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Kimberly Sanders Hebert

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the review committee have been made.

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Walden University
2018

Abstract

Validating a Home Health Care Staff Educational Module for Wound Treatment and Documentation

by

Kimberly Sanders Hebert

MS, South University, 2012

BS, Prairie View A&M University, 2008

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

August 2018

Abstract

Although guidelines and minimal standards for the care and documentation of wounds in home health care settings in the United States are available, there is a lack of compliance among many home health care agencies (HHAs) with regard to the accuracy of wound documentation and care of wounds. Failure to follow guidelines for wound care according to Centers for Medicare and Medicaid Services and Home Health Outcome and Assessment Information System standards could result in loss of revenue for HHAs, improper treatment of wounds, and legal ramifications. The purpose of this doctoral project was to develop and validate a staff educational module on wounds and wound documentation for an HHA. Benner's from-novice-to-expert model was the conceptual framework for understanding nurses' matriculation. The practice-focused question focused on whether a wound staff educational module increased the home health care nurse's knowledge about wounds and wound documentation. A 5-level Likert scale was used by an expert panel to validate the staff educational module. Descriptive analysis was used to evaluate the data. The results of the survey supported implementing the educational module with recommendations (overall percentage 93% [4.4]). The findings of this project contribute to social change by increasing nurses' knowledge of wound care, improving the quality of wound care, increasing reimbursement and revenue, and decreasing the cost of care for wounds.

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Dedication

This project is in dedication to the late Dr. Alice O. Griffin, an avid educator and inspirational speaker. Dr. Griffin encouraged me to reach the highest heights in whatever I decided to do in life. Most of all, she encouraged me to search for knowledge for, in it, I would find wisdom and freedom. Her greatest accomplishment was being my grandmother.

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Section 1: Introduction

Best practices in wound care prevention and treatments are a current concern in the home care environment, health care practioners. Errors can lead to poor client outcomes through improper medical treatment based on inaccurate and omitted documentation. Officials at the Center for Medicare and Medicaid Services (CMS) also determined that lack of wound documentation and inaccurate documentation can pose a financial burden to the agency and its clients (Baranoski & Ayello, 2016).

In this doctoral project, I addressed the need for education on wounds and wound documentation in the U.S. home health care setting (HHS). For the project I developed, I used an expert panel to validate an educational module to be used in the HHS. The goal of the educational module was to decrease the knowledge gap in wounds and wound documentation. It was also the goal of the educational module to assist the skilled nurse in becoming a competent practitioner in the documentation of wounds.

Problem Statement

Nursing Practice Problem

For years, nursing documentation has been a concern, for government agencies, and health care professionals. Errors in documentation may result in lack of proper treatment for the client and ultimately a lack of reimbursement for services rendered (Baranoski & Ayello, 2016).

It is common for facilities and legal agencies to review nursing documentation during an investigation or for quality improvement (Ayello & Baranoski, 2014). Even

though institutions may have guidelines, there are minimal standards for Boards of Nursing about documentation in the U.S., according to (Baranoski & Ayello, 2016).

Nurses from all practice backgrounds have expressed concerns about receiving inadequate education for wound treatment (Ayello, Zulkowski, Capezuti, Jicman, & Sibbald, 2017). Although nurses report being exposed to wounds and have some knowledge through experience, in surveys, the majority of respondents have stated that that there is not enough education on wounds and wound documentation (Ayello & Baranoski, 2014; Ayello, Zulkowski, Capezuti, Jicman, & Sibbald, 2017). Medical facilities, schools, and government agencies are charged with the task of creating innovative ways to allevitate this knowledge gap.

The overall cost of a nurse not being properly educated on wounds and wound documentation can be passed on not only to the client but to the facility as well. The client receiving care from a nurse who is not properly educated on wounds could develop complications that could not only cost the client monaterily, but physically as well. On the other hand the facility must provide care to the client in treating the wound which cost the facility more money, and the posibility of not being reimbursed on the cost of care by CMS. Following guidelines set by CMS is important as facilities and, specifically, home health care agencies (HHAs) are reimbursed based on their documenation of care (Ayello et al., 2017).

Local Relevance of the Problem

In an extensive review of skilled nurses' (SN) documentation of wound care of clients; administrators of an HHA identified several concerns; which I learned about in interviews conducted at the agency in June 2015. These concerns were

- inaccurate documentation of wounds (incomplete documentation, measurements, odor, color, drainage, or changes),
- lack of documentation on client/family education of wounds,
- lack of documentation of communication to the provider if current wound care is promoting healing of the wound,
- documentation not meeting the minimal CMS and The Home Health Outcome and Assessment Information Set (OASIS) standards, and
- the loss of revenue based on inaccurate documentation.

As a result of the concerns in the interview the decision was made that the SNs needed more education on wounds. It was also determined that with this education on wounds, how to document the wounds should be included. Include a follow-up sentence or two here.

Significance for Nursing Practice

I developed an educational module on wounds and wound documentation to decrease the knowledge gap on wounds in the HHS. The significance of this project is supported by Ayello and Baranoski (2014) who discussed the need for education on wounds and wound documentation. In the survey they conducted, Ayello and Baranoski found that the majority of nurses, regardless of their background, educational level, or

experience, desired more education in general on wounds. The survey also showed that most nurses felt like they did not receive enough education on wounds in their nursing schools curriculum (Ayello & Baranoski, 2014). The authors concluded that wound care practices evolve, and there is a need for nurses to stay current in their practice to improve patient care and outcomes.

The Home Care Association of Florida (n.d.) reported that reimbursement of services given is based on the client/patient OASIS assessment and the agency's ability to comply with CMS guidelines. OASIS contains data items developed for measuring patient outcomes for the purpose of performance improvement in home health care. OASIS assessment are collected at specified time points for adult (age 18 or over) and CMS clients (Home Care Association of Florida, n.d.). These assessments must be done at their scheduled time and completed accurately or funds may be withheld from the agency.

The need for education on the documentation of wounds is further supported by Thomas' (2012) study of an evidence-based pressure ulcer educational program (EduP) designed to improve patient outcomes for pressure ulcers. Thomas concluded that the nurse must be able to properly identify and document all elements of these wounds. These wounds (pressure ulcers) should be monitored and their progress should be tracked accordingly to improve clients' outcomes and their quality of life, according to Thomas. Follow up education is also recommended in order to ensure the competency and knowledge of wounds.

