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A Nursing In-Service for Diabetes Education

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Walden University

College of Health Sciences

This is to certify that the doctoral study by

Heidi Steiner

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
2018

Abstract

A Nursing In-Service for Diabetes Education

by

Heidi Steiner

MSN, Walden University 2010

BSN, University of Louisville, 1994

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

November 2018

Abstract

Nurses play a central role in preparing patients for discharge. Diabetes affects one-third of all hospitalized patients, with readmission rates 20% higher for patients with diabetes. Low health literacy affects patients' ability to understand education provided during a hospitalization, especially in diabetic patients who are required to perform complex self-care activities. The rehabilitation nurses within the practicum site struggled to provide adequate diabetes education, leading to patients' readmissions and frequent calls to the nursing unit post discharge. The purpose of this project was to educate nurses on an inpatient unit about survival skills and teach-back approaches to improve inpatient diabetes education. Orem's self-care nursing deficit theory guided the project. Nursing literature provided current evidence-based practice guidelines on diabetes education for the staff education program. An expert panel was used to evaluate the effectiveness of the project in improving rehabilitation nurses' knowledge, skills, and ability to administer patient education to diabetic patients using the teach-back method. All 6 expert panel members agreed that the in-service content was relevant to the environment and would improve the nurses' ability to deliver diabetic education on the rehabilitation unit using the teach-back method. Current knowledge of diabetes education practices and strategies to overcome low health literacy can bring positive social change and improve nursing practice by advancing the nurses' ability to provide inpatient diabetes education.

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Dedication

I would like to dedicate this work to my mother and late father, who taught me the value of education from a young age and always encouraged lifelong learning.

Acknowledgments

I would like to thank my husband for his love, patience, and support throughout this journey. This appreciation also extends to the rest of my family and friends for their loving and encouraging words, keeping me engaged and motivated to finish what I started. I would also like to acknowledge my professional colleagues for providing me with the encouragement and flexibility needed to earn this terminal nursing degree. Finally, I would like to thank my committee chair, Dr. Cheryl McGinnis, for helping me cross the finish line.

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Section 1: Nature of the Project

Introduction

Diabetes is a prevalent chronic disease that requires those affected to perform complicated self-care actions. The Centers for Disease Control and Prevention (CDC; 2018) estimated that 9.4% of the United States population is diagnosed with diabetes, costing an estimated total of \$245 billion to treat. According to the most recent data, 7.2 million hospitalized patients in 2014 had diabetes listed as a primary or secondary diagnosis (CDC, 2018). Rehabilitation nurses are primarily responsible for patient education during an inpatient rehabilitation stay. As such, because rehabilitation nurses play a critical role in educating patients with diabetes, it is important for nurses to know the most recent trends related to diabetes education for the inpatient rehabilitation setting.

According to the most recent guidelines from the American Association of Diabetes Educators (AADE; 2016), inpatient diabetes education content should focus on priority elements the patient should know before discharge, otherwise known as survival skills. Survival skills include meal planning, safe medication administration, blood glucose monitoring, and treatment of hypoglycemia and hyperglycemia. The purpose of this DNP project was to teach rehabilitation nurses diabetic evidence-based guidelines and use of the teach-back method to administer diabetic patient education. Teach-back is an evidence-based technique used by nursing staff to teach patients with low health literacy. The method provides patients with opportunities to repeat information taught using their own words so the nurse can validate learning. Low health literacy can lead to low self-confidence when patients attempt to manage complex diseases such as diabetes.

Health literacy assessment tools are time-consuming and not conducive to the inpatient setting. Therefore, the Agency for Healthcare Research and Quality (AHRQ; 2018) recommended that nurses follow a universal precautions approach to patient education, treating all patients as if they have low health literacy by speaking to them in plain language. Given the challenges bedside nurses face when providing patient education, this project included survival skill training to provide rehabilitation nurses with an approach to diabetes education that is conducive to the inpatient setting and easily incorporated into their workflow.

There is a potential for positive social change for nursing practice because of this DNP project. This DNP project presented the rehabilitation nurses with evidence-based guidelines to increase knowledge of survival skills and teach-back to improve inpatient diabetes education.

Problem Statement

Nurses interact with patients throughout the patients' stay, giving the nurse a fundamental role in diabetes education. Lack of patient understanding of education costs the US \$17 billion annually (Coleman et al., 2013). The vice president of clinical operations for the practicum site's health system indicated that organizations within the system are challenged to reduce readmissions and improve outcomes. Improving patient education to support a safe discharge is part of the health system's overall strategy to achieve better outcomes and reduce readmissions. The DNP project took place on a 35-bed inpatient rehabilitation unit located in the midwestern United States. The nurse manager of this unit identified barriers to effective patient education practices. Patients

with diabetes were particularly difficult for the nursing team on the rehabilitation unit with regards to adequate patient education. For example, patients were sent home unable to manage their diabetes, leading to frequent calls to the nursing unit or readmissions to the hospital. The nurse manager also shared the lack of a consistent approach to patient education from the nurses on the rehabilitation unit. Finally, the site's clinical nurse specialist for diabetes and patient education reinforced the need for improved diabetic patient education practices, not only at the local site but from a system perspective as well.

This doctoral project holds significance for the field of nursing practice because all patients deserve to have education provided in a way they can understand, irrespective of the challenges faced by the rehabilitation nurse to provide education. Nurses play a pivotal role in helping patients learn how to manage chronic illnesses, such as diabetes. Transitioning diabetic patients safely home from the acute care setting hinges on the nurse's ability to provide diabetic patient education, helping patients reach their health goals (Gerard, Griffin, & Fitzpatrick, 2010). In order to improve outcomes for diabetic patients, inpatient rehabilitation nurses should be aware of the recommendation to focus on survival skills when providing patients with diabetic education.

Purpose

The purpose of this DNP project was to teach rehabilitation nurses diabetic evidence-based guidelines and use of the teach-back method to administer diabetic patient education. Rehabilitation nurses are expected to provide quality patient diabetes education, beginning at admission. However, researchers have shown that bedside nurses

have a knowledge deficit related to the most recent recommendations for diabetic patient education (Hollis, Glaister, & Lapsley, 2014; Hughes, 2012; Krall, Donihi, Hatam, Koshinsky, & Siminerio, 2016; Modic, Canfield, Kaser, Sauvey, & Kukla, 2012). There is a gap in nursing practice between the expectation for rehabilitation nurses to administer diabetic patient education using the teach-back method and the knowledge, skills, and abilities for rehabilitation nurses to be successful. Through this doctoral project, I approached this gap by providing the site with a staff education in-service for the inpatient nurses on the rehabilitation unit to improve diabetic patient education.

It is a well-known fact that U. S. hospitals are challenged to reduce costly readmissions. Lack of diabetes education is a risk factor for readmissions and poor disease management (Korytkowski, Koerbel, Kotagal, Donihi, & DiNardo, 2014). There are proven economic benefits associated with DSME. For example, Powers (2017) found that patients who received diabetes education had 39% lower annual health care costs than patients who had no diabetic education. Teaching hospital rehabilitation nurses to educate patients on survival skills can lead to a safe discharge and referral to outpatient DSME, thereby improving patient outcomes and reducing the risk of hospital readmissions.

The guiding practice-focused question for this project was as follows: Will a staff education project for rehabilitation nurses increase nurses' knowledge, skills, and abilities to administer patient education to diabetic patients using the teach-back method?

Nature of the Doctoral Project

Sources of evidence for this project included professional nursing journals and websites: *Journal of Nursing Administration*, *Nursing Management*, *International Journal of Older People Nursing*, *Journal of Health Communication*, *Diabetes Care*, *Patient Education and Counseling*, *American Journal of Nursing*, *Journal of Nursing Care Quality*, American Nurses Association, AHRQ, AADE, CDC, and the U.S. Department of Health and Human Services. A comprehensive literature search was obtained through online sources as well as the Walden University Library to access evidence-based articles through CINAHL, PubMed, and the Cochrane databases.

Literature reviews provide information on current knowledge about a topic and help generate new practice change ideas (Friesen-Storms, Moser, Loo, Beurskens, & Bours, 2015). Evidence from aforementioned sources was used to develop the staff education in-service to increase nurses' knowledge, skills, and abilities to administer patient education to diabetic patients using the teach-back method. The staff education in-service was presented to an expert panel at the site for review. The expert panel evaluated the project at the end of the presentation. The education program was updated based on the expert panel's feedback and delivered to the site for future dissemination.

The findings from the literature review analysis provided me with enough evidence to connect this DNP project to the gap in nursing practice: the expectation for rehabilitation nurses to administer patient education to diabetic patients using the teach-back method and the knowledge, skills, and abilities for nurses to be successful. I anticipate this education in-service can improve nurses' knowledge of survival skills as a

current recommendation for inpatient diabetes education. Nurses may also report improved competence and confidence using the teach-back method when administering diabetic patient education.

Significance

Members of the stakeholders for this DNP project were also included in the panel of experts who provided the formal evaluation. The stakeholders provided the approval at the beginning of the project and included the rehabilitation unit nurse manager, the organization's education director, the diabetes clinical nurse specialist, and the outpatient diabetes education clinic manager. The expert panel included the stakeholders and two rehabilitation nurses. The rehabilitation nurses, nurse manager, and clinical nurse specialist may report improved patient preparation for discharge and improved outcomes, thereby addressing the issue of diabetic patients discharged with inadequate education. The rehabilitation nurses may report increased knowledge of diabetic patient education practices. The diabetic patients may receive improved education leading to increased confidence in their ability to manage self-care.

The process of educating patients with diabetes may change because of this project. This change in process will require participation by the key stakeholders to assure the project aligns with the organization's mission and vision. Therefore, it was critical for the stakeholders to have a clear comprehension of the project goals.

This DNP project has potential implications for positive social change for nursing practice. According to the American Nurses Association Standards of Professional Nursing Practice (2010), health teaching and health promotion are considered a standard

by which all registered nurses are expected to perform. Providing rehabilitation nurses with the knowledge, skills, and abilities to address the specific education needs of diabetic patients improves patient care and supports nurses to practice according to the ANA standards.

This project has a potential for transferability to similar practice areas, spanning across the continuum of care. The patient education process occurs in a variety of settings, such as home care and long-term care. Developing an evidence-based nursing in-service for nurses across the continuum of care would enhance diabetic patient education in these settings as well. Another potential for transferability of this doctoral project is the application to other disciplines. Patient education is the responsibility of the interprofessional care team within healthcare organizations. As such, although this project targets rehabilitation nurses, transfer to other disciplines would further improve outcomes. For example, physicians, social workers, physical therapists, dieticians, pharmacists, and respiratory therapists administer diabetic patient education. Interprofessional use of this in-service can also lead to improved competence by incorporating recent evidence into education practices for diabetic patients.

Summary

Diabetic patients are at risk for adverse outcomes and readmissions when discharged from the acute care setting. Despite the desire to provide high quality care to patients, nurses are not always aware of the latest evidence to improve inpatient diabetic patient education. This evidence-based practice project filled in this practice gap by

promoting quality health teaching and health promotion, which is identified by the ANA (2010) as a core competency for nurses.

In Section 2, I describe the concepts, models, and theories used to develop the nursing education in-service. Further exploration into the relevance to nursing practice is included, as well as local background and context. Finally, I describe my role as the DNP student as it relates to this doctoral project.

Section 2: Background and Context

Introduction

The purpose of this project was to teach rehabilitation nurses diabetic evidence-based guidelines and use of the teach-back method to administer diabetic patient education. Diabetes self-management education (DSME) improves patient outcomes and decreases cost by improving the patient's ability to care for themselves (Krall et al., 2016). Nurses must stay current on evidence-based strategies for providing quality education to hospitalized patients with diabetes. The AADE recognized the challenges nurses face to provide comprehensive DSME in the acute care setting and recommend inpatient education focus on survival skills (AADE, 2016; Hardee et al., 2015). The practice-focused question for this doctoral project was as follows: Will a staff education project for rehabilitation nurses increase nurses' knowledge, skills, and abilities to administer patient education to diabetic patients using the teach-back method?

In this section, I articulate the theory that guided the development of the staff education project for rehabilitation nurses, incorporating a synthesis of primary writings by key theorists, such as Orem. A clarification of terms and the relevance to nursing practice is addressed, along with a summarization of the history of the problems associated with low health literacy and recommendations to improve practice. I conclude the section with a summary of the practicum site background and relevance of the issue, along with the institutional context and a description of my relationship to this doctoral project.

