. The toolkit provides step-by-step guides for providers to follow, and guides providers to assume that all patients have difficulty comprehending health information and accessing health services. Patients are recommended to make an action plan, create goals with providers' assistance, and to create a specific goal that they would most likely implement. These goals might improve medication adherence and accuracy, result in easy-to-read pill charts with specific days and times to take medications, or to review medical compliance at each visit (AHRQ, 2010). Health literacy precautions are aimed at simplifying communication with and confirming comprehension for all patients so that the risk of miscommunication is minimized, making the office environment and health care system easier to navigate, and supporting patients' efforts to improve their health.

Health workers must be cognizant that they often speak to patients in the language of their disciplines and to be understood they must alter their language or explain or translate words they are using. Two communication strategies that can be used to help in this regard are the teach-back method and Ask Me 3. The teach-back method can be used to validate that the patient has an understanding of the information that has been given to him or her. The health worker provides the information, then asks the patient to repeat back in his or her own words what he or she needs to know or needs to do in a non-shaming way. It is not a test of the person's abilities, but of how well the health care professional has explained the information. This is an important

method to make sure that patient has indeed received the correct information in the communication exchange and to prevent an adverse event. Ask Me 3, a program of the National Patient Safety Foundation, is an initiative that empowers the patient to ask three questions during a visit with a health care provider (Lambert & Keogh, 2014b). The premise of the program is that many people have trouble understanding words used in health care because they may be unfamiliar or the word is familiar but the person does not understand it in the health care context.

Ask Me 3

notes that words with Latin or Greek prefixes present special problems, and the health science field is full of such words. The program also provides patients and families with tools to plan ahead and “ask three” questions at each visit with a provider: What is the problem? What do I need to do? Why is it important for me to do this? (National Patient Safety Foundation, Ask Me 3, 2010). When the Ask Me 3 program is embraced at the organizational level, a shame-free healthcare environment is created because it shows that health care staff expected patients to ask questions to enable them to understand their health care (Lambert & Keogh, 2014b).

An additional tool gaining use in health care organizations is “Plain Language.” Also called Plain English, this is a method of communicating to patients and families so they can understand the provider the first time they read or hear the information. Written material in plain language allows the patient to find what he or she needs, understand the information, and use the information to meet their needs. Plain language is defined by results: it is easy to read, understand and use. The National Cancer Institute along with other national health organizations has developed print materials following this practice for low literate patients. The Medical Library Association developed "Deciphering Medspeak" to help translate common "medspeak"

terms into plain language, and developed a Plain Language version that is written for consumers with a fifth grade or lower reading level. The use of easy-to-understand language not only is used for printed brochures and patient education materials, but also for communication through electronic means such as web sites and social media. MedlinePlus, a patient education resource of the National Institute of Health's National Library of Medicine, has an easy-to-read version of its health information that is written at the 5th to 8th grade reading level, with interactive health tutorials. The website also provides information about how to plan and research easy-to-read materials, organize and write, and then evaluate and improve the information (NIH).

Assessment tools are also needed to quantify information about a person's health literacy level and demographics associated with health literacy. There are numerous tools available to measure health literacy. Among those often used is the Single Item Literacy Screener (SILS), a single item instrument designed to identify patients who need help with reading health-related information. The instrument asks one question, "How often do you need to have someone help you read instructions, pamphlets or other written material from your doctor or pharmacy?" Responses range from never (1) to always (5). If the person scores a 2, he or she is identified as a potential person needing literacy help. Another frequently used literacy measurement tool is the Test of Functional Health Literacy in Adults (TOFHLA), which was one of the first quantitative methods of assessing health literacy. The TOFHLA consists of a 50 item reading comprehension test that omits words in a sentence. In addition, there is a 17 item numeracy section that determines the test taker's ability to follow directions on medication labels, monitor blood glucose and keep track of appointments. There is also a shortened version of the TOFHLA. The original version takes 30 minutes to complete and the shortened version seven minutes. The

Rapid Estimate of Adult Literacy in Medicine (REALM) is a two- to three-minute reading recognition test that can be administered by a nurse. It measures the participant's reading comprehension and ability to interpret health care terms and health-related materials (Lambert & Keogh, 2014b).