Purpose Statement

The purpose of this doctoral project was to validate an educational module for nurses on wound care and documentation. A team of experts included a certified wound care nurse, an administrator from the HHA, a nurse who contributed to the project, a home health skilled nurse, and a nurse educator reviewed the educational module. The expert panel provided feedback on the content and gave recommendations for the module.

Gap in Nursing Practice

According to CMS reports, errors persist in wound documentation even with current guidelines (Baranoski & Ayello, 2016). Nurses from all educational levels have stated that there is still a need for more formal education on wounds and documentation (Ayello & Baranoski, 2014). The goal of this doctoral project was to validate an educational module designed to close the gap in knowledge deficits on wounds and wound documentation.

Practice-Focused Question

I sought to answer the following practice-focused question: Will a wound staff education module validated by an expert panel increase the home health care nurse's knowledge of wound identification and wound care documentation? I addressed the knowledge gap in wounds by developing an educational module on wound care and wound documentation. Having an expert panel to validate the educational module was helpful, I believe, in making the educational module more valuable to the home health care SN.

Nature of the Doctoral Project

This project involved the validation of a staff educational module called Wound Care and Documentation Module for the HHS (WCDMH; see Appendix A). I submitted the staff educational module to an expert panel electronically for validation, and the panel used a Likert scale to evaluate the module. The panel determined that the staff educational module would increase the home health care nurse's knowledge of wounds and documentation. I used the descriptive statistics to perform the statistical analysis. An overall percentage of the responses were taken. A more detailed explanation of the project approach is included in Section 3. I anticipated that the results of the expert panelist evaluation would show that the module was valid and that it would increase the home health care nurse's knowledge on wounds and wound documentation.

Significance

Impact on Stakeholders

The current stakeholder for this project was the local HHA; potential stakeholders could be other HHAs and health care facilities. Considering the knowledge gap on wounds and documentation in the HHS (Guidry, 2015). this project could have a positive impact on home health nursing. Providing more education for nurses can improve client outcomes and decrease nurses' insecurities about providing care to clients with wounds (Ayello et al., 2017). In addition, implementing this educational module could decrease the cost of care for wounds in HHAs and prevent the retraction of funds by CMS.

Contributions to Nursing Practice

This project's practice-related contributions include increasing nurses' knowledge of wounds and documentation. In developing the project, I sought to identify best practice and evidence-based practice as it relates to wounds. Cost is a major concern for health care facilities overall (Schaum, 2016). Combining education and best practice may help to decrease further complications and minimize the cost of wound care (Ayello et al., 2017). In addition, having an expert panel validate the educational module may support the use of the program in the future.

Potential Transferability to Similar Practice Areas

This project addressed overall wound care and documentation. The need for education on this topic is not limited to the HHS, as addressed in the literature review in Section 2. Facilities have policies and procedures that are specific to their requirements; however, the basic knowledge and documentation of wounds remains the same across facilities (Baranoski & Ayello, 2016). I designed this educational module so that the staff at the facility could change it to meet facility requirements; as well as update it as wound practices evolve.

Positive Contribution to Social Change

Wound care is challenging and ever changing as new evidence-based practice comes to the forefront (Ayello & Baranoski, 2014). Dale and Wright (2011) indicated that continuous instruction, accompanied by planning and consistency in the implementation of the wound care programs of HHAs, is necessary. Improving nurses' knowledge of wounds and wound documentation should fulfill the guidelines of

governing agencies such as CMS and subsequently result in HHAs being reimbursed funds, thereby increasing their revenue.

Summary

Doctor of Nursing Practice (DNP) graduates have a responsibility to promote the quality of health care in nursing (Zaccagnini & White, 2011), and they are in a position to have an influence on wound care by using evidence-based practice (EBP) guidelines and staff in-services to improve compliance (Zaccagnini & White, 2011). It is the responsibility of the DNP graduate to seek out challenges in the nursing practice and address them. The DNP graduate should also demonstrate concern for education not only for the patient but also for future nurses and colleagues (American Association of College of Nursing, 2006). It is also the responsibility of the DNP graduate to present these findings at a higher level (locally to internationally; and to government and government agencies) (Zaccagnini & White, 2011) so that nurses can provide quality health care to all patients.

Section 2: Background and Context

Introduction

This doctoral project addressed the practice problem concerns of inaccurate documentation of wounds, lack of wound education in the HHS, and the loss of revenue based on documentation errors. The practice-focused question was, will a wound staff education module for nurses increase the home health care nurse's knowledge of wound care documentation according to an expert panel? To address the practice problem at the project HHA and answer the practice-focused question, an expert panel validated a staff educational module, WCDMH. In this section, I will discuss my use of Benner's (1982) from-novice-to-expert model as a framework for the project. I will also discuss the relevance of the project to nursing practice and the local background and context as well as my role in the project.

Literature Review

I reviewed key literature to assist and support the development of an educational module on wounds and wound care documentation for clinicians who are home health care nurses. The sources include studies whose authors used group experts to validate and approve educational modules on wounds for use in the HHS. This review includes peer-reviewed articles published from 2012 until 2017. To identify sources, I used the following databases: EBSCOhost, CINAHL, and PubMed. I used the following keywords: *wounds*, *wound care*, *wound documentation*, *home health*, *wound education*, *validation*, *education*, *modules*, *expert panel*, *survey*, and *inaccuracies in the documentation.*

Several themes are present in these sources of evidence. One theme, which supports the discussion in Section 1, is that home health nurses and nurses have knowledge gaps in general on wounds and wound documentation. Another theme addresses the lack of education provided to nurses in the HHS. A concern about the cost to maintain wound care, and also the cost and legal ramifications of inaccurate care and documentation of wounds, is another theme.

First, the sources of evidence include discussion of nurses not following protocols and guidelines put in place to decrease inaccuracies in wounds and wound documentation. These inaccuracies could result in poor patient outcomes (Korzendorfer & Cantu, 2012). Second, the literature reflects the need for current EBP on wounds and wound documentation. Furthermore, the literature provides insight about the need to implement standardized wound assessment and documentation tools as well as support for nurses receiving education on how to use the tools properly for the tools to be effective. Most facilities in the United States have transitioned to EHRs to decrease errors in documentation (Qian & Yu, 2014). However, according to the literature I reviewed, there is not a significant difference in the errors in written documentation versus EHR. Cost is a major concern for the treatment of wounds; in the United States alone, 25 billion dollars is spent annually on wound treatment (A. Thomas, 2012).