Concepts, Models, and Theories

Orem's Self-Care Theory

Orem's self-care deficit nursing theory (SCDNT) provided strong theoretical and practical support for the development of a staff education project to increase nurses' knowledge, skills, and abilities to administer patient education to diabetic patients using the teach-back method. The SCDNT guided my project in that it was based on the philosophy that patients have the desire to care for themselves and assumes a person's knowledge of health problems is necessary to promote self-care behaviors. Orem emphasized the value of patient education, with the nurse assessing the patient's readiness to learn as well as what the patient needs to know. Orem referred to the nursing process as a series of actions driven by a goal. The project incorporated the identification of diabetes education goals to help the nurse prioritize education provided while using evidence-based strategies to assure learning occurred. In diabetic patients, the overall goal is adequate glycemic control and prevention of complications. Accomplishing this aim requires proper self-care skills with regards to nutrition, blood glucose monitoring, and medications used to regulate blood glucose levels (Sürücü & Kizilci, 2012). The actions taken by the nurse are deliberately selected based on the patient they are caring for (Orem, 1991).

Providing education to diabetic patients could improve their self-care skills. Diabetes self-management education and support facilitates the knowledge, skills, and abilities needed for adequate self-care (Powers et al., 2016). The ADA position statement maintains that all diabetic patients receive DSME when diagnosed and periodically

thereafter, depending on the needs of the patient. As I developed my project, use of SCDNT as it relates to DSME guided the assessment, planning, implementation, and evaluation phases of the project. The SCDNT consisted of three theories that established Orem's (1991) self-care deficit theory of nursing: (a) theory of self-care (b) theory of self-care deficit, and (c) theory of nursing systems. Together, these three concepts were considered by Orem as part of a general concept of nursing.

Theory of self-care. Essential to the theory of self-care is the human potential to develop both motivational and intellectual self-care skills (Orem, 1991). My project took place on an acute rehabilitation unit, where the overarching goal is to improve the patients' ability to care for themselves. Orem's (1991) assumption that humans can develop skills needed for self-care guided this project. Providing DSME expedites the knowledge, skills, and abilities required for diabetes self-care. The AADE (2016) outlined seven self-care behaviors to include when assessing patients with Type 2 diabetes: (a) eating healthy, (b) staying active, (c) monitoring, (d) medications, (e) solving problems, (f) decreasing risk, and (g) improving coping skills. Such factors informed the development of the nursing in-service.

Theory of self-care deficit. The theory of self-care deficit ties engagement in self-care and dependent self-care to a person's limitations in knowing what to do under certain situations, and how to do it (Orem, 1991). In the second part of this theory, Orem (1991) elucidated that nursing is needed when the patient's self-care abilities are not able to meet their needs, leading to a deficit. This gap can occur either in an unplanned state or a planned state where a shortfall is predicted (Orem, 1991). Diabetic patients in the

hospital setting provide the healthcare team with an opportunity to evaluate self-care deficits. Applying Orem's theory of self-care deficit to this doctoral project provided a theoretical base and encouraged a design that incorporated interventions based on patient's individualized needs and deficits.

Theory of nursing system. Fundamental to the elements of the self-care deficit theory of nursing is the theory of nursing system, as it provides a foundation for a healing relationship between the patient and the nurse (Orem, 1991). According to Orem (1991), the nursing assessment process reveals the patient's ability to meet his or her self-care demands. The nurse determines the patient's diabetes management behaviors and implements a plan of care guided by the self-care agency (Sürücü & Kizilci, 2012). In this way, the nurse enters a relationship with persons who have self-care deficits, performing actions that are defined by their specific nursing abilities to meet the individual self-care needs.

Clarification of Terms

Diabetes self-management education: The process of facilitating the knowledge, skill, and ability necessary for diabetes self-care. Goals are to encourage informed decision-making, problem-solving, and partnership with the healthcare team to improve outcomes quality of life. Guided by evidence-based research (Powers et al., 2016).

Discharge coordination: Initiation of activities aimed to reduce post discharge issues through linking patients to support services across the continuum of care (Weiss, Bobay, Bahr, Costa, Hughes, & Holland, 2015).

Discharge education: Education provided to the patient during the hospital stay intended to prepare the patient and caregiver to go home (Weiss et al., 2015).

Discharge planning: The development of a discharge plan personalized to the patient's needs that targets improved outcomes and decreased costs of care through the organization of providers and services (Weiss et al., 2015).

Health literacy: The ability to attain, convey, process, and comprehend essential information needed to make appropriate health decisions (Cloonan, Wood, & Riley, 2013).

Health numeracy: Effectively using numbers to execute health-related tasks (Watts & Stevenson, 2017).

Literacy: The ability to read, write, and speak English in a way that demonstrates problem-solving to function in a job and as part of society to develop one's knowledge and potential (Beagley, 2011).

Survival skills: The AADE (2016) recommended inpatient diabetes education focus on preparing diabetic patients to perform basic skills by discharge, with a plan for ongoing diabetes education in the outpatient setting.

Teach-back: Used by health care professionals during patient education to assure the patient/caregiver understands the information by asking the patient/caregiver to state what they need to know in their own words. Also known as "show me" (AHRQ, 2018).

Universal precautions: The term used by the AHRQ (2018) recommending nurses and other health care providers assume patients have low health literacy when providing education.

Relevance to Nursing Practice

Health Literacy: A Brief History

Providing diabetic education and efficiently communicating to patients are core to nursing as a profession. Professional nursing practice includes lifelong learning, using recent evidence to transform practice. The impact of low health literacy on diabetic patients has been well-defined in the literature (see Al Sayah, Williams, & Johnson, 2013; Cavanaugh, 2011; Swavely, Vorderstrasse, Maldonado, Eid, & Etchason, 2014). Low health literacy is related to poor outcomes and poor self-care, particularly in patients with diabetes. Nurses are inclined to misjudge health literacy levels when educating patients. Considering that patients are now deemed part of the healthcare team, it is imperative for nurses to consistently integrate health literacy skills into practice to better engage patients in their health (Oyler & Obeck, 2014). A brief history of health literacy and patient education informed the development of the staff education in-service to teach rehabilitation nurses diabetic evidence-based guidelines and use of the teach-back method to administer diabetic patient education.

Florence Nightingale and Virginia Henderson recognized the importance of health education and management of self-care before they were considered elements of health literacy (Oyler & Obeck, 2014). Education practices in nursing have evolved. From the 1960s through the 1980s, patients played a passive role in their care (Hoving, Visser, Mullen, & van de Borne, 2010). Healthcare professionals were deemed the expert, and patients often did not feel comfortable asking questions (Hoving et al., 2010). Health education materials were developed based on an individual healthcare professional's

opinion for what to include, with little regard to the patient's ability to read or comprehend the information. It was not until the 1990s when patient engagement, health promotion, and health literacy were considered within the context of patient education (Hoving et al., 2010; Parnell, 2014).

Health literacy was measured in 2003 as a subsection of the U.S. Department of Education National Assessment of Adult Literacy Survey, at the request of *Healthy People 2010*, marking the first-time adults were gauged for health literacy in the United States. Initial characterizations of health literacy concentrated on the patient's capacity to incorporate necessary mathematical and reading skills to something related to health (Parnell, 2014). Later, health literacy was defined in the National Library of Medicine as the "degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (Parker & Ratzan, 2010, p. 20). The ability to conduct an Internet search, reading wellness pamphlets, calculating medication doses, and comprehension of verbal and written health care directives are newer components of health literacy skills (Eadie, 2014).

As part of *Healthy People 2020*, a national action plan has been launched to improve health literacy. If the people of our country are to achieve the goals in *Healthy People 2020*, health care providers should consider and address health literacy. The vision for *Healthy People 2020* is to: (a) deliver access to accurate and actionable health information to all, (b) offer person-centered health materials and services, and (c)

promote good health through life-long learning and skills (U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2010).

Today, low health literacy is more common than nurses might realize. Roughly 88% of adults in the United States have low health literacy, leading to self-care deficits, especially in diabetic patients (Watts & Stevenson, 2017). Nurses are in a position to foster effective diabetic patient education by understanding that patients with low health literacy and diabetes can learn complex self-care skills when they are given clear, consistent diabetic education using methods such as teach-back.

Universal Precautions Approach

Healthcare is a complicated environment. The AHRQ recognized the limitations and complexity of fitting time-consuming health literacy screening tools into everyday nursing practice. Therefore, it is currently recommended that nurses adopt a universal precautions approach to patient education, practicing as though all patients have low health literacy (U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2010). Adopting this approach allows nurses to focus on current recommendations to overcome low health literacy, such as: (a) using simple language, (b) providing education through a shame-free environment, (c) providing small doses of education at a time, and (d) using materials written at a fifth-grade level (Dickens & Piano, 2013; Macabasco-O'Connell & Fry-Bowers, 2011; Reddick & Holland, 2015; Toronto & Weatherford, 2016; Watts & Stevenson, 2017). Research has shown that most patients appreciate uncomplicated communication with the healthcare team, further supporting use of strategies to assure clear communication and validation of

comprehension has occurred (Ballard & Hill, 2016). A weakness to this approach is that nurses will not know the severity of low health literacy. Still, the adoption of effective strategies to manage patients with low health literacy may improve communication practices between nurses and patients.

Low Health Literacy and Teach-Back Method

The nursing profession employs over 3 million people across many areas of healthcare, placing nursing at the forefront for the promotion of health literacy (Parnell, 2014). Nurses have an ethical duty not only to provide education to their patients but also to gauge their comprehension and capacity to use the information to make informed choices regarding their health. Current recommendations for nursing practice to overcome low health literacy includes the use of teach-back methodology when providing patient education to patients. Patients remember information more often when they repeat what they heard back to the nurse in their own words. Advocating the utilization of teach-back assures patients and caregivers understand the education provided (Caplin & Saunders, 2015; Kornburger, Gibson, Sadowski, Maletta, & Klingbeil, 2013). In fact, Peter et al. (2015) found that patients who understand the education provided by the health care team have a 30% reduction in readmission rates compared to patients who did not understand health-related concepts provided by clinicians.

Health literacy assessment instruments have been utilized in the past to measure low health literacy. Two examples are the Test of Functional Health Literacy in Adults (TOLFA) and the Rapid Estimate of Adult Literacy. Due to the nature of the acute care

environment, current health literacy assessment tools in use must be administered within a short period. The TOLFA is a well-known health literacy measurement tool; however, the administration time is lengthy and impractical for patients admitted to the hospital. Therefore, a shortened version of the TOLFA (s-TOLFA) is recommended for the clinical setting and has been deemed the gold standard for health literacy measurement (Al Sayah et al., 2013; Eadie, 2014). More recently, the Single Item Literacy Screener consists of one question that can be used to recognize patients who struggle when reading health-related information: “How often do you need to have someone help you when you read instructions, pamphlets, or other written material from your doctor or pharmacy?” (Eadie, 2014, p. 11). The responses range from 1 (never) to 5 (always), with a score of 2 indicating a need for assistance (Eadie, 2014). Nurses should carefully consider the mode of delivery for health educations in this population.

Diabetic Education: Survival Skills

Diabetic patients are often admitted to the hospital for reasons other than their diabetes, providing nurses with an opportunity to assess diabetes management skills as an inpatient education plan is developed. Due to the stress placed on patients and families during hospitalization, the current recommendation for nursing practice is to focus on what the patient and family need to know for a safe transfer home, otherwise known as survival skills (Hardee et al., 2015; Krall et al., 2016; Nelson-Slemmer & Thomas, 2014). The AADE (2018) recommended health care providers focus on the following survival skills for hospitalized patients:

- Meal planning: A healthy meal plan to include complex carbohydrates, fiber, protein, plenty of vegetables, and a limited amount of heart-healthy fats.
- Safe administration of medications: Taking medications correctly (with food and rotate insulin injection sites) and at the right time each day.
- Monitoring of blood glucose: When to check blood sugar and what the numbers mean, how to use blood glucose meter.
- Treatment of hyperglycemia and hypoglycemia: What to do when blood sugar is too low or too high, recording blood sugar results and bringing them to follow-up visits.

This doctoral project advanced nursing practice by providing rehabilitation nurses with a patient-centered, assessment-based approach to DSME. The project encouraged the rehabilitation nurses to prioritize the patient-specific diabetes education needs that might lead to improved outcomes. The in-service included teach-back as a best practice education method, and also focused on survival skills. Use of the universal precautions approach provided a nursing strategy for clear communication to all patients, protecting patients on the rehabilitation unit from not understanding their diabetes education.