Stormont-Vail HealthCare and Health Literacy

Stormont-Vail HealthCare is an integrated health care system that is based in Topeka, Kansas, and provides primary and specialty care throughout northeast Kansas through physician clinics and an acute care regional hospital. The organization is the largest health care provider in its 13-county territory and employs nearly 240 physicians and 4,400 people. The health care system cares for a diverse population, both urban and rural. Its primary patient population is in Topeka and Shawnee County. Shawnee County mirrors the Hispanic population of Kansas, at 11.3 percent (Kansas Health Matters, 2015). The percentage of residents living in poverty in Shawnee County in 2013 was 17.2%, compared to 14% of all Kansans. Of those in poverty in Shawnee County, 12.6% were white non-Hispanic, 32% were Black, 29.9% percent were Hispanic or Latino, and 29.8% were American Indian. The median age in Shawnee County in 2013 was 38 years old. For white residents, the median age was 43, for black residents 38; for American Indian, 30; Asian residents, 24; and Hispanic residents was 22. Nearly 84% of Shawnee County residents speak English at home and 4.1% speak Spanish. Of those, 17% don't speak English well and 7% speak no English (Shawnee County data, 2015). The general literacy rate of Shawnee County in 2003, the latest data available from the National Center for Education Statistics, was 8% of the population lacked basic prose literacy skills (U.S. Department of Education, 2003). This was defined as those who scored "below basic" in prose and those could not be tested due to language barriers.

Stormont-Vail does not have any organizational policies that are specific to health literacy, but there are generic structure policies for patient care staff that cover patient education, which states that patient education is to be delivered in consideration of patient/family literacy and communication levels, ability to accept, understand and use information provided, and known emotional and physical barrier to learning. Through this policy, the organization recognizes that patient and family education is an organization-wide, interdisciplinary function, which strives to improve patient health outcomes by providing health education and involving the patient in care and care decisions. In the acute care setting the nurse is tasked with exploring any limitations or barriers a patient or family might have specific to education and learning and is to document that information in the electronic medical record, with ongoing assessment to evaluate if additional intervention or education is needed. At the time the patient is discharged from the hospital, a discharge summary and care plan are to be reviewed with the patient and an assessment of the learning needs is again to be done. While the health care staff receives annual educational training that includes information on communicating with patients and families, none in recent years has dealt on health literacy. The hospital nursing staff does use the “teach-back” method of providing patients. It is planning to implement “Plain Language” for the hospital codes system in the near future, but has not considered that concept for patient education.

There have been health literacy efforts between Stormont-Vail and the Topeka-Shawnee County Public Library due to being selected as the site of a Medical Library Association-National Library of Medicine Health Information Literacy Research Project in 2008. The project helped educate health care providers about the key role they and medical librarians can play with improving their institution’s health literacy efforts. Key components of the pilot were

implementing the health information literacy training, promoting NLM resources such as MedlinePlus and Information Rx, and providing consumer health information resources and services to health care providers and their patients. During this timeframe, the organization's health science librarian was part of the effort and met with primary care providers and staff to encourage better information exchanges between providers and patients and an introduction to the Ask Me 3 materials to encourage discussion. This included the development of "prescriptions" that could be given by providers to patients and families to encourage them to utilize health information resources at the nearby Topeka & Shawnee County Public Library. The public library had launched a health information neighborhood with health-related resources. This resource area was developed with input from Stormont-Vail staff, local health agency experts, health sciences librarian and healthcare professionals from the community. Stormont-Vail continues to have a fully staffed health sciences library with trained staff to provide health information and access to databases to staff. It is also open to any patient or patient's family that seeks information, though the library is not promoted as a public library. The Stormont-Vail health sciences library is also resource to the Topeka public library staff if a patron is seeking specific information not available through the public library.