In addition to concerns about high costs, there are legal concerns related to wound care. The HHA is reimbursed based on the documentation of wounds (Yankowsky & Fife, 2013). HHAs are cited by CMS for fraud if documentation does not reflect the care rendered, resulting in a loss of revenue (Yankowsky & Fife, 2013). The literature I

reviewed also includes discussion of the nurses' desire to be further educated on wounds in all levels of nursing, and it supports the implementation of educational modules and in-services. In addition, the literature addresses the use of expert panelists to validate an educational module. Some authors noted the lack of literature on the use of expert panelists to validate educational modules on wounds and wound documentation.

Inaccuracies in Wound Care and Documentation

Although inaccurate documentation is a concern for health care facilities, lack of documentation could be just as damaging. In 2016 CMS denied 92% of claims submitted on wounds (Schaum, 2016). According to the literature, there were many inaccuracies in the documentation of these submissions. The reported reasons for denied claims were (a) no evidence of wound debridement in the documentation, (b) the documentation did not discuss Stage III or Stage IV wounds with moderate to high exudate, (c) basic wound assessments were missing "type, location, size, depth, or drainage amount" (p. 344), (d) orders did not have the quantity in them, (e) orders were missing the frequency of the dressing changes, and (f) medical records not submitted (Schaum, 2016).

Nurses should document in a way that anyone who accesses the client medical record can see a clear picture and explanation of what the nurse has done or assessed. If documentation is not clear it may cause erroneous thinking, which could cause a improper treament of wounds. Improper treatment of wounds may produce legal actions, lawsuits, and changes in gonvernment regulations on wound care. Korzendorfer and Cantu (2012) discussed the regulatory guidelines for minimal documentation in long-term care. The authors expressed that workers need guidance on what needs to be documented

(Korzendorfer & Cantu, 2012). The *State Operations Manual Guidance to Surveyors for Long-Term Care Facilities* states the requirements for the minimal documentation standards for wounds and pressure ulcer risk assessment (Korzendorfer & Cantu, 2012). Daily documentation is required for ulcers that do not have dressings. Photography is acceptable if the facility has protocals in place for it (Korzendorfer & Cantu, 2012; Hampton, 2015).

Furthermore, a checklist or standardized forms makes it easier for the health care providor to document wounds. However, Medicare is concerned that some forms lack a designated signature line; Medicare requires a licensed medical professional to evaluate wounds (Hampton, 2015). If the record does not have documentated proof that a health care professional assessed the wound, the record does not meet CMS standards (Korzendorfer & Cantu, 2012). Having a document that is consistent and supports continuity is extremely important. The medical record contains the documentation of multiple health professionals; if the record is not consistant and organized, information may be missed, or there may be contradicting documentation (Korzendorfer & Cantu, 2012).

Conflicting wound measurements on wounds between two nurses can a misdiagnoses. If the documentation of the wound healing is not accurate, the health care provider could prescribe the wrong treatment for the client. Incomplete notes from physicians accompanied with the inacccurate documentation of the wound is a concern governing agencies and facilities. Mistakes such as these put the client at risk and are

even more dangerous for a client who is medically complex (Korzendorfer & Cantu, 2012).

The theme of proper measurement of wounds and accurate documentation is prevelant throughout the literature. Sylvie Hampton in her six part series on wounds, addressed the main topics that nurses question in wound care (Hampton, 2015). Specifically in part four Hampton (2015) emphasizes the necessity for accurate documentation and wound measurent. The example given discusses the Nursing and Midwifery Coucels Code (NMS, 2015), where clear "codes" or guidelines were given on documentation. Not only the codes state that the documentation had to be clear, concise and timely; they also discussed the delegation of documentation to other health care assistants (HCAs) and students. The nurse does not have to co-sign once the HCA completes training, however it is the RN's responsibility to make sure that documentation is prompt and complete. All in all the literature says that clear and accurate documentation is needed to properly track wound healing and progress (Hampton, 2015).

Standardized Wound Assessment and Education

Providing education on the use of standardized forms whether electronic or not is important. Staff must understand how to use the tool to optimize the use of the tool. Standardizing wound documentation and incorporating tools for documentation decreases inaccuracies in the documentation.

Dowsett (2009) discovered that there were no real standardized approaches to wound assessment and documentation in the United Kingdom (Shepherd & Nixon, 2013). Shepherd and Nixon (2013) devised a tool that would assist in the standardization

of wound care and documentation called the Wound Healing Assessment Monitoring (WHAM) tool. The WHAM tool derived from the PUSH (Pressure Ulcer Score Healing) tool that adapted from the National Pressure Ulcer Advisory Panel (NPUAP, 1998) (Shepherd & Nixon, 2013). The WHAM tool encompasses the standardization of wound assessment and documenation by using evidence-based practice and visual imaging. Sherpherd and Nixon also implemented an educational program to teach the nurses how to use the tool accurately. As a result, the authors discovered that use of the WHAM tool, improved the quality of wound care and documentation (Shepherd & Nixon, 2013). The implementation of the tool made it easier for the clinician to not only monitor outcomes, but also keep track of clients wound healing.

Electronic Health Records

Many health care facilities; inpatient, outpatient and home health based have adopted some form of health care EHRs. The results of a study on pressure ulcers on a medical-surgical unit concluded that; wound documentation whether electronic or written did not reflect the policies and guidelines of the facility (Li & Korniewicz, 2013). Li and Korniewicz (2013) findings were that eleven patients (N=139) formed pressure ulcers; when comparing the EHR to the written documentation discrepancies were noted in the nursing documentation.

Qian & Yu (2014) determined that for EHRs to be effective in wound documentation, there must be an efficient tool/instrument implemented into the system. So the authors performed a direct observational study on the use of the EHR to document wounds in a residential nursing home. They discovered there were deficiencies in the

EHR, and the functionality did not meet the needs of the nurses (Qian & Yu, 2014). These barriers caused frustration and lack of accurate documentation. Also, they lacked the mobile devices needed at the point of care, which resulted in the nurses reverting to the use of paper (Qian & Yu, 2014). Providing education on the tool used; decreases the knowledge gap, and ultimately would decrease the frustations seen. Having the nurses' educated encourages buy in, decreases errors and could prevent them reverting to the use of the paper.