Local Background and Context

The overall goal of the rehabilitation nurse is to help patients with disabilities or chronic illness maximize independence. Rehabilitation nurses should provide education to help patients acquire the self-care skills needed for optimal health (ARN, 2016). In fact, the Association of Rehabilitation Nurses Core Curriculum endorses health education as a vital component of rehabilitation nursing (Hyde & Kautz, 2014). The practicum

site's nurse manager reported the need to improve patient education practices among the rehabilitation nurses on her unit. In particular, patients with diabetes are often sent home unable to manage their illness, leading to frequent calls to the nursing station and readmissions. The desire to improve diabetic patient education among the rehabilitation nurses justified the need to offer a staff education in-service to increase nurses' knowledge, skills, and abilities to administer diabetic patient education.

The project took place on a 35-bed inpatient rehabilitation unit located within a large metropolitan area in the midwestern U.S. The project site is part of a large health system in the United States. The mission of the system is to serve in the spirit of the Gospel as a compassionate and transforming healing presence. The vision is to become a national leader and trusted health partner for life. Patients feel valued when nurses communicate in a way they can understand, thus facilitating trust and partnership, and aligning this doctoral project with the practicum site's mission and vision.

Regulatory certification provides healthcare organizations with opportunities to showcase their commitment to quality care. Applying for disease-specific certification demonstrates an organizational commitment to high-quality care. The Joint Commission and the ADA partnered to create a Certificate of Distinction for Inpatient Diabetes Care (The Joint Commission, 2017). The practicum site is considering applying for the Joint Commission's Inpatient Diabetes Certification within the next few years. To achieve certification, organizations must show adherence to the following elements that have been identified to improve outcomes among diabetic patients: (a) requirements for staff education, (b) written protocols for blood glucose monitoring, (c) hypoglycemia and

hyperglycemia treatment plans, (d) incidences of hypoglycemia data collection, (e) self-management patient education, and (e) program champion or team (The Joint Commission, 2017). This doctoral project will prepare the site for The Joint Commission accreditation by addressing the self-management patient education portion of the requirements.

Role of the DNP Student

Currently, I am the clinical informatics director for a national health system. My current job responsibilities include leveraging technology to support clinical practices throughout the system. The site where I implemented the doctoral project is a single unit within one of our hospitals located near the system headquarters. I am not employed at the project site nor is this DNP project a part of my work responsibilities within the system.

My role in the doctoral project was to develop a staff education in-service and deliver it for the site to implement at their convenience. As the project director, my in-service offered education to the rehabilitation nurses on survival skills, teach-back, and how low health literacy impacts the patients' ability to understand diabetic patient education. My role was also to partner with the nurses to create a process that fits their workflow, combining local findings with evidence in the literature for the final product. My commitment to the practicum site did not extend past completion of this doctoral project.

I have always had a passion for health promotion and patient education. I have a degree in community health education in addition to my nursing degrees. Before my

specialization in informatics, I was the nurse manager and subsequent director for a 24-bed inpatient rehabilitation unit where we prioritized patient education. Prior to my current informatics role, I consulted for one of the largest electronic medical record vendors in the country. Embedding technology into clinical workflows in hospitals throughout the country offered an in-depth evaluation of current challenges faced by inpatient nurses to provide education in a manner that patients can understand and act on.

Bias might have occurred during my project due to my past experiences as a nurse manager in a rehabilitation unit, where patient education was valued and highly prioritized. Consequently, it was important not to interject my beliefs about how to address patient education. I was fortunate to have the system director for practice and research as my preceptor. To minimize bias, my preceptor reviewed my work throughout the process to assure bias was absent from the final product.

Role of the Stakeholders

Identifying key stakeholders was critical to the DNP project outcome. The stakeholders were used at the beginning of the project to obtain buy-in by assuring the project aligned with the site's expectation to increase rehabilitation nurses' knowledge of diabetic patient education. I explained the project, purpose and need related to the identified organization's practice problem. The stakeholders were also used as the expert panel to participate in the staff education in-service presentation for evaluation. The expert panel included the nurse manager for the rehabilitation unit, two rehabilitation nurses, the director of education for the site, the outpatient diabetes clinic educator, and the diabetes clinical nurse specialist. All members of the expert panel were part of the

stakeholder group, with the exception of the two rehabilitation staff nurses. The expert panel was introduced to the staff education in-service using a PowerPoint presentation. Meeting invites were scheduled prior to the meeting to assure all expert panel members could attend.

Throughout the project, meetings were scheduled with the nurse manager to present her with background information and evidence to support the content of the nursing in-service. During the meetings, the nurse manager provided input into the design of the in-service to assure alignment with her requested train-the-trainer approach to implement the project on the rehabilitation unit at a later date. In addition, I participated in the health system's diabetes experts committee meetings, led by the practicum site diabetes clinical nurse specialist, to gather expertise and contextual insight relative to the DNP project.

After I presented the in-service to the expert panel, each panel member provided immediate feedback on the doctoral project. Suggestions for improvement were offered by the panel. Verbal approval was given by the group to move forward with the final product once suggestions were incorporated into the final product.

Summary

Providing diabetes education challenged the nurses at my practicum site. Orem's SCNDT guided the assessment, planning, implementation and evaluation of the DNP project to develop a staff education in-service to increase nurses' knowledge, skills, and ability to administer patient education to diabetic patients using the teach-back method. Although several strategies have been used historically by clinicians to assess patient's

health literacy skills, recent evidence recommends that nurses assume low health literacy when providing discharge education. After a brief introduction to Section 3, I will identify sources of evidence I used to develop the DNP project.

Section 3: Collection and Analysis of Evidence

Introduction

Nurses bear the responsibility to promote evidence-based care to diabetic patients, with education seen as a vital part of quality nursing care. Patients with low health literacy often do not understand the education provided, which leads to poor outcomes and readmissions to the hospital (Wallace, Perkhounkova, Bohr, & Chung, 2016). The practicum site's nurse manager identified the need to improve the rehabilitation nurses' knowledge of inpatient diabetes education practices. According to the nurse manager, diabetic patients are discharged without the ability to manage their diabetes, leading to frequent calls to the nursing station and readmissions. The purpose of my project was to teach rehabilitation nurses diabetic evidence-based guidelines and use of the teach-back method to administer diabetic patient education. The project took place on a 35-bed inpatient rehabilitation unit located within a large metropolitan area in the midwestern United States. The site has a goal to achieve The Joint Commission certification for Inpatient Diabetes Certification. This project can help achieve this goal.

Practice-Focused Question

The practice-focused question for this project was as follows: Will a staff education project for rehabilitation nurses increase nurses' knowledge, skills, and abilities to administer patient education to diabetic patients using the teach-back method? It is essential for rehabilitation nurses to participate in continuing education regarding current trends in best practices to administer diabetic patient education. The rehabilitation nurse manager at the practicum site identified a need to improve diabetes patient education

practices for the rehabilitation nurses on her unit. All patients benefit from teaching strategies that consider low health literacy. There is important information to convey during inpatient diabetic patient education; however, it must be done in a way that patients can understand. Health literacy is often overlooked by nurses when educating patients, which leads to poor outcomes and frequent readmissions (Wallace et al., 2016). The practicum setting identified the need for evidence-based strategies to improve inpatient diabetic patient education.

The purpose of this project was to teach rehabilitation nurses diabetic evidence-based guidelines and use of the teach-back method to administer diabetic patient education. This project included recommendations from recent literature for rehabilitation nurses to incorporate into diabetic education for hospitalized patients. The in-service centered on diabetes survival skill training and use of the teach-back method when administering diabetic patient education to validate patient comprehension of education taught. In this way, the development of the in-service aligned with the practice-focused question.

Operational Definitions

Genysis: Refers to the site's electronic health record.

Regional Health Ministry: Defines a group of services offered in one region of the 22 states served by the organization.

Sources of Evidence

Sources of evidence used to address the practice-focused question included a thorough appraisal of both primary and secondary peer-reviewed nursing literature and a

detailed review of professional websites related to the project. Key nursing journals included *Diabetes Spectrum*, *American Journal of Nursing*, *Diabetes Care Management*, *Journal of Health Communication*, *Journal of Clinical Nursing*, *Journal of Communication in Healthcare*, *Patient Education and Counseling*, and *Journal of Nursing Administration*. The Joint Commission Certification in Inpatient Diabetes website (The Joint Commission, 2017) contained valuable information to support development of the in-service. Permission was obtained to use the content from the Health Literacy Universal Precautions Toolkit (see AHRQ, 2018) and the Always Use Teach-back! Toolkit (see Abrams, Rita, Kurtz-Rossi, & Nielson, 2012; see Appendix A).

The purpose of this DNP project was to teach rehabilitation nurses diabetic evidence-based guidelines and use of the teach-back method to administer diabetic patient education. The ADA recommends diabetic patient education begin at admission and include survival skills (ADA, 2015; AADE, 2016). Survival skills simplify inpatient diabetes education, and the teach-back method validates patient understanding. This has potential to lead to increased patient confidence in their ability to manage diabetes, thus strengthening the relationship between the nurse and the patient and improving outcomes (Lee Thompson, 2017).

The practice-focused question was addressed as relevant evidence was collected and analyzed to inform the development of the in-service. The clinical practice question guided the review. According to Melnyk and Fineout-Overholt (2015), answering practice-focused questions relies on the ability to identify information produced from quantitative and qualitative studies, clinical reasoning, and patient choices. Regardless of

the source, the intention for analysis of evidence is to ascertain the validity of the content as it relates to the practice-focused question (Melnik & Fineout-Overholt, 2015).

When searching the evidence related to clinical practice problems, the best practice is to review multiple databases to assure full scope and reliability (Gerberi & Marienau, 2017). The databases and search engines I used to find evidence to support the practice problem included CINAHL, MEDLINE, Cochrane Database, National Guideline Clearinghouse, and PubMed. Key search terms included *patient education, health literacy, diabetes education, nursing education, nursing knowledge, nurse, self-care, teach-back, inpatient, and nursing knowledge of diabetes trends*. The search engines used mapped keywords with a subject heading to assist me with finding the most relevant articles to answer the clinical practice question (see Melnik & Fineout-Overholt, 2015). Additionally, I reviewed the ADA, AHRQ, AADE, and Joint Commission websites.

Institutional Review

The Institutional Review Board (IRB) protects human subjects' rights and welfare. This doctoral project was approved by the Walden University IRB as a staff education project. The Walden IRB approval number was 04-26-18-02641288. Additional approval was obtained from the site's local IRB.

Analysis and Synthesis

Review of the literature provided current best practices on diabetic patient management and the basis for content development of the staff education in-service. In addition to scholarly websites, relevant official websites were used during project design to assure the content was accurate and based on the latest information. Clinical practice

guidelines were also incorporated since they are often placed at the top of evidence pyramids (Gerberi & Marienau, 2017). The literature review did not differentiate educating patients based on whether they have Type 1 or Type 2 diabetes. For example, when teaching about medications, nurses individualize the content based on the patient's regimen (oral medications, injections, or insulin pump therapy), regardless of whether they have Type 1 or Type 2 diabetes.

A scholarly database can be overwhelming due to the number of articles available. To ensure that only the most relevant literature appeared, I used the databases' limit function to seek higher-level evidence. For example, when using CINAHL, I filtered the study design to "randomized controlled trial." Search dates encompassed the previous 10 years, with preference given to articles published within the past 5 years. To ensure a broad search, the "full text" button remained open. Once key terms were entered in the search fields, selecting "major heading" provided relevant subject headings, taking advantage of the tagging system within the CINAHL database, thus fortifying the results of my search (see Gerberi & Marienau, 2017). The Walden librarian was a useful resource when full-text articles were not readily available through the library.

The evidence was used to develop the staff education in-service for inpatient diabetic patient education. Once the project was developed, an expert panel was formed to evaluate the in-service. I developed a list of nine questions for each member of the expert panel to answer following the presentation. The panel consisted of six experts who evaluated the knowledge, skills, and ability to provide staff education after receiving the educational presentation. The experts included the nurse manager of the rehabilitation

unit, director of education for the hospital, outpatient diabetes clinic manager, diabetes clinical nurse specialist, and two rehabilitation staff nurses.

The Walden manual for the Staff Education Project was used to develop the project. I completed the following steps:

1. Analyzed site needs and established criteria for the staff education in-service.
2. Developed the practice-focused question.
3. Interviewed organizational leadership to discuss staff in-service goals,
4. Obtained commitment from site organizational leadership.
5. Formulated learning objectives.
6. Researched the literature to address the in-service goals.
7. Developed the staff in-service.
8. Verified the staff in-service with an expert panel from the site.
9. Presented in-service to the expert panel to gain immediate feedback.
10. Revised and finalized the staff in-service based on expert panel evaluation.
11. Obtained site IRB approval as well as Walden IRB approval.
12. Assisted the site with their plan to implement the in-service, including resources and timelines.
13. Developed an evaluation questionnaire for the site to use when the in-service is implemented.