Stormont-Vail produces much of its own printed patient educational materials or relies on those provided through its electronic medical record (Epic), through protocols in its nurse information line (Health Connections) or through government health agencies and associations. Patient education materials developed in-house are not measured by any assessment tools to ascertain if they are at certain reading levels. Brochures and patient information are also developed in Spanish for those departments that request it. This is often done for high volume

materials, such as patient handbooks, release forms, and in areas that have a high-volume of non-English speaking patients. In addition, the hospital has a system set up to provide verbal health information and translations to non-English speaking patients through a language bank and through staff members who are multi-lingual, as well as processes for informing patients and families who may be hearing or visually impaired.

In a pilot project to reduce non-emergent visits to the Stormont-Vail Emergency Department by a group of individuals who were identified as “super utilizers,” low health literacy levels of some of the participants was indirectly impacted. The high volume users of the Emergency Department were matched up with health coaches, who were advanced nursing students at the Baker University School of Nursing. The patients are not only assisted in learning about appropriate times to utilize the Emergency Department or when it is appropriate to seek care in a lower cost primary care or immediate care setting, the coaches helped patients sign up for health insurance, get connected to health information and resources that they did not know how to access, and guidance in navigating a complex health system. While this program did not initially seek to improve health literacy, it has had a side benefit in assisting a patient population that did not understand appropriate health care levels or how to access that care.

Theoretical Framework

Researcher Don Nutbeam developed a model of health literacy that provides a useful framework in addressing the needs of lower health literacy patients. Nutbeam said that each level of health literacy described in the model provides the skills required by patients to effectively use literacy tools and to engage in shared decision making. He believed that by providing people with the tools and ability to understand health information and gain access, the improvement of

health literacy translated into empowerment (Nutbeam, 2002). Nutbeam tied health literacy to health education, primarily for the patient, but for purposes of this project, that can also be extended to apply to the provider and health care professional as well. The information exchange is two-way communication. Through more personal forms of communication and appropriate community-based educational outreach, people can overcome barriers to their health and access to health services.

Review of the Literature

Abundant research and literature concerning health literacy is being conducted at national levels and health care systems, as well as in specific health professions. A review of the literature in PubMed, Cochrane, Ebsco, Medline and Ovid was done from August through October 2015, and searches were conducted for literature published in the past fifteen years. The language used was English and search vocabulary included health literacy, literacy, communication, patients, providers, impact, communication, public health, health systems, and a combination of those keywords. Studies and literature in the United States was the primary focus, but information about research in Europe and Australia was also of interest and health literacy appears to be of high importance in those geographic areas as well. In all, 50 studies and articles were initially identified as having content relevance to this project, and after further review, those most beneficial were included as resources in the project's bibliography. The literature review also provided further investigation into governmental and health-related web sites that provide resources and information about health literacy for consumers as well as education and training modules for health professionals.

Implementation Plan

Limited or low health literacy is a difficult concept to address for health care professionals and systems. Research shows that it is a serious problem with serious outcomes both to the patient and community in terms of health, and to the health care organization in terms of outcomes and financial impact. Individual providers or staff members who attempt to have a positive impact in the health literacy of their clients are to be commended, but without a concerted system-wide effort or key partnerships in the community, it will be difficult to make broad changes. Departments or service lines that have staff members work together to address patients and families with low health literacy can be successful in exchanging important health information for specific situations, but still may not be able to affect a positive result in a more global way. Perhaps more successful is an organization identifying a certain at-risk patient group, such as the Super Utilizers in the Stormont-Vail Emergency Department, and working closely with them to ascertain health services and understand health information. This, then, could have the effect of raising the health literacy of those individuals. The most comprehensive method to impact low or limited health literacy of a patient population would be to do a system-wide focus on the issue, implementing policies, setting goals and measurement, providing tools, providing education to staff, and providing education and resources to patients and the community. This type of initiative would take the support of leadership and staff and financial resources. A 2009 study showed that a simple health literacy intervention program for parents of pediatric patients helped reduce Emergency Department overcrowding and health care expenditures. Potential benefits include reduction in the number and associated costs of visits to the physician's office and emergency department, improved parent self-confidence about taking