Standardization in the EHR. The Journal of Wound Ostomy and Continence Nursing, published a study using the Dephi techinique (Kinnunen, Saranto, Ensio, Iivanainen, & Dykes, 2012). This study's obejective was to develop and validate an electronic documentation system. This study selected an expert panel of nurses and medical professionals through an electronic survey; the participants had on average atleast 18 years of experience in wound management (Kinnunen, Saranto, Ensio, Iivanainen, & Dykes, 2012). The researchers wanted to know what the expert panelist considered pertainent or important documentation. To determine the level of importance of each theme the authors had two rounds of questionioning, and used the item-level content validity index (I-CVI). The I-CVI indicates the, "interaterater agreement and level of consensus (Kinnunen et al. p. 399, 2012)." In all the study discussion determined that when standardizing the documentation tool, there was a lack of "uniformed wound terminolgy". To conclude the study determined standardizing wound terminolgy can improve documentation on wounds. There were many advantages noted in using the standard template for documentation. It met legal requirements and guidelines for

documantaion, it facilitated wound management, it can be adapted to an electronic medical record; and it can generate a standardized database for research (Kinnunen et al., 2012).

Cost and Legal Concerns

The majority of the articles used for this study discuss the legality of improper wound documentation and the cost and loss of revenue. According to Ayello & Baranoski (2016) CMS is a federal government agency that is apart of the Department of Health and Human Services, because CMS provides over one half of financing for health care cost states must follow with the federal regulations. These regulatory agencies set forth the requirements for not only care of the client, but documentation as well; which in turn affects reimbursement (Ayello & Baranoski, 2016).

White (2014) reports with the treatment of wounds that continue over months 650,000 people required treatment costing approximately three billion dollars. Lindsey (2010) reports that "1.5% of total health expenditure is targeted at chronic leg ulcer treatment, with most of it being delivered by community nursing services (White, 2014, p. 52)." Hence the need to increase education in not only community nursing but HHAs as well.

Home Care Association of Florida (n.d.) reported the cost for HHAs to care for wounds has been extremely high. For the HHA to receive reimbursement the agency must have an accurate OASIS (Outcome and Assessment Imformation Set) assessment, which is submitted to CMS (Home Care Association of Florida, n.d.). The agency must document the assessment of the wound and the reevaluation of the wound. Furthermore

the agency must address the OASIS questions, four of the questions address wounds and need to be answered to receive reimbursement (Home Care Association of Florida, n.d.).

Yankowsy and Fife (2013) discuss the ways to avoid legal ramifications in home health services and wound care. Nurses in the HHS must understand that for clients to receive home health services, especially as it pertains to wounds the client must be homebound as defined by CMS (Yankowsky & Fife, 2013). It is important that when nurses are taking orders and assessing the client on admission; the extent of the wound is documented, and the clear documentation of “medical necessity” and “homebound” status is stated. If these components are not documented, there could be legal repercussions for the agency as well as the clinician. Ultimately if services being provided do not match what is ordered, the agency will be responsible for reimbursing CMS for services rendered (Yankowsky & Fife, 2013).

Further Education

Thomas (2012) conducted a study on implementing an educational program on pressure ulcers and wound care documentaiton in a long-term care facilities. The findings determined that staff retained knowledge from the first session to the next session and that there was an increase in nursing knowledge and accuracy in comprehensive wound documetnation (Thomas A. , 2012). The description of the wounds improved from (59.5% to 82.7%) in elements of size, (43.9% to 70.5%) for exudate, and (42.7% to 63.1%) for tissue type (Thomas A. , 2012).

There are also concerns that many nurses do not know the current practices for wound care and thus the inaccuracies in the documentation of wounds.

In an update from *Nursing2014's* survey results, Ayello & Baranoski (2014) reported 642 nurses participated in this survey and it was determined that: a) wound care is not a pertinent topic in nursing school, b) the student nurses need more education on wounds, and the nurses need more reviews and updates on current wound care practices. c) home health nurses' exhibit confidence in performing wound care; however, they did not know the best way to treat the wounds. Nurses' knowledge of wounds both LVN (licensed vocational nurse) and RN came as a result of in-services, journals, and the internet, and d) home health agencies did not include enough education for wound care in orienting new home health nurses. Most of the agencies because of the cost would limit dressings to simple gauze methods.

Ayello et al. (2017) address the current state of the lack of education on pressure injuries for nurses in the United States. The authors use the framework of Dr. Patricia Benner's novice-to-expert; to explain the process that the nurses go through to reach clinical expertise. They further more discuss how novice nurses do not have previous experience to build upon ultimately making it difficult for them to grasp new context (Ayello et al., 2017). Hence facilities requiring new nurses to go through internships and transitional programs when first employed. Having some form of competency testing is a necessity; however, it needs to be coupled with continued education. Ayello et al. (2017) Identified numerous educational gaps on pressure injuries. First, RNs and student nurses identified etiology and cause of pressure injuries at a higher rate than that of "assistant nurses. Moreover all of them scored high on the nutrional assessment, but RNs and student nurses scored low on "pressure injury classification" and "clinical observation.

To resolve this issue the author recommends that the nurses that are practicing begin education on these subjects and instructors review the curriculum for knowledge gaps on these subjects (Ayello et al., 2017). Classroom based training and sessions take nurses away from clinical time, it is not considered the most effective way of education. Incorporating mobile apps as interactive educational modules is one of the recommendations. Another recommendation is the use of app technology to offer smaller "bite-size" modules. The smalled educational modules were offered to a long-term care (LTC) facility that reported going 100 days without avoidable pressure injuries. After implementing the educational module the LTC reported they went 200 days without a reported avoidable pressure injury (Ayello et al., 2017). The authors summized that interactice education is the best-practice for nursing education. They say less effective techniques include learning at the bedside (trying to connect new knowledge while at the bedside), and "reinforcement" using and expert colleague to help fine tune a new clinical practice when it is not working (Ayello et al., 2017).

Types and methods of education play an important role in decreasing the knowledge gap of nurses. In a study examining the effectiveness of "face-to-face inactive lecture" on pressure ulcers (PU) using a comparison of pre-test and post-test

Expert panel and validation. In performing the search for articles supportive of the topic chosen on wounds and wound documentation, there were limited current sources. Also there are limited sources on expert panel validation of educational modules for the HHS as well. The following will address general sources for validation of tools and educational programs.

Educational programs and models should be evaluated for their effectiveness. Before implementing such programs and modules experts in the area of study should review and validate them for their use. Moattari, Moosavinasab, Dabbaghmanesh, and Zarif, and Sanaiey (2014) found that the use of experts to develop the electronic modules and the planning and development of a web-based diabetes educational program received postive responses from the participants. When difficult information is taken and curtaled to the learner, in combination with expert input, outcomes are more favorable.