Summary

Bedside nurses advocate for patients' needs every day. The rehabilitation nurse has a responsibility to offer diabetic patient education so a safe transition to the next level

of care becomes a reality. In this doctoral project, I aimed to increase nurses' knowledge, skills, and abilities to administer patient education to diabetic patients using the teach-back method. The in-service included evidence-based strategies to use when providing education to this population. The project was guided by a review of relevant evidence to address the practice-focused question. In Section 4, I convey the outcomes of the project, along with prospective implications for positive social change. I include a summary of how I used the expert panel as well as plans to disseminate the findings. Finally, I address project strengths, limitations, and suggestions for future projects addressing diabetes education.

Section 4: Findings and Recommendations

Introduction

The purpose of this DNP project was to teach rehabilitation nurses the current evidence-based guidelines and application of the teach-back method for patients with diabetes. The teach-back method encourages patients to repeat what they learned in their own words to assure they comprehend the education provided by the nurse. A large hospital in the midwestern area of the United States experienced a gap in nursing practice between the expectations for rehabilitation nurses to administer diabetic patient education using the teach-back method and the knowledge, skills, and abilities for rehabilitation nurses to be successful. In this doctoral project, I addressed this gap by associating evidence to the development of an educational in-service designed to increase the rehabilitation nurses' knowledge of diabetic patient education. The practice-focused question used for this DNP project was as follows: Will a staff education project for rehabilitation nurses increase nurses' knowledge, skills, and abilities to administer patient education to diabetic patients using the teach-back method?

Development of the Educational In-Service

In addition to the current literature, content for the in-service included guidelines from the AADE (2016), the AHRQ Health Literacy Universal Precautions Toolkit (2018), and the Always Use Teach-back! Toolkit (see Abrams et al., 2012). The highest level of evidence was used to answer the clinical practice question and develop the in-service. The analysis of the evidence showed that educating patients on survival skills was recommended for the hospitalized diabetic patient to support a safe discharge.

However, patients with low health literacy might not understand what was taught, leading to continued readmissions and poor outcomes at the site. Therefore, researchers have recommended that nurses use the teach-back method when administering diabetic patient education (Al-Sayah, 2014; Ha Dinh, Bonner, Clark, Ramsbotham, & Hines, 2016). Survival skills and teach-back were the two primary components of the PowerPoint presentation designed for the rehabilitation nurses (see Appendix C).

Program Content

Survival Skills

In the presentation, I defined the rationale behind the need for nurses to focus on survival skills when educating hospitalized diabetic patients. The presentation included examples of questions the nurses might ask the patient to determine their baseline knowledge of survival skills (medications, hypoglycemic management, blood glucose management, nutrition basics, and when to refer the patient to the outpatient diabetes education clinic for more detailed DSME). The results of the patient assessment inform the development of the patient's plan of care. Assuring patients know survival skills prior to discharge improves patient safety and patient confidence in managing their diabetes.

Teach-Back

The teach-back portion of the presentation began with an explanation of how low health literacy impacts diabetic patient outcomes. Included were current recommendations to overcome low health literacy and the universal precautions approach. Teach-back was presented as an evidence-based method used to improve the patient and caregiver's understanding and retention of what was taught. Content from the

AHRQ Health Literacy Universal Precautions Toolkit (see AHRQ, 2018) and the Always Use Teach-back! Toolkit (see Abrams et al., 2012) was included to explain the teach-back method.

In addition to the PowerPoint presentation, I developed an instructor guide (see Appendix D) for future use when the project is implemented by the organization. The purpose of the instructor guide was to provide additional information to help the person assigned to facilitate the in-service.

Findings and Implications

A panel of six experts from the site were invited to participate in a qualitative-like review of the in-service. The six-member expert panel included the nurse manager for the rehabilitation unit, the site director of education, the site diabetes clinical nurse specialist, the outpatient diabetes clinic manager, and two rehabilitation staff nurses. Prior to holding the formal in-service, I held a conference call with the panel of experts and explained the purpose of the project and learner objectives; I also asked the panel of experts to complete the Always Use Teach-back! Toolkit online interactive self-learning module (see Abrams et al., 2012) so they would have a good understanding of the teach-back method prior to the formal in-service. I then told them that they would receive an email with: (a) the link to the interactive self-learning module, (b) the PowerPoint presentation, and (c) the instructor guide. I then scheduled a meeting to present the in-service for formal approval, and all panel members accepted the invitation. During the meeting, I presented the 1-hour PowerPoint presentation to the expert panel.

Following the presentation, I spent an hour asking the expert panel a set of open-ended questions. The questions were designed to facilitate group discussion and obtain input on the in-service content related to rehabilitation nurses' diabetic education skills. Additional feedback included knowledge and application of the teach-back method when educating diabetic patients. I gave each expert panel member an opportunity to answer the questions while I took notes. Table 1 summarizes the expert panel responses to the questions.

Table 1

Summary of Expert Panel Responses (N = 6)

Question	Nurse manager	Director of education	Diabetes clinical nurse specialist	Outpatient clinic manager	Staff Nurse 1	Staff Nurse 2
Tell me how you felt about the on-line teach-back interactive self-learning module?	Easy to follow and insightful.	Highlighted the need for nurses to use teach-back.	All nurses should watch it.	I did not get a chance to view it.	I did not get time to go through it.	It made me think about how I teach patients.
How might the in-service increase knowledge of survival skills for inpatient diabetes education?	It gives the nurses guidance.	It gives the nurses guidance and not too complicated.	Agreed with nurse manager-gives guidance.	Will improve patient safety after discharge and improve referrals to our clinic for detailed education.	Guides the nurses.	Easy to understand.
How might the in-service improve competency of teach-back methodology to use during patient education?	Provides tools for success.	Will help improve teach-back practice.	Liked the scenarios at the end of the presentation-encourages continuous improvement.	Offers great ideas for improvement.	Made sense and scenarios at the end encourage practice.	Agree with nurse 1.
How do you think the PowerPoint presentation and Instructor Guide will support the requested train-the-trainer approach to dissemination?	Gives good baseline knowledge. Confident using train the trainer approach.	Agreed with the nurse manager.	Agreed with the nurse manager.	Agreed with the nurse manager.	Nothing to add.	Agree it provides background knowledge.
What do you think about the length of the on-line interactive module?	The nurse can click through it and control the pace.	Finding time to complete during work hours might be difficult but the length of time is fine.	Did not take long to complete.	N/A	N/A	It was easy to access and did not take long.

(table continues)

Table 2 (continued)
Summary of Expert Panel Responses (N = 6)

Question	Nurse manager	Director of education	Diabetes clinical nurse specialist	Outpatient clinic manager	Staff Nurse 1	Staff Nurse 2
Please provide feedback on the pre-test and post-test with regards to providing enough information to evaluate if nursing knowledge of survival skills and teach-back is enhanced?	I like the confidence scale on the pre-test, so we can see improvement over time.	They were fine.	Agree they will give us a way to evaluate the in-service.	Agreed with other expert panel members.	Agreed with other expert panel members.	Agreed with other expert panel members.
What additional questions should be added to the pre-test and post-test?	None-nurses don't want to complete long surveys.	Agreed with the nurse manager.	Agreed with the nurse manager.	Agreed with the nurse manager.	Agreed with the nurse manager.	Agreed with the nurse manager.
What suggestions do you have for improving the presentation?	Remove the length of time for the interactive learning module-does not have to take 45 minutes and that might discourage nurses from completion of the module.	Remove a few teach-back slides since the on-line module covers the content. We will place the presentation in our on-line learning module.	Change the survival skill medication assessment words from "unexpected reaction" to "side effects" Add slide that speaks to the process we used a while ago for teach-back for consistency: Assess, Teach, Evaluate.	Nothing.	Provide in-service to physicians.	Agree with providing in-service to physicians.
How might this in-service will improve diabetic education practices on the rehabilitation unit?	Helps nurses identify education needs and encourages early teaching.	Reminds nurses to start teaching early.	Encourages peer to peer evaluation. The survival skills concept is easy to understand so nurses might educate more effectively.	Agree with teaching early and might lead to more appropriate referrals to the clinic.	Easy to use and makes sense.	Makes me feel like I have never known how to do teach-back.

Panel feedback indicated approval of the in-service for the rehabilitation nurse. The expert panel members all agreed the in-service met the staff nurses' need to improve diabetic patient education on the rehabilitation unit. The panel felt the in-service content and recommendations would be easy for the rehabilitation nurses to read and understand. The panel approved the formal in-service using the teach back method for diabetic patient education. One member of the expert panel (the site director of education) requested less teach-back slides due to the high quality of the Always Use Teach-back! Toolkit (see Abrams et al., 2012) on-line interactive self-learning module. The group agreed with the request, stating that it would provide the nurses with more time to practice the teach-back skill during the in-service. The panel identified two slides with content that was duplicated in the on-line interactive self-learning module. As a result, the two slides were removed from the final PowerPoint presentation designed for the rehabilitation nurses. Other common themes from the group included: (a) affirmed relevancy of the topic to the current environment, (b) design and content of the in-service supported the train-the-trainer approach, (c) encourages diabetic patient education early in the patient's admission process. I updated the final PowerPoint presentation based on feedback from the expert panel.

The project fulfilled the AADE's (2016) recommendation to provide ongoing diabetes management updates for clinicians who care for diabetic patients. Qualitative-like feedback indicated the in-service was relevant and desired by the site and may lead to better diabetic patient education practices. The project incorporated strategies based on the latest evidence to improve the rehabilitation nurses' knowledge, skills, and abilities to

provide diabetic patient education. For example, use of the teach-back method can improve inpatient diabetes education at the practicum site, promoting patient's self-management of their diabetes and improving patient's overall health. Also, empowering diabetic patients with knowledge and confidence to manage basic self-care skills (survival skills) can improve patient's confidence to manage their diabetes, leading patients down a path of health and well-being and paving the way for healthier communities.

This DNP project has potential implications for positive social change by improving nurses' knowledge of diabetic patient education. Detailed DSME should occur in the outpatient setting, however, nurses have a responsibility to prepare diabetic patients for a safe transition home. As nurses improve their knowledge, skills, and abilities to administer diabetic patient education, patients gain confidence, leading to motivation to manage their diabetes.

Recommendations

Patient education is a core element of nursing practice that should be a collaborative activity between the patient and nurse (Lee Thompson, 2017). This DNP project provided the rehabilitation nurses with a diabetic patient education in-service to increase knowledge of survival skills and mastery of the teach-back method. The in-service was presented to an expert panel for immediate qualitative feedback. Due to the positive feedback, it is recommended the project be presented to the rehabilitation nurses at the site using the PowerPoint presentation and supporting documents from the Always Use Teach-back! Toolkit (see Abrams et al., 2012). The rehabilitation unit educator

should provide the in-service to the members of the rehabilitation unit nurse practice council. The nurse members of the practice council group are accountable for dissemination to the remaining nurses on the unit. Project documents included evaluation tools to evaluate effectiveness of the in-service.

Contribution of Stakeholders

The stakeholders were vital to the success of this DNP project. At the beginning of the project, the stakeholders supported and gave approval to move forward with the project. The stakeholder group included the nurse manager of the rehabilitation unit, the director of education, the diabetes clinical nurse specialist and the outpatient diabetes clinic manager. The stakeholders also approved site plans for future implementation. The stakeholder roles in the project were: (a) the site diabetes educator included me in her monthly system-wide diabetes expert meetings to assure the project aligned with the health system's goals, (b) two meetings were scheduled with the nurse manager on the rehab unit to assure the project addressed the current gap in practice, (c) a day was spent with the outpatient diabetes clinic educator to assure the in-service included acceptable criteria for outpatient diabetes clinic referrals.

Project Implementation Plans

My role in the DNP project does not extend past gaining approval from the expert panel and delivering the final product to the nurse manager of the rehabilitation unit. The site will move forward with implementation of the in-service in the fall of 2018. The rehabilitation nurse educator will facilitate the in-service to the nurse practice council nurses. Once the nurse practice council nurses are competent and confident using the

teach-back method, they will disseminate the education to the rehabilitation nurses throughout the unit. In addition, the site education director plans to implement the in-service to other inpatient units within the hospital, with future plans to extend implementation throughout the large health system.