care of children's medical issues at home, and redirection of important health care resources toward more patients with critical illnesses (Herman, Young, Espitia, Fu & Farshidi, 2009). The study measured the impact of a simple parent health literacy intervention on emergency department and primary care clinic usage patterns.

Summary of the Project

To have a successful impact on low health literacy, an organization's leadership must make health literacy integral to the organization's mission, structure and operations. Once leadership is committed, the focus is on creating structures that spur a culture change to occur, such as developing policies that support health literacy, setting health literacy performance goals, or providing health literacy education to staff (Briglia, Perlman & Weissman, 2015). The significant impact of low health literacy on health outcomes makes health literacy a critical area for nurses and other health care professionals to understand. It is central to enhancing the involvement of patients in their care, improving health outcomes and the provision of safe health care. Without understanding of health literacy and being addressed by health workers, health inequities will widen, poor quality care will be provided, health outcomes will be impacted, and health care costs will increase (Johnson, 2014).

Even though a significant number of adults continue to have inadequate literacy skills, health care systems continue to develop and use educational materials that are not appropriate for the patients and families they serve (Ryan et al., 2014). As health care organizations strive to meet new demands established by the Affordable Care Act, an increasingly important aspect of care is health literacy. Several provisions in the Affordable Care Act call for health care information to be communicated clearly (Briglia et al., 2015). Health literacy is fundamental to

high quality care, and relates quality improvement aims described in the IOM Quality Chasm Report: safety, patient-centered care, and equitable treatment (IOM, 2001).. Self-management and health literacy have been identified by IOM as cross-cutting priorities for health care quality and disease prevention. Under the guidance of the Agency for Healthcare Research and Quality, health literacy is now included as part of the Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys that ask consumers and patients to report on and evaluate their experiences with health care. The CAHPS Health Literacy Item Sets focus on assessing providers' activities to foster and improve the health literacy of patients (IOM, 2015).. Health literacy is commonly defined as patients' ability to obtain, process, and understand the basic health information and services they need to make appropriate health decisions. While health literacy depends in part on individuals' skills, it also depends on the complexity of health information and how it is communicated. The primary goal of these supplemental items for the CAHPS surveys is to measure, from the patients' perspective, how well health information is communicated to them by health care professionals. According to AHRQ, the development and dissemination of these item sets are part of a larger effort by the Agency for Healthcare Research and Quality to encourage a greater emphasis in the provider community on patient-centered care.

Conclusion

A systems approach to improving health literacy will provide the most comprehensive and long-lasting approach both at Stormont-Vail and for other health care organizations. This change should be integrated into public health and health care interventions (Parker & Ratzenr, 2010), and promote partnerships across the continuum of care and with organizations outside of health care providers that distribute information, such as the public library, educational systems

and the news media. Understanding that literacy is the key to opening doors to information for better health and health access is the foundation for the initiative. Many tools and guides are available to improve the health literacy of patients and the community. However, the measurement and connection between health literacy and patient safety and outcomes has not been well defined within many health care organizations. Creating standards for understandable health communications, prescription labels or other initiatives would be one way to generate real time examples of how health literacy can improve the health of a patient and community. The usage of and creation of patient education materials that are measured for their literary levels and employ visual learning could also improve health literacy. A protocol for translation of primary printed materials across the system for non-English readers would also be beneficial. Education for health care professionals in a system seeking to improve health literacy is imperative. Health literacy is about communicating health information clearly and understanding it correctly, and is relevant along all points of the continuum of care (Osborne, 2011). It is a shared responsibility of the patient and the provider, as well as the health care system.

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