Current Evidence-Based Guidelines

In an article supporting recommendations for conservative sharp wound debridement (CSWD) Rodd-Nielson et al. (2013) an expert panel developed policies and recommendations for the implementation of the evidence-based CSWD. The author and expert panel suggest that policies on CSWD incorporate guidelines on documentation. They also recommend that the documentation includes the forms of consent, revisiting the policies and procedures and way to document adverse events (Rodd-Nielson, et al., 2013). The expert panel recommended: "1) procurement of appropriate equipment, 2) consultation with end user for procurement decisions, 3) specifications of limitations on settings in which CSWD may be performed, 4) documentation of anatomical locations or wound etiology types that may be debrided, 6) identification of absolute and relative contraindications to the procedure, 7) descriptions of safety measures to be taken when performing CSWD, 8) descriptions of occupational health and safety/ergonomic measures to be taken when performing CSWD, and 9) description of procedures for cleaning and reprocessing of the equipment (Rodd-Nielson, et al., 2013)."

The NHS (National Health Services) reported 2.2 million wounds managed in 2012 and 2013; and a £4.5 billion - £5.1 billion cost (Guest et al., 2015) in the management of these wounds (Adderly, Evans, & Coleman, 2017). With these given numbers, England had to address the concerns of the management of wounds to the health care community. The NHS England (2016) began and initiative Leading, Change, Adding Value (Adderly, Evans, & Coleman, 2017). Through this initiative an expert panel of 17 nurses and doctors with experience in wounds examined the literature review of Dr. Susanne Coleman's to determine what topics and domains should be placed in the wound assessment minimal data set (MDS) (Adderly, Evans, & Coleman, 2017). The goal was to develop an evidence-based MDS that would be more consistent and thereby facilitate improved management of wounds and monitoring of the healing process. Ultimately, the initiative showed the use of the economic management of wounds and their cost; to guide the improvement of the care for wounds and their management. The desire of the team and the expert panelist is to improve wound management using collaborative efforts on policies in combination with the use of an EBP MDS tool for wound assessment (Adderly, Evans, & Coleman, 2017).

In a cross-sectional study of the Sunshine Coast Clinical Research Network 18 general practice completed a survey on wounds and the billing item claimed (Whitlock, Ryan, Morcom, Spurling, & Janamian, 2014). The researchers calculated cost of wound care based on: 1) the time the nurse spent on the visit at an hourly rate of $31.11, 2) the cost of the dressing according to SSS Australia (a health care supply company), and 3) the cost of the care administered by the general practitioner (GP) at a rate of 65% of all

items billed (Whitlock, Ryan, Morcom, Spurling, & Janamian, 2014). They then took the net income and subtracted it from to the total cost that billed for wounds. Majority of the cases report that the cost of the wound care episode was greater the the total income. Although materials used for the episodes of care only accounted for one third the cost of the wounds. The concerns remain that to decrease such cost materials will be cut, and this will effect best-practice (Whitlock, Ryan, Morcom, Spurling, & Janamian, 2014). Moreover, placing the cost on the client or cutting cost by using cheaper materials pose even greater concerns. General practitioners (GP) are having to choose between the dressing that is more cost effective, or the dressing that is best for the healing of the wound. The recommendations are that the practitioners review their policies on dressings, confirm the use of best-practice, while maintaining "financial viability" in their practice (Whitlock, Ryan, Morcom, Spurling, & Janamian, 2014).

Having nurses educated on wounds is imperative. Rodd-Nielson et al. (2013) determined, first, there was much confusion on "sharp debridement" it was unclear whether are not this debridement was considered conservative or surgical. Conservative sharp wound debridement (CSWD) is considered cost effective, and is a preferred method of debridement for diabetic wounds and venous ulcers; but may be used in other wound cases (Rodd-Nielson, et al., 2013). Secondly, the expert panel strongly discourages using a self-taught method, stating much of the literature documents the negative implications of nurses practicing CSWD without being properly trained (Rodd-Nielson, et al., 2013). To conclude the expert panel strongly recommends that nurses have extensive education on wound care. Furthermore, the education needs to be specific

to the nurses' practice setting. Hence, the need for home health care nurses having in-services specific to their practice.

The International Journal of Palliative Nursing 2013 released an article that presented an emancipatory action research (EAR) study, which allowed the participants to investigate for themselves their practice. In this study, the community nurse expresses the desire to have more education on managing wounds (Willis & Sutton, 2013). To their knowledge for palliative care of wounds, the accepted practice did not promote wound healing at the time. With understanding the district nurses' (DN) desires, the research supported the need for educational resources that are current and evidence-based information to support wound management decision in caring for the palliative patient with wounds (Willis & Sutton, 2013).

The American College of Wound Healing and Tissue Repair along with The Angiogenesis Foundation addressed the patient-centered outcomes in wound care (Foundation, 2013). According to the authors' Executive Summary the expert summit found that clients do not feel engaged in their care. They state that there needs to be more communication with the client concerning chronic wounds. Payers are able to ensure that funds are being allocated properly. They want clients to be an "integral part" of the wound healing process (Foundation, 2013). There has been limited research funding for wound care according to Foundation (2013), it is stated that this is a result of poor understanding of the wound process which leads to decrease quality in patient care. Moreover, the recommendation, according to the author, is validation of wound care methodologies should be validated to ensure positive patient outcomes. Criterion and

guidelines must be established and implemented accordingly, this will ensure that best practice and EBP is being used to provide high quality wound care (Foundation, 2013).

In a research study of 150 nurses in Turkey, the author used linguistic validity to establish the validity and reliability of the Turkish version of the Pressure Ulcer Prevention Knowledge Assessment Instrument (PUPKAI-T) (Tulek, Polat , Ozkan, Theofanidis, & Togrol, 2016). This instrument is a multiple-choice tool used to assess the "knowledge and prevention of pressure ulcers. The content validity of the instrument was 0.94 and the correlation coefficients were between 0.37 and 0.80. The item difficulty scored 0.21 and 0.88; the discrimination indices were 0.20-0.78, with an internal consistency of 0.083 (Tulek, Polat , Ozkan, Theofanidis, & Togrol, 2016). As a result, the PUPKAI-T is valid and reliable; the tool is a useful tool for determining educational needs of nurses on pressure ulcer prevention (Tulek, Polat , Ozkan, Theofanidis, & Togrol, 2016). Placing tools through rigorous testing, and education the nursing staff on how to use the tool can make for better client outcomes.