Strengths and Limitations of the Project

The main strength of this DNP project was the opportunity to address a current need for the rehabilitation nurses at the project site. Included was an approach to improve diabetic patient education that was based on guidelines from the AADE (2016), the AHRQ (2018), and the Always Use Teach-back! Toolkit (see Abrams et al., 2012). The project was designed to easily fit into the nurses' workflow, providing a standardized and simplistic approach to diabetic patient education for the rehabilitation nurses. Addressing health literacy using teach-back is a skill nurses can employ to validate patients and families understood the information provided.

There are recognized limitations to this DNP project. The expert panel sample size was small (n=6). Also, there was no formal evaluation conducted with the panel of experts using a Likert scale. Feedback was subjective and given in a group setting. According to Grove, Burns, & Gray (2013), the facilitator might come group interview sessions with preconceived notions on the topic of discussion. It is helpful to allow participants to provide their views early in the session to overcome any preconceived notions from the facilitator (Grove et al., 2013).

Recommendations for Future Projects

Future recommendations include the identification of survival skills for other health conditions. For example, like diabetes, congestive heart failure is a complex chronic disease that hinges on self-care management for the best patient outcomes (Mahramus et al., 2014). Other recommendations include further studies to investigate if nurses' mastery of teach-back leads to improved self-care, reduced readmissions, patient retention of knowledge, and quality of life improvements (Ha Dinh et al., 2016).

Section 5: Dissemination Plan

Dissemination of this DNP project serves to advance nursing practice and improve patient outcomes at the practicum site. Health teaching and health promotion are included in the ANA standards of professional nursing practice (ANA, 2010). The site hopes to improve patient education practices first on the rehabilitation unit, then throughout the hospital, and finally all over the system. The rehabilitation unit holds monthly nurse practice council meetings. Membership of the nurse practice council includes 10 rehabilitation unit nurses. Using a train-the-trainer approach, the unit educator will provide the in-service to the nurse practice council nurses using the PowerPoint and the Always Use Teach-back! Toolkit (see Abrams et al., 2012). The unit practice council will then disseminate the in-service to the remaining nurses on the unit with plans to evaluate the effectiveness of the in-service for continuous improvement opportunities. Lessons learned will be applied as the project filters through the system-wide patient education council for broad system level implementation.

Dissemination offers nurse opportunities to contribute to the development of evidence-based practice (Moule, Armoogum, Douglass, & Taylor, 2017). Based on the nature of this DNP project, there are several venues that are appropriate for distribution to the broader nursing profession. First, I plan to present this project to my organization's system patient education council in the fall of 2018. Patient education is performed by nurses in a variety of roles and in a variety of settings across the care continuum. All patients deserve to receive education in a manner they can understand. As such, this DNP project centers on teach-back as an evidence-based strategy to assure patients

comprehend the education provided to them. This project also encourages nurses to consider patient education content conducive to the practice setting. The broader nursing profession can benefit from this project through professional nursing conferences such as the American Organization of Nurse Executives. The American Organization of Nurse Executives encourages transformative models of care as well as cross-continuum care. Written publication in the Nursing Management Journal is another option to reach a wide variety of nurse leaders who may be interested in improving patient education practices in their setting.

Analysis of Self

Healthcare is a complex environment. The nursing profession must be encouraged to improve practice by making changes that lead to better patient outcomes. The journey to earn a DNP has forever changed the way I approach decision making and practice change recommendations. As a practitioner, I have been in various leadership roles throughout my career. In my current informatics leadership role, I help influence the design of technology to support over 130,000 clinicians across the continuum of care. My team and I take this responsibility very seriously. As a result of this program, I now think like a scholar, encouraging informatics teams throughout the large health system to review and synthesize evidence when faced with a clinical practice problem.

As a nurse informatician, I have served the role of project manager throughout my career. Developing a scholarly project has contributed to my current knowledge of project management by emphasizing the importance project evaluation. In my field, it is not uncommon to quickly move to another project after the implementation phase. This

DNP journey has taught me the importance of a solid plan to evaluate the project. I now ask my team to provide the evaluation strategy as part of the project plan, with metrics to measure the effectiveness of the change.

My long-term career goals are two-fold. First, I would like to continue growth as a nurse scholar and expert nurse informatician leader, leveraging technology to transform nursing practice. Second, I want to be an active participant in informatics and nursing leadership professional organizations, with opportunities to influence the future of nursing as a profession and focusing on cross-continuum care. Completion of the DNP journey provides me with skills and professional respect that will allow me to accomplish these goals.

The main challenge with this DNP project was the length of time it took to obtain approval for project implementation. The Walden requirements for the DNP project changed after I wrote a significant portion of the proposal, which caused a delay in the implementation of the project due to significant updates to fit the new requirements. This delay showed that I had the patience and perseverance needed to finish this journey. Nevertheless, the development and implementation of the project was a very enjoyable experience due to my passion for patient education and the opportunity to spend time with a very engaged group of rehabilitation nurses. In my current informatics role, I do not have the privilege of immersing myself into a clinical unit within a hospital setting. The opportunity to lead this staff education project with the stakeholders and expert panel from the beginning to the end made this journey worth the effort. The lessons learned and

skills developed during the completion of the DNP project will make me a better nurse leader and scholar.

Summary

Bedside nurses are often the first contact between the patient and the healthcare team, giving them an opportunity to identify education needs early in their inpatient stay. Diabetes is wide-spread disease that requires complex self-care actions for optimal health. Delivering the right information at the right time in a way patients can understand is paramount to patient empowerment and improved outcomes. This DNP project provides busy nurses with a standardized approach to diabetic patient education that is evidence-based and encourages nurses to go beyond asking the patient and caregiver if they understand what was taught by the nurse. The project encourages use of teach-back to validate that patients can verbalize in their own words what they heard from the nurse during the education encounter. The project also taught the rehabilitation nurses to convey knowledge of basic diabetes concepts to patients, otherwise known as survival skills. The combination of incorporating survival skills and teach-back training into the in-service for the site to disseminate led to the success of this DNP project. Qualitative feedback from the evaluation of expert panel members showed the project would improve the inpatient nurses' diabetes education practices on the rehabilitation unit, thus addressing a current gap at the site. The discoveries from this DNP project can lead to positive social change across the care continuum.

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Appendix A: Permissions

Hello Heidi. Thank you for your interest in the Always Use Teach-back! Toolkit.

We created the *Always Use Teach-back!* Toolkit to help individuals and organizations improve their use of teach-back. You are welcome to link to it and use it in your educational offerings and your pilot intervention. It is preferred that the interactive learning module content be used together (not just isolated video clips and not just some of the content) since it is intended to be a package. The tools (pdfs and videos) can be used alone or as needed to supplement your training.

When using the Toolkit, please use this acknowledgement/suggested citation: Abrams MA, Rita S, Kurtz-Rossi S, Nielsen G. Always Use Teach-back! Toolkit. 2012. www.teachbacktraining.org.

Thank you and best wishes with your work.

Dear Ms. Steiner:

I am following up your request on behalf of [redacted]. I handle the majority of permissions for the Agency for Healthcare Research and Quality (AHRQ), including those related to health literacy.

If you want to use materials from the AHRQ Health Literacy Universal Precautions Toolkit, I can grant permission for those materials that are not previously copyrighted, which means the majority of the toolkit. However, if your interest is primarily in the "Always Use Teach-Back" Toolkit, you will need to contact the copyright holder, Dr. Mary Ann Abrams of the [redacted].

If there are other materials that you are interested in using or adapting, please let me know so that I can determine whether AHRQ can grant permission.

Sincerely,

Appendix B: PowerPoint Presentation



A Nursing In-Service for Diabetes Education

Heidi Steiner, RN, DNPc, RN-BC, NE-BC,

May, 2018

Objectives

- ▶ By the end of the in-service, the rehabilitation nurses will describe how diabetes impacts society.
- ▶ By the end of the in-service, the rehabilitation nurses will describe the relationship between Dorothy Orem's Self-Care Nursing Deficit Theory (SCNDT) and diabetes education.
- ▶ By the end of the in-service, the rehabilitation nurses will verbalize how current best practices in diabetes education can improve patient safety during the discharge process.
- ▶ By the end of the in-service, the rehabilitation nurses will describe the role health literacy has on patient outcomes.
- ▶ Rehabilitation nurses will demonstrate teach-back 50% of the time for a one-month period following role-play sessions with the facilitator.

Overview

- Diabetes affects 9.4% of the U.S. Population and costs the U.S. \$245 million (CDC, 2018).
- Thirty-day readmission rates for patients with diabetes are between 14.4% and 22.7% higher than patients without diabetes (Ostling et al., 2017).
- Bedside nurses are primarily responsible for patient education during an inpatient stay, defining educational needs for a safe transition from the acute setting (Haase et al., 2015)
- Providing the right information at the right time in a way patients can understand can improve outcomes and encourage active participation in patient's self-care.
- Teach-back is an evidence-based approach delivering education and has been shown to improve learning outcomes (Peter et al., 2015).

Key Terms

- **Diabetes self-management education:**
 - The process of facilitating the knowledge, skills, and ability necessary for diabetes self-care. Goals are to encourage informed decision-making, problem-solving, and partnership with the healthcare team to improve outcomes and quality of life. Guided by evidence-based research (Powers et al., 2016).
- **Discharge education:**
 - Education provided to the patient during the hospital stay intended to prepare the patient and caregiver to go home (Weiss et al., 2015).
- **Health literacy:**
 - The ability to attain, convey, process and comprehend essential information needed to make appropriate health decisions (Cloonan et al., 2013).
- **Health Numeracy:**
 - Effectively using numbers to execute health-related tasks (Watts, Stevenson, & Adams, 2017).
- **Survival Skills:**
 - The American Association of Diabetes Educators (AADE) recommends inpatient diabetes education focus on preparing diabetic patients to perform basic skills by discharge, with a plan for ongoing diabetes education in the outpatient setting (American Association of Diabetes Educators, 2016).
- **Teach Back:**
 - Used by health care professionals during patient education to assure the patient/caregiver understands the information by asking the patient/caregiver to state what they need to know in their own words. Also known as 'show me' (AHRQ, 2018).
- **Universal Precautions:**
 - The term used by the AHRQ recommending nurses and other health care providers assume patients have low health literacy when providing education (AHRQ, 2017).

Dorothy Orem's Self-Care Nursing Deficit Theory (SCNDT)

- People have a desire to care for themselves (Orem, 1991).
- Knowledge of health problems is necessary to promote self-care behaviors (Orem, 1991).
- Patient education is a valued intervention and goal-driven (Orem, 1991).

Theory of Self-Care

- The human potential to develop motivational and intellectual self-care skills (Orem, 1991).
- Providing DSME expedites the patient's knowledge, skills, and abilities required for self-care (Powers, 2016).

Theory of Self-Care Deficit

- Engagement in self-care is tied to a person's limitations in knowing how to manage their condition (Orem, 1991).
- Nursing is needed when the patient's self-care abilities are not able to meet their needs (Orem, 1991).
- Hospitalized diabetic patients provide opportunities to evaluate self-care deficits and intervene with the right education at the right time (Powers, 2016).

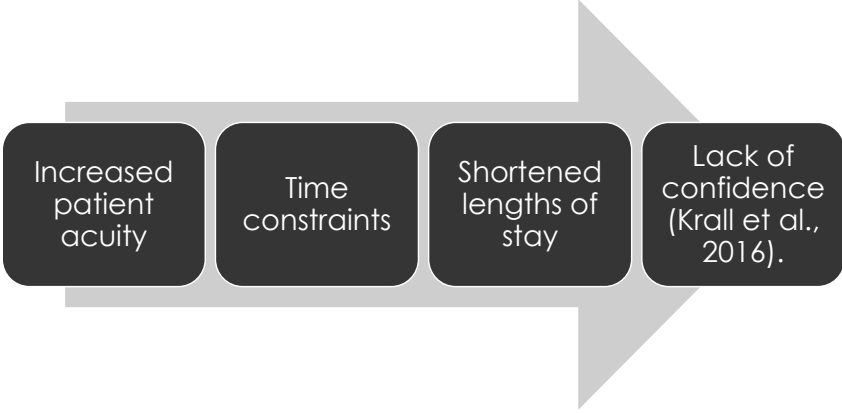
Theory of Nursing System

- Provides a foundation for a healing relationship between the nurse and patient (Orem, 1991).
- The nurse implements a plan of care guided by the self-care agency, performing actions that are defined by specific self-care needs (Sürücü & Kizilci, 2012).