Literature Review Summary

There is a plethora of literature that supports the need for wound care education. Ascertaining the literature for this research proposal posed a slight difficulty. There is limited literature on wound care and wound documentation in the HHS; there is also a need for more articles on education for home health nursing. Even when addressing the use of expert panels for validation, again there were little to no articles that addressed the subject topic specifically.

The use of standardize tools to document and manage wounds were prevalent. The literature states that the use of standardized tools if evidence-based, whether electronic or written can improve client outcomes. The improvement of client outcomes is a result of proper communication, timely documentation, and accurate assessment of wound healing within the documentation.

A general theme throughout the literature review is increase in the cost to care for wounds. The literature review discusses the need for documentation to be accurate so that agencies can be properly reimbursed. Along with being properly reimbursed there could be legal ramifications for agencies who do not properly document and care for wounds.

Evidence in the literature represented a discomfort in nursing students, novice nurses, and experienced nurses. There is a consensus that with educational modules and in-services that are consistent and up-to-date with current nursing practice for wound care, the nurse would be more comfortable in the delivery of wound care and documenting their findings.

In all, the doctoral project supports the need for educational modules and in-services on wound care and wound documentation in the HHA; to decrease the knowledge gap in home health nurses. The literature also determines that these sessions should be frequent taking into consideration the constant changes in wound care therapy.

Lastly, expert panels should be used to validate educational programs prior to implementing them. The selection of the expert panels should be carefully made; understanding that a universal agreement is required to implement the educational program. Overall, there should be a follow-up ensuring that the implementation of the

educational module is not too conservative and is realistic for the facility in which it is being implemented.

Concepts, Models, and Theories

Theoretical Model

Most nurses understand the need for ongoing education. This need is not limited to just our clients/patients, but also for our colleagues and co-workers. Benner's from-novice-to-expert model supports the importance of continued education, without respect to the length of time and experience of the nurse's practice (Ayello et al., 2017). Benner's model explains the transition of the nurse through the five stages of development as the nurse reaches clinical expertise. These stages are a novice, advanced beginner, competent, proficient, and expert (Thomas, et al., 2015). Dr. Benner's model details how the nurse progresses through the different stages developing their skills acquisition and knowledge. The model also explains teaching strategies for each stage of the model (Davis & Maisano, 2016). Because Dr. Benner's model is used in many areas and aspects of nursing, the use of it as a theoretical model for this project is supportable. Dr. Benner's model is an effective framework to address progress, and competency.

It is important to note that even the most experienced nurse can become a novice when new methods are presented. Matriculation through Benner's model is best implemented through mentorship, practice, and evaluation (Davis & Maisano, 2016). Nurses in the HHS may be experienced nurses who are new to the HHS. Some may even have experience with wounds but have not been properly educated on the best-practice of care and documentation of wounds. When assessing a nurse's competency, the nurse

should always know the criteria that are being used. Assessing a nurse's competency and skill level is important but continuing education should always accompany it. Nursing is ever changing and evolving, therefore the nurse's education does not reach completion, therby making the nurse a life long learner (Ayello et al., 2017).

Definition of Terms

Competency: An activity designed to examine nurses' knowledge and ability to perform nursing skills (Ayello et al., 2017).

Client/patient: Anyone to whom the nurse is assigned to provide nursing care. Another definition is a person who engages in the professional advice or services of another (Client, 2018).

Expert panel: A group convened to provide specialized expertise related to a specific topic or area of interest (Expert, 2018) .

Validation: The process of establishing the suitability of a mechanism or system to performing a particular task. The use of documented evidence to assure that specific systems or processes will consistently produce a product meeting predetermined specifications and quality attributes (Validation, 2018).

Relevance to Nursing Practice

History of Problem in Nursing

As mentioned before there are concerns about proper education for nurses, specifically wound education. These issues are compounded with the errors in documentation and the loss of revenue because of these concerns. Many authors have addressed these concerns; however, it remains an increased need to address these issues

in the HHS.

This doctoral project takes into consideration the research headed by Dr. Elizabeth Ayello and her team. Dr. Ayello addressed the need for education on wounds and identified strategies that will increase the nurse's knowledge of wounds and documentation (Ayello et al., 2017) (Baranoski & Ayello, 2016). Dr. Ayello also discussed the ongoing concerns about the need for this education on all levels of nursing; from student nurses to experienced nurses; in all clinical practice areas. These teachings use Dr. Benner's model from-novice-to-expert as a theoretical framework to explain the growth and progression of the nurse on a continuous learning pendulum (Ayello et al., 2017). Moreover, Dr. Ayello and her team in the book *Wound Care Essentials* explain the need for proper documentation of wounds for many reasons. One reason for proper documentation of wounds is that the facility is reimbursed based on the documentation, and may lose revenue if not properly documented. Secondly, proper identification and documentation of wounds affect the treatment of the wound. Lastly, CMS reimburses the facility based on documentation.

Dr. Anita Thomas also assessed nursing knowledge and documentation after a pressure ulcer educational program (EduP), presented to nurses in an LTC (Thomas A., 2012). This doctoral project incorporates the tools used by Dr. Thomas within the WCDMH. Dr. Thomas established through using a pre-test/post-test EduP and wound documentation tool that, nurses had an "increase in knowledge and improved comprehension on wounds (Thomas A., 2012, p. 142)." Dr. Thomas also determined that

the findings of the study would assist nurses in the future to use EBP in documentation and to follow the federal guidelines for documentation (Thomas A., 2012).

The current state of nursing practice and recommendations. There are continuous efforts to improve the care of wounds and educate nurses with EBP practices. The concern for the cost of wound care and the loss of revenue based on errors in documentation is currently being addressed with the implementation of EBP tools. These tools are being implemented along with extensive education on the tool. More committees and expert panels are reviewing tools and educational programs for wound care and wound documentation before implementing them in facilities.

Recommendations to improve nursing practice problems. The following are the recommendations to improve the current nursing practice problem:

1. More education on wounds and wound documentation in the school of nursing curriculums.
2. More offerings of education or continued education for wounds and wound documentation in the HHS.
3. Education and in-services should be provided on a consistent and timely schedule to ensure knowledge and competency.
4. Nurses should be tested for competency and knowledge before and after each educational in-service.
5. Use of an EBP standardized tool for documentation of wounds; whether electronic or written.
6. Use of an EBP standardized tool to audit charts on wound documentation.