Educating the Hospitalized Diabetic Patient

Nursing Barriers to Providing Comprehensive Diabetes Education



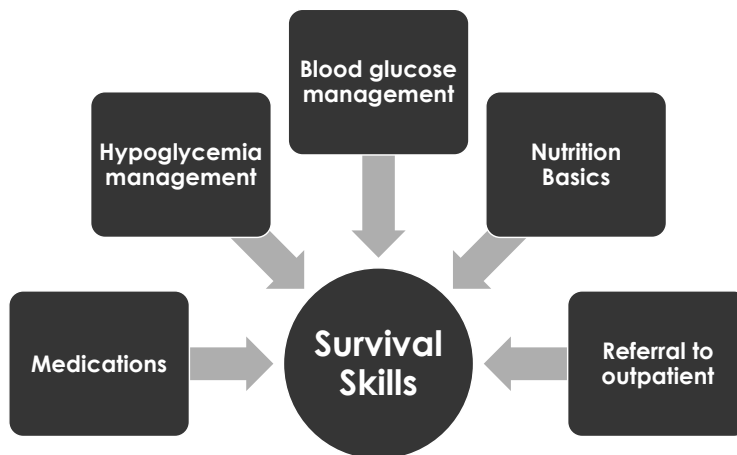
Increased patient acuity

Time constraints

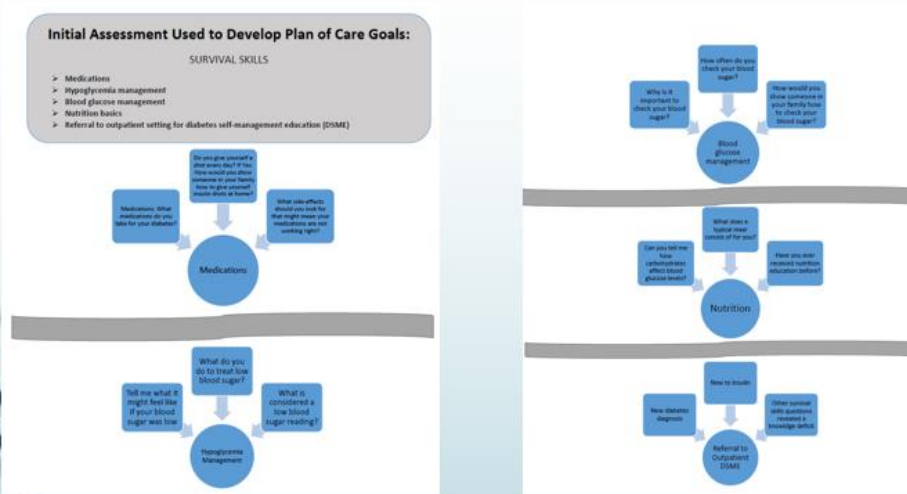
Shortened lengths of stay

Lack of confidence (Krall et al., 2016).

Simplify: Focus on Survival Skills



Initial Assessment



Current Best Practices

The literature supports comprehensive DSME occurring in the outpatient setting (Krall et al., 2016; American Association of Diabetes Educators, 2016).

Nurses must prepare diabetic patients for a safe transition out of the inpatient setting

The American Diabetes Association recommends discharge education begin on admission and include survival skills (ADA, 2018).

Admission: Diabetes Assessment Informs the Patient's Plan of Care

Current treatment

Competency to perform blood sugar checks

Ability to identify and treat hypoglycemia

Nutrition education needs

Need for outpatient DSME

Health Literacy

Defined:

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 & Ratzan, 2010, p. 20).

Our responsibility:

Provide education in a way patients can understand (U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2010).

Health Numeracy

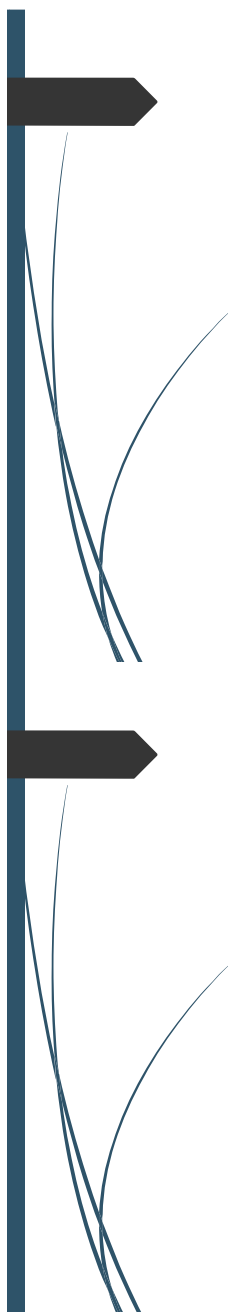
Effectively using numbers to execute health-related tasks (Watts, Stevenson, & Adams, 2017).

**Low Health
Literacy**

Poor diabetes
knowledge

Poor Outcomes

(Al Sayah et al., 2014;
Watts et al., 2017)





Current Recommendations to Overcome Low Health Literacy

- ▶ Use simple language (AHRQ, 2010).
- ▶ Provide education through a shame-free environment.
- ▶ Provide small doses of education at a time.
- ▶ Use materials written at a fifth-grade level (Dickens & Piano, 2013; Macabasco-O'Connell & Fry-Bowers, 2011; Reddick & Holland, 2015; Toronto, 2016; Watts & Stevenson, 2017).
- ▶ Teach-back!



Universal Precautions

- ▶ Approach to patient education where it is assumed all patients have low health literacy (Reddick & Holland, 2015; Toronto, 2016; Watts & Stevenson, 2017).
- ▶ Most patients appreciate uncomplicated communication with the healthcare team (Ballard & Hill, 2016).
- ▶ Health literacy measurement tools are time-consuming and not suited for the inpatient setting.
- ▶ Protects patients from not understanding their discharge instructions (Hadden, 2015).

Why Teach-back?

- ▶ **Ninety-million Americans (47%) have difficulty understanding information provided to them by healthcare providers (Kornburger, Gibson, Sadowski, Maletta, & Klingbeil, 2013).**
- ▶ **Improves patient/caregiver understanding and retention when they can repeat what was taught in their own words (Kornburger et al., 2013).**
- ▶ **One of the top 11 evidence-based patient safety practices, endorsed by several healthcare organizations, including the Agency for Healthcare Research and Quality (AHRQ) (Tamura-Lis, 2013).**

Confirm Patient Understanding

“I want to make sure I explained your medicine clearly. Can you tell me how you will take your medicine?”

“Tell me what you understood.”



(AHRQ, 2018)

Teach-Back Quick Guide

Teach-Back Quick Guide

- Use teach-back for ALL patients.
- Start with most important message.
- Limit to 2-4 key points.
- Use plain language.
- Rephrase message until patient demonstrates clear understanding.

Examples of Teach-Back Starters

- "Just to be safe, I want to make sure we are on the same page. Can you tell me..."
- "I want to make sure that I explained things clearly. Can you explain to me..."
- "Can you show me how you would use your inhaler at home?"

Use Plain Language

Use these words	Avoid these words
reduces swelling	anti-inflammatory
blood thinner	anticoagulant
take before meals	take on an empty stomach
take after meals	take on a full stomach
high (low) blood sugar	hyper(hypo-)glycemic
high (low) blood pressure	hyper(hypo-)tension
fats	lipids
overweight	obese
weak bone disease	osteoporosis
not cancer	benign

Use these words	Avoid these words
heart doctor	cardiologist
skin doctor	dermatologist
doctor who treats diabetes	endocrinologist
stomach doctor, doctor for digestion problems	gastroenterologist
doctor for women	gynecologist
doctor for the brain, spine, and nervous system	neurologist
cancer doctor	oncologist
eye doctor	ophthalmologist
lung doctor	pulmonologist
joint, bone, and immune system doctor	rheumatologist

(AHRQ, 2018)

Transition

Update education goals in the plan of care

Criteria for referral to outpatient DSME:

- Newly diagnosed with diabetes
- New to Insulin
- Continued self-care knowledge deficit (share outcomes of education provided during the inpatient stay during handoff to the outpatient DSME setting:

Assure patient performs teach-back for when to call the provider



Teach-back Practice Scenarios for Survival Skills

Medications

- The patient's plan of care identified a knowledge deficit for insulin use. You provided education regarding the need to take insulin with meals. Demonstrate how you would ask the patient to teach back the information provided.



Hypoglycemia Management

- ▶ The patient's plan of care identified a knowledge deficit related to hypoglycemia management. You taught the patient the signs and symptoms of low blood sugar, and how to treat a blood sugar of less than 70. Demonstrate how you would ask the patient to teach back the information provided.



Blood Glucose Management

- ▶ The patient's plan of care identified a knowledge deficit related to the importance of checking blood sugar daily, prior to eating breakfast. Demonstrate how you would ask the patient to teach back the information provided.

Nutrition

- ▶ The patient's plan of care identified a knowledge deficit related to the relationship between carbohydrates and blood sugar. Demonstrate how you would ask the patient to teach back the information provided.



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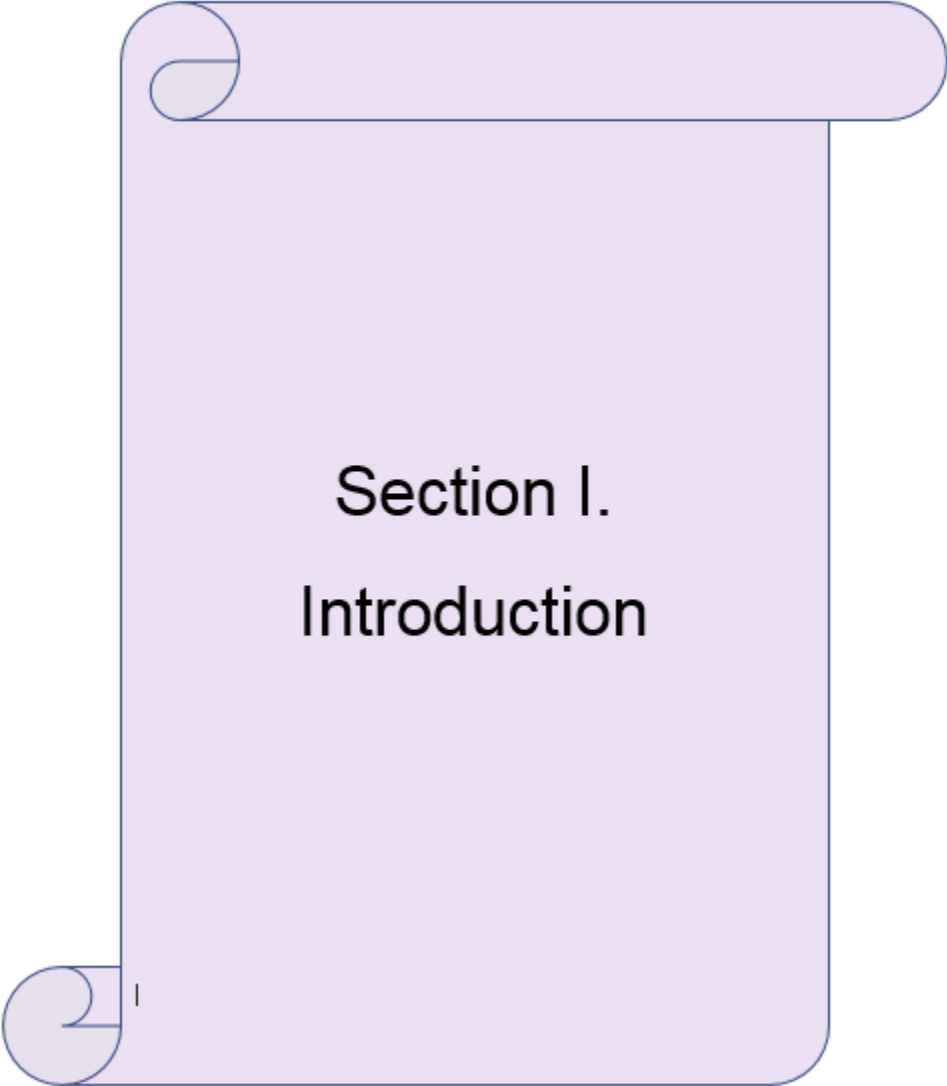
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**Instructor Guide:
A Nursing In-
Service for
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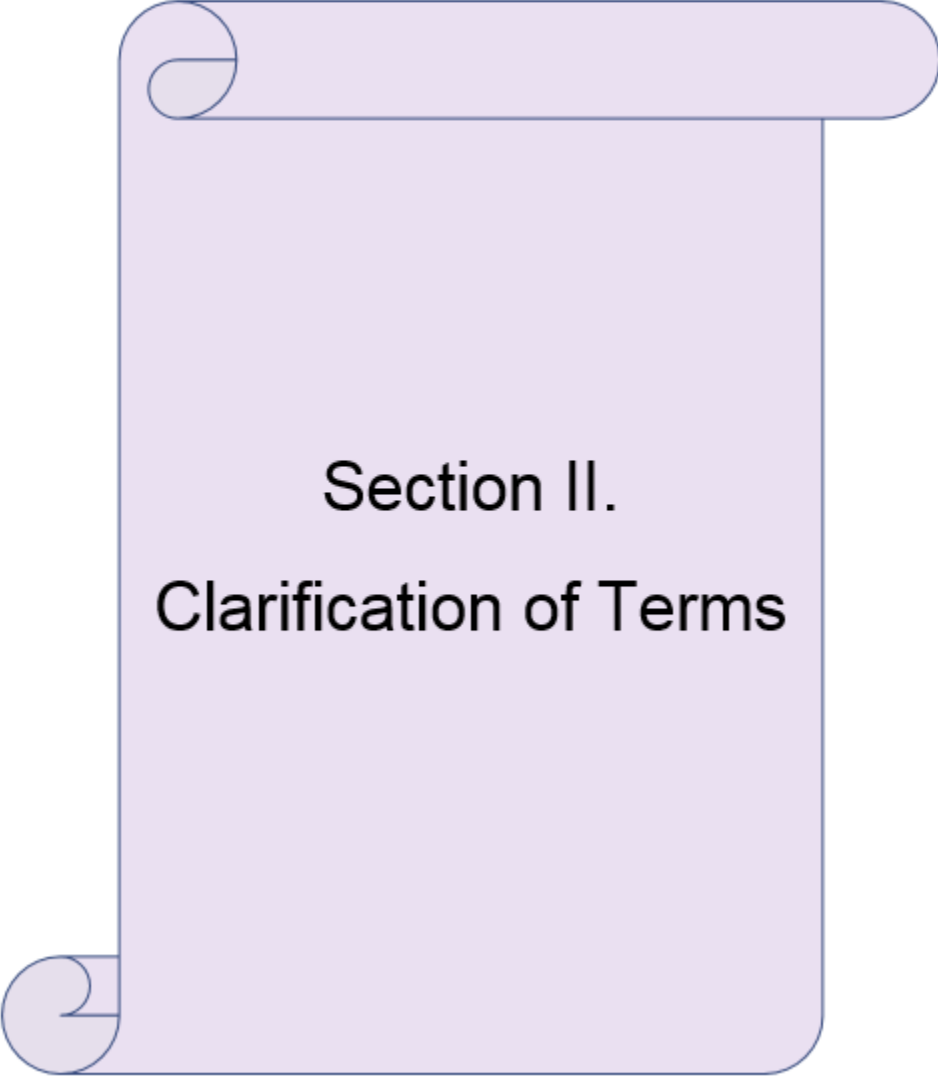
Section I.
Introduction

Introduction

Diabetes is a complex chronic disease that affects 9.4% of the United States population, costing the U.S. an estimated \$245 billion to treat (CDC, 2018). According to the most recent data, 7.2 million hospitalized patients in 2014 had diabetes listed as a primary or secondary diagnosis (CDC, 2018). Moreover, thirty-day readmission rates for those admitted with diabetes are between 14.4% and 22.7% higher than patients without diabetes (Ostling et al., 2017). Bedside nurses are primarily responsible for patient education during an inpatient hospital stay and play a critical role in identifying educational needs to plan for a safe transition to the next level of care (Hasse et al., 2015). Delivering the right information at the right time to diabetic patients in a way they can understand has the potential to empower them to actively take part in their self-care, leading to improved outcomes and a better quality of life. Validating patient understanding of discharge education provided goes beyond asking the patient/caregiver if there are questions or asking the patient/caregiver if they understand what was taught by the clinician. This in-service will center around use of teach-back methodology when educating diabetic patients in the acute setting. This in-service will also provide busy clinicians with a standardized approach to addressing the educational needs of the inpatient with diabetes, so the education process can start as close to admission as possible. Dorothy Orem's self-care deficit nursing theory (SCNDT) provides theoretical and practical support for the development of this in-service.

About this In-Service

The purpose of this nursing in-service for diabetes education is to offer components of a comprehensive evidence-based diabetes educational offering for nurses, however, the content is also relevant to the interprofessional team caring for the patient as well. This document is designed in such a way that can either be administered all at once or in small increments, thus acknowledging the challenges faced in the acute setting to deliver educational in-services to busy clinicians. This in-service will also incorporate the identification of diabetes education goals to help the nurse prioritize education provided while using evidence-based strategies to assure patient/caregiver learning occurred. The recommended order to implement the in-service is as follows: (a) ask participants to complete the pre-test, (b) ask participants to review the interactive teach-back learning module, (c) attend the in-service, (d) complete the post-test (e) practice the scenarios within the in-service and ask a co-worker to complete the observation tool, or, practice with a patient and a co-worker observing, who will complete then the observation tool, (f) discuss with nursing teams as desired to hardwire the change.



Section II.
Clarification of Terms

Clarification of Terms:

- *Diabetes self-management education:*
 - The process of facilitating the knowledge, skills, and ability necessary for diabetes self-care. Goals are to encourage informed decision-making, problem-solving, and partnership with the healthcare team to improve outcomes and quality of life. Guided by evidence-based research (Powers et al., 2016).
- *Discharge coordination:*
 - Initiation of activities aimed to reduce post discharge issues through linking patients to support services across the continuum of care (Weiss, Bobay, Bahr, Costa, Hughes, & Holland, 2015).
- *Discharge education:*
 - Education provided to the patient during the hospital stay intended to prepare the patient and caregiver to go home (Weiss et al., 2015).
- *Discharge planning:*
 - The development of a discharge plan personalized to the patient's needs that targets improved outcomes and decreased costs of care through the organization of providers and services (Weiss et al., 2015).
- *Health literacy:*
 - The ability to attain, convey, process and comprehend essential information needed to make appropriate health decisions (Cloonan et al., 2013).
- *Health Numeracy:*
 - Effectively using numbers to execute health-related tasks (Watts, Stevenson, & Adams, 2017).
- *Literacy:*
 - The ability to read, write, and speak English in a way that demonstrates problem-solving to function in a job and as part of society to develop one's knowledge and potential (Beagley, 2011).

➤ *Survival Skills:*

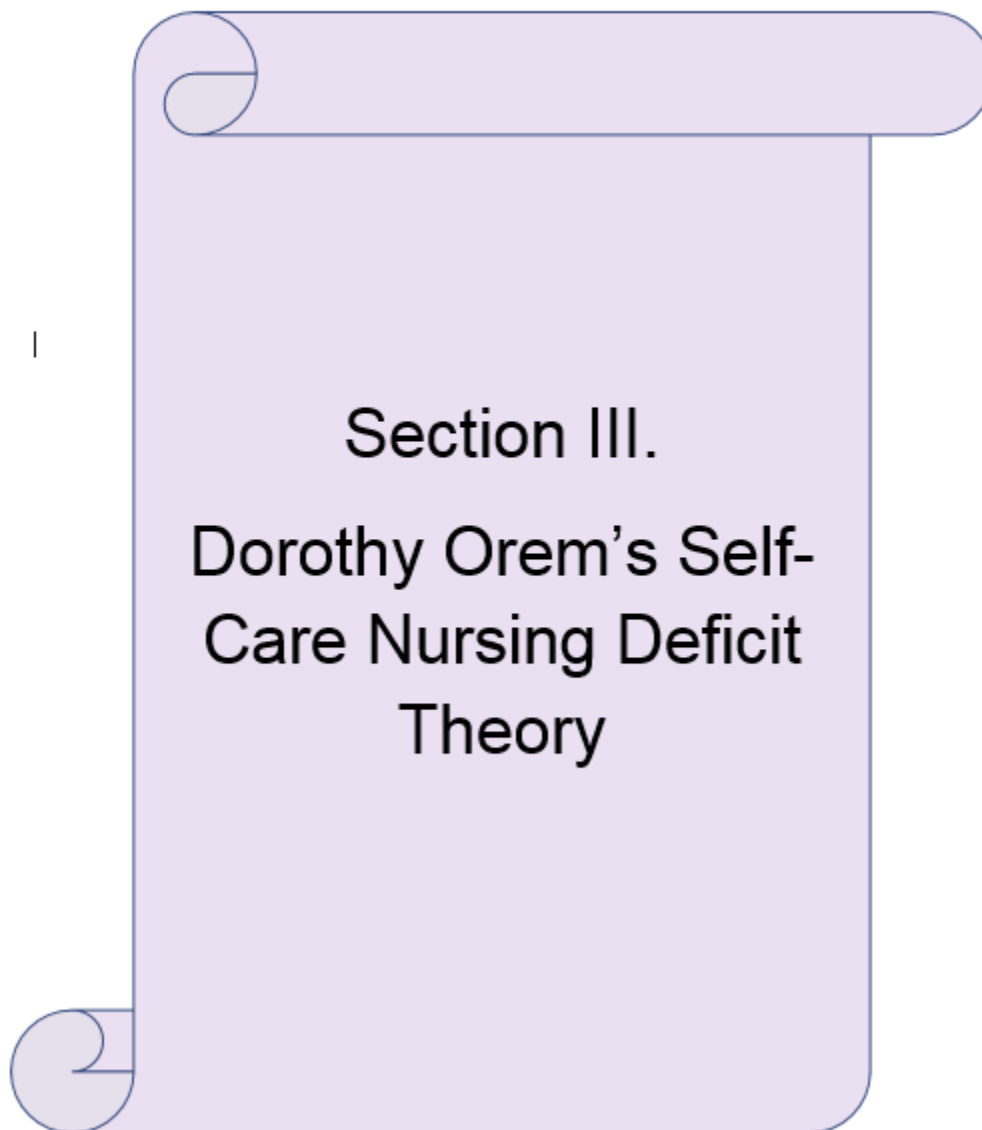
- The American Association of Diabetes Educators (AADE) recommends inpatient diabetes education focus on preparing diabetic patients to perform basic skills by discharge, with a plan for ongoing diabetes education in the outpatient setting (American Association of Diabetes Educators, 2016).

➤ *Teach-Back:*

- Used by health care professionals during patient education to assure the patient/caregiver understands the information by asking the patient/caregiver to state what they need to know in their own words. Also known as 'show me' (AHRQ, 2018).

➤ *Universal Precautions:*

- The term used by the AHRQ recommending nurses and other health care providers assume patients have low health literacy when providing education (AHRQ, 2017).

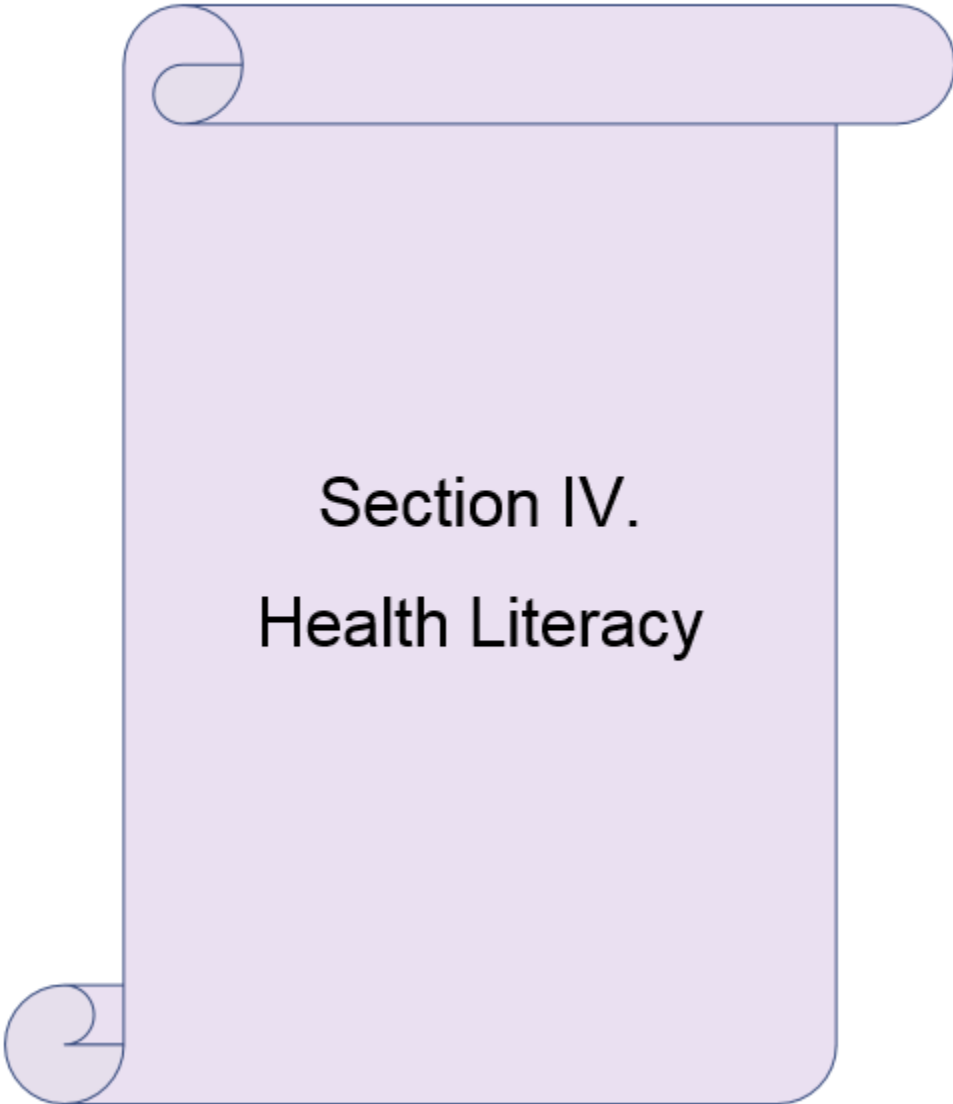


Dorothy Orem's Self-Care Nursing Deficit Theory (SCNDT)