7. Use of face-face education and modules that are specific to wounds, and wound documentation in the HHS.
8. More HHAs should encourage and require nurses to have a set number of continuing education hours (CEUs) on wounds. These nurses should also be encouraged and required to obtain a certification in wound care.

Past research on current practice problem. Many journal articles discuss the lack of accurate documentation on wounds by clinicians. The articles also discuss the concern for clinicians not following the guidelines set by the facility. Ehrenberg & Christina (2003) studied nurses' documentation on leg ulcers in a Swedish primary health care district. The authors used two audit tools to audit 100 patients' records for aherence to the guidelines for documentation of leg ulcers. The author's findings were that despite the guidelines for the setting, there were deficiencies in the documentation, and there were descrepancies in the use of the nursing process.

The systematic review by Baich, Wilson, & Cummings (2010) discussed nine themes that were discovered in the use of enterostomal therapy nurse (ET), two of the themes focused on; 1) peaked interest in wound care amongst other nurses, and 2) protocols for wound care being standardized. These themes showed nurses taking accountability for their practice and understanding that for patient outcomes to improve there is a need for education in wounds and a need to understand protocols or have protocols in place.

Smith et al., (2010) discusses the auditing of acute wound care documentation on surgical inpatients by both nurses and physicians. In this study, the authors discovered that 75% of clients had no documentation of wound margins, and only 70% of wound

dressings was documented by both the physician and the nurse (Smith et al., 2010). As a result, the authors concluded that the documentation by both the physicians and the nurses did not meet Australian standards; and there is ineffective communication concerning wound care in the hospital setting (Smith et al., 2010).

Providing education on the use of standardized forms whether electronic or not is important. Staff must understand how to use the tool to optimize the use of the tool. Standardizing wound documentation and incorporating tools for documentation decreases inaccuracies in the documentation. A prospective, nonrandomized study which used pre-test post-test design, evaluated the introduction of structured encounter forms for the emergency department at The Children's Hospital and Health Care Center to document wounds (Kanegaye, Cheng, McCaslin, Trocinski, & Silva, 2005). This study found that overall documentation improved 80% vs. 68% when allowed to free text; however, documentation of the general assessment worsened with structural charting (Kanegaye et al., 2005).

Patton (2009) determined that care for community leg ulcers would be more effective if leg ulcer clinics were used for patients who were being treated at home for their wounds. However, Patton (2009) also discovered that it would be costly to introduce this initiative to agencies, so it is more efficient to use resources that are already available by educating the nurses that are on staff. In analyzing this finding, it would ultimately support educating HHA nurses to care for clients with these wounds.

Dale & Wright (2011) conducted a study that determined that in many home health care agencies (HHA) that a "no more wet-to-dry" (p.433) protocol needed to be

implemented in the HHA based on the types of wounds being treated. As a result, it was discovered that within in the HHA education for the staff, educational referral sources of journals and articles, and a set of wound care protocols with administrative buy-in would maximize wound care management (Dale & Wright, 2011).

Continuing with the trend of education; in a study that consists of a task force of 20 clinical nurse specialist (CNS), it was determined that a two-day educational program on wound care was needed. Furthermore an additional one day class for new hires would be recommended to assure standardizations of wound care and consultation is being provided accurately (Capasso et al., 2009).

Nurses may look for other options to educate themselves, not being certain that these findings are evidence based or even best practice. As a result of a survey of wound care nurses who cared for malignant cutaneous wounds Haisfield-Wolfe & Rund (2002); it was determined that these nurses were going to the internet for further information on how to care for wounds. They concluded that there needed to be more online education for these nurses to assist in providing care (Haisfield-Wolfe & Rund, 2002). Zulkowski, Ayello, & Wexler (2007) concluded that there is a direct correlation between wound care education/certification on nursing knowledge and practice. The authors conducted a convenience sample of 460 nurses being tested on pressure ulcers. The results were that nurses certified in wound care scored 89 %, nurses with specialties scored 78% and nurses without certification scored 76.5% (Zulkowski et al., 2007). Kothari, Hovanec, Hastie, & Sibbald (2011) contribute suggestions such as, “training sessions, communication technologies, process mapping and communities of practice (p.

1).” Implementing these suggestions would increase knowledge and decrease the knowledge gap.

It is ideal to offer education and staff development when the nurses are eager to partake in learning, however in some cases staff may not have buy in which may affect results. To manage change and empower staff Bowers (2011) studied a team of community nurses that provide care to homebound patients. The author discovered that staff is not always involved in the change factor. If resistance to change is not addressed and handled, positive outcomes can be reversed and damage may occur the change project (Bowers, 2011). So effectively educating staff would require the staff to take onus, accountability, and responsibility for their practice. If this occurs, there is a greater chance for the change agent to work.

This doctoral project provided a staff educational module on wounds and wound documentation for the HHS/HHA. This project will advance nursing by decreasing the knowledge gap for the HHS on wounds and wound documentation. Having the project validated by an expert panel will ensure that it is an effective tool for practice. As previously mentioned, this project is grounded in the research of Dr. Ayello and her team, as well as Dr. Thomas. Both researchers support education on wounds and documentation. They also support educating the nurse on the tools that will be used in the documentation so that they can be used effectively. Lastly, their research supports EBP standardized tools for documentation.

Local Background and Context

Local Evidence to Support Practice Problem

Needs assessment. The administrator for the local HHA was interviewed to establish the need for this doctoral project. Through a series of conferences, the general theme that occurred was: wounds, wound care, wound prevention, and documentation. After further discussion, the administration expressed that the nurses were taking care of the clients to the best of their knowledge; however, the concern is that the nurses are not using best-practice in wound care and documentation. Because of the inaccurate documentation the HHA was forced to back pay CMS thousands of dollars during a state site visit. The agency expressed a need for an in-service or educational module on wounds and wound documentation for the HHA (R. Guidry, personal communication, January, 24, 2018). This local evidence supports the practice-focused question, "Will a wound staff education module for nurses increase the home health care nurse's knowledge of wound care documentation according to an expert panel?" All the evidence used to answer the practice question is addressed in Section 3.

This doctoral project required an expert panel to validate an educational module for nurses on wound care and documentation. Having this module validated by the expert panel is necessary to determine if implementing the module will decrease the knowledge gap on wound care and documentation in the HHA.