Orem's SCNDT is based on the philosophy that patients have a desire to care for themselves, assuming a person's knowledge of health problems is necessary to promote self-care behaviors (Orem, 1991). Orem (1991) emphasized the value of patient education, with the nurse assessing the patient's readiness to learn as well as what the patient needs to know. Orem (1991) referred to the nursing process as a series of actions driven by a goal. The nurse must identify applicable goals that will lead to better self-care after discharge from the hospital, with a plan for follow-up education if necessary. Orem's theory is made up of the following components:

- Theory of Self-Care
 - The human potential to develop both motivational and intellectual self-care skills (Orem, 1991).
 - The assumption that humans can develop skills needed for self-care guides this in-service
 - Providing diabetes self-management education (DSME) expedites the knowledge, skills, and abilities required for self-care (Powers et al., 2016).
- Theory of Self-Care Deficit
 - Ties engagement in self-care and dependent self-care to a person's limitations in knowing what to do under situations, and how to do it (Orem, 1991).
 - Nursing is needed when the patient's self-care abilities are not able to meet their needs, leading to a deficit (Orem, 1991).
 - Diabetic patients in the hospital setting provide the health care team with the opportunity to evaluate self-care deficits and intervene with the right education at the right time (Powers et al., 2016).
- Theory of Nursing System
 - Provides a foundation for a healing relationship between the nurse and the patient (Orem, 1991).
 - The nurse determines the patient's diabetes management behaviors and implements a plan of care guided by the self-care agency, entering a

relationship with the patient and performing actions that are defined by their specific self-care needs (Sürücü & Kızılcı, 2012).



**Section IV.
Health Literacy**

Health Literacy

History and Definition

- In the 1990's, health literacy was included within the context of patient education, along with patient engagement and health promotion (Hoving, Visser, Mullen, & van den Born, 2010; Parnell, 2014).
- In 2003, health literacy was measured as a subsection of the U.S. Department of Education National Assessment of Adult Literacy Survey, at the request of Healthy People 2010, marking the first time adults were gauged for health literacy in the United States (Berkman, Davis, & McCormack, 2010).
- Initially, characteristics of health literacy focused on the patient's capacity to incorporate necessary mathematical and reading skills to something related to health (Parnell, 2010).
- The National Library of Medicine later defined health literacy as the "degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (Parker & Ratzan, 2010, p. 20).
- Newer components to health literacy include the ability to conduct an internet search, reading wellness pamphlets, calculating medication doses, and comprehension of verbal and written health care directives (Eadie, 2014).

Feasibility of Health Literacy Screening Tools

Health literacy assessment tools have been used in the past to screen patients for low health literacy. The Test of Functional Health Literacy in Adults (TOLFA) and the Rapid Estimate of Adult Literacy (REALM) are well-known and validated tools to measure health literacy (Eadie, 2014; Sand-Jecklin, Daniels, & Lucke-Wold, 2017). However, healthcare is a complex environment, and the Agency for Healthcare Research and Quality (AHRQ) recognizes the limitations of fitting time-consuming health literacy screening tools into everyday nursing practice. Therefore, nurses should adopt a **universal precautions** approach to patient education, practicing as though all patients have low health literacy (Ballard & Hill, 2016; Parnell, 2014; Sand-Jecklin, Daniels, & Lucke-Wold, 2017; Toronto & Weatherford, 2016; U.S.

Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2010). Hospitalization often places stressors on patients and caregivers who would otherwise possess adequate health literacy skills, further supporting the recommendation to assume low health literacy when communicating health information to patients (AHRQ, 2010).

Current Recommendations to Overcome Low Health Literacy

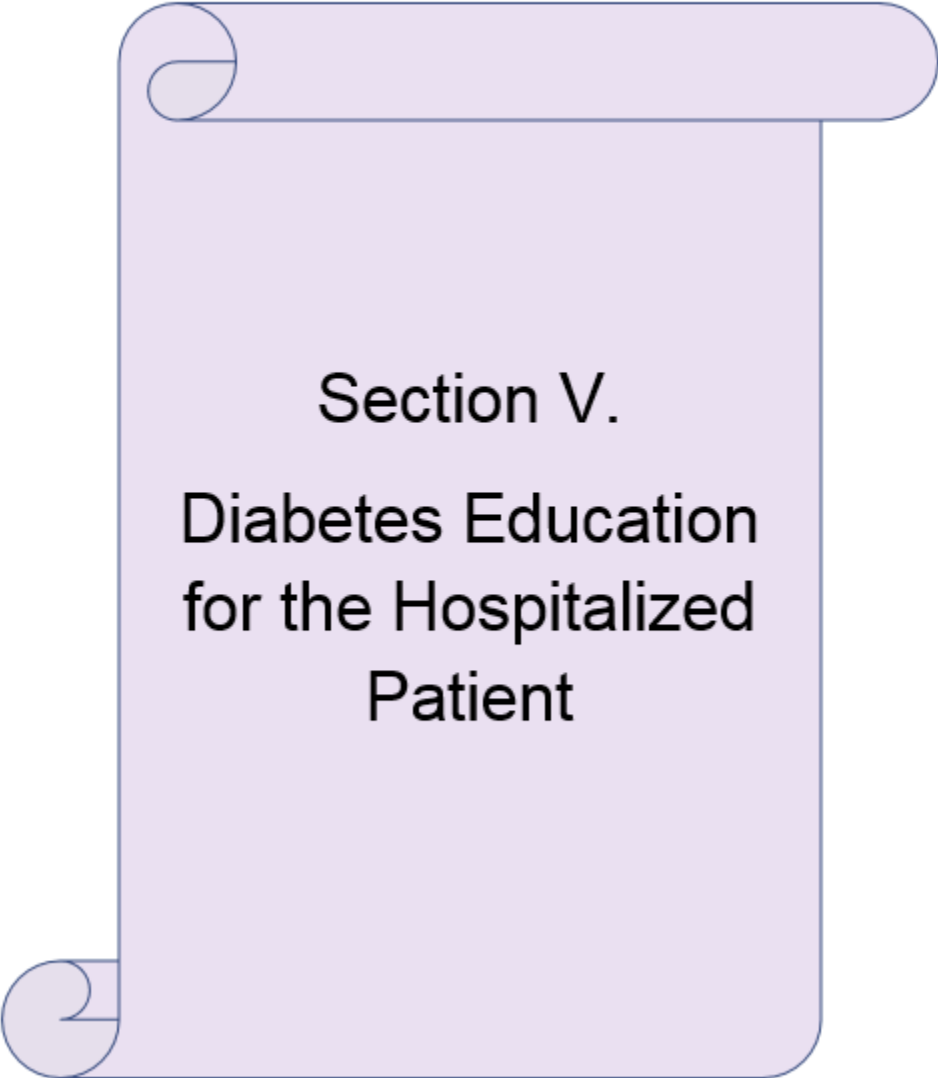
- Use simple language
- Provide education through a shame-free environment
- Provide small doses of education at a time
- Use materials written at a fifth-grade level
- Use strategies such as Teach-back (Abrams, Kurtz-Rossi, & Nielsen, 2012; Dickens & Piano, 2013; Macabasco-O'Connell & Fry-Bowers, 2011; Reddick & Holland, 2015; Toronto, 2016; Watts & Stevenson, 2017).

Teach-back: The Basics

- Ninety million Americans (47%) have difficulty understanding information provided to them by healthcare providers (Kornburger, Gibson, Sadowski, Maletta, & Klingbeil, 2013).
- Ha, Bonner, Clark, Ramsbotham, & Hines (2016) conducted a systematic review to evaluate the use of teach-back when delivering health education to patients with chronic diseases and found teach-back helped improved knowledge and self-care abilities.
- Ha et al., (2016) recommends all health care professionals use teach-back method for maximum patient understanding.
- The Joint Commission and National Quality Forum both recommend teach-back to evaluate whether patient/caregiver learning has occurred (Kornburger et al., 2013).

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- Teach-back is an approach used to ask patients what they understood from an educational encounter with a healthcare professional (Tamura-Lis, 2013).
- Patients and caregivers have improved understanding and retention when they can repeat information provided to them in their own words and demonstrate self-care skills prior to transitioning to the next level of care (Kornburger et al., 2013; Tamura-Lis, 2013).
- Teach-back is one of the top 11 evidence-based patient safety practices, endorsed by several healthcare organizations, such as the AHRQ (Tamura-Lis, 2013).
- When performed accurately, teach-back places accountability on the clinician for patient's comprehension of education, creating an environment of open discussion (Peter et al., 2015).



Section V.
**Diabetes Education
for the Hospitalized
Patient**

Introduction:

Diabetes is a complex disease, and those affected are required to make daily self-management decisions and perform complicated self-care actions (Powers, 2016). According to the literature, diabetes self-management education (DSME) is a priority for patients with this complex disease, however, detailed DSME should occur in the outpatient arena (Krall et al., 2016; American Association of Diabetes Educators, 2016). Yet, nurses must coordinate care and prepare patients to transition safely out of the inpatient setting. Principles for educating diabetic patients within the hospital setting have recently changed, leaving bedside nurses unaware of these trends and affecting their ability to provide the right education at the right time (Modic, Canfield, Kaser, Sauvey, & Kukla, 2012). Diabetic patients are often admitted to the hospital for reasons other than diabetes, providing nurses with an opportunity to assess diabetes management skills as an inpatient education plan is developed (Wexler et al., 2012). Patients with diabetes and low health literacy manage their disease poorly, leading to poor outcomes and frequent readmissions (Cavanaugh, 2011; Swavely et al., 2014).

Best Practices:

The AADE recognize the barriers acute care nurses face when providing DSME, such as high patient acuity, time constraints, shortened lengths of stay, other interventions with higher priority, and lack of confidence (Krall et al., 2016). Therefore, the latest recommendation is for inpatient nurses to teach "survival skills" related to medications, hypoglycemia and hyperglycemia management, nutrition, blood glucose monitoring, and referrals to outpatient DSME (American Association of Diabetes Educators, 2016; Corl et al., 2015; Hardee et al., 2016; Hasse et al., 2015; Krall et al., 2016).

Planning for transition from the acute setting begins at admission. As stated earlier, diabetic patients may be admitted to the hospital for reasons other than diabetes, offering the clinical team an opportunity to assess their current knowledge level of survival skills. The bedside nurse cannot assume patients who have a history of diabetes are able to manage their self-care effectively. Therefore, in order to achieve advanced certification in diabetes, the Joint Commission requires an initial and on-going assessment of the patient's comprehension of program-specific information (The Joint Commission, 2017). This can be accomplished through an assessment performed at admission, asking open-ended questions to ascertain the patient's current knowledge of survival skills (American Association of Diabetes Educators, 2016; Hardee et al., 2015; Krall et al., 2016). The outcomes of the assessment should state the identified learner and be used to create the education plan of care (Beck et al., 2017). The

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elements outlined in this section should be documented in the patient's electronic health record, thus providing an avenue of communication among other health professionals treating the patient (ADA, 2018). The discharge plan will include referrals to outpatient DSME, if indicated.

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