The setting for this staff educational module was in a local small HHA located in Houston, Texas. This staff educational module is suitable for this setting as reported by the administrator of the HHA. The administration reported numerous errors in wound

documentation and a knowledge gap in the current best practices in wound care (R. Guidry, personal communication, January 24, 2018). Reports from the facility administrators state that there have been losses in revenue up to $10,000 at the times of state audits (R. Guidry, personal communication, January, 24, 2018). The aforementioned is as evidence by state regulatory bodies review of documentation, administering citation, and taking back funds paid for services rendered (R. Guidry, personal communication, January, 24, 2018).

Operational Definitions

This doctoral project answers the question, “Will a wound staff education module for nurses increase the home health care nurse’s knowledge of wound care documentation according to an expert panel?” In answering this question, the doctoral project determined that the educational module will increase nurses’ knowledge according to the expert panel. To better understand, two terms were defined; educational module and nurse’s knowledge.

- Educational module- a short course of study; video instructional with competencies and demonstrations conducted to teach subjects a topic where there is a knowledge deficit (Module, 2018).
- Nurses knowledge- the nurse’s awareness of information; and knowledge of how to perform a task (Knowledge, 2018).

State and Federal Context

As mentioned in Section 1 CMS which is a part of Health and Human Services, set forth the regulations for many health care issues. They also set forth regulations and

guidelines for wounds and wound care. In part CMS provides reimbursement for the care of the client with wounds. They may also retract payment if the care of a client with wounds is not properly documented, or if the cause of the wound begins with negligent care by the agency. This issue was addressed by having an expert panel to validate the educational module on wounds, it also allowed the expert panel to make the recommendations needed for the module so that it meets the standards of care.

Role of the DNP Student

Education is highly important to me, not only as a DNP candidate, but as an educator as well. Wound care has always been an area of interest through my career, even when I started as a licensed vocational nurse (LVN). Often clients that needed extensive wound care would be assigned to me, and I always felt that there should have been more education in the curriculum for nursing students. Even as I matriculated through my scholastic career, I noticed that wounds were covered but not extensively, unless the faculty had a background in that subject. My fears were also in documenting these wounds and staging wounds as well. I understood that the treatment of the wounds is based on my care and documentation of them. Hence, my desire to explore this topic.

I chose to do my practicum experience in the HHS because I rarely came across literature discussing concerns in the HHS. As I studied my practicum experience, I realized that my preceptor (the administrator for the agency) had many concerns about wound documentation. My preceptor would review chart audits with me and explain how CMS would “ding” the agency if the documentation has errors and missing documentation. She would also express how she wanted her nurses to have some formal

education such as in-services, conferences, or educational modules on wounds. Her concerns were valid as she stated that the agency could not afford to continue to lose revenue based on inaccurate wound documentation. As we continued to explore the current problems; realizing that there may be other agencies with the same problems; the administrator recommended I create a wound and wound documentation module for the HHA as my doctoral project.

I was eager to have my doctoral project validated by the expert panel so that I can help the HHA improve client outcomes, decrease errors in documentation and increase nurses' knowledge. These three things improve the overall care for the clients and will further prevent the loss of revenue.

Assumptions and Limitations

Within the project, there are assumptions; assumptions provide the reasonable expectations of what the doctoral project is anticipating. Performing this project brings forth several assumptions:

1. Experienced clinicians believe that there should be more wound care education (specific to wound documentation as well) incorporated into staff education (Russell, 1999; Li & Korniewicz, 2013).
2. Nurses in the HHS believe that there is a knowledge gap as it pertains to wound care, and documentation (Ayello & Baranoski, 2014).
3. Continued in-services on wound documentation will decrease in-accuracies in the documentation on wounds (Dale & Wright, n.d.; Thomas, 2012; Ayello & Baranoski, 2014).

The limitations of this project will be further discussed in Section 4 under Strengths and Limitations.

Summary

The primary concern is to alleviate the knowledge gap on wounds and wound documentation in the HHA/HHS. The best way to alleviate this problem is through education. Creating this educational module and having it validated by a panel of experts will provide feedback on whether or not the staff educational module will be effective. Section 3 will discuss the methodology and the sources of evidence that will support the doctoral project.

Section 3: Collection and Analysis of Evidence

Introduction

In this section, I will address the methodology of this DNP project. I used an expert panel to validate and educational module, WCDMH (see Appendix A) for approval to be implemented in an HHA/HHS in Houston, Texas. As discussed in Section 2, validating educational modules and tools helps to improve client outcomes and helps to ensure EBP (Moattari et al., 2014). In this section, I will thoroughly discuss the sample size and instrumentation. I will also address ethical issues that pertained to the project. I reviewed and discussed recommendations for the type of tools used and form of curriculum with Dr. Elizabeth Ayello, who also on the expert panel, and is the Clinical Associate Editor of *Advances in Skin & Wound Care.*

Practice-Focused Question

The practice-focused question was, Will a wound staff education module avlidated by an expert panel increase the home health care nurse's knowledge of wound identification and wound care documentation? As discussed in the Section 2 the operational terms discussed were educational module and nurses' knowledge. The educational module was developed addressing wound treatment of and the documentation of wounds. The nurses' knowledge of wounds should improve based on the educational module. The expert panel will validate if the educational module will increase nurses' knowledge on wounds and wound documentation.

Sources of Evidence

Methodology

Project design. An expert panel consisting of five experienced health care professionals validated the educational module. The expert panel consisted of a certified wound care nurse, an administrator from the HHA, a staff nurse from the HHA, a nurse who contributed to the project, and a nurse educator with experience in wound care. I administered an adapted 5-level Likert scale tool developed by Grove et al. (2013) to the expert panel. The expert panel validated the tool electronically (see Appendix C). The tool used was a 5-level Likert scale evaluation of the module with the following ratings: *Strongly Agree* = 5, *Agree* = 4, *Neutral* =3, *Disagree* =2, *Strongly Disagree* =1, and *Not Applicable* =0. The five panelists received an electronic copy of the educational module (see Appendix A), with a Likert scale evaluation tool attached. After reviewing the educational module independently, the five panelists returned the Likert scale evaluation tool electronically with recommendations within one week after receiving it.

The educational module included a PowerPoint presentation with embedded video from WoundRounds® (see Appendix A), a study packet handout (see Appendix B) to accompany the PowerPoint presentation, and the test with demographics attached (see Appendix D). Permission to use the Nurse Demographic Questionnaire (NDQ; 2012), Pressure Ulcer and Wound Documentation Questionnaire (PUDQ; 2012), and Wound Documentation Audit Tool (2012) is provided (see Appendix E). Permission to use the videos from WoundRounds® that are included in the educational module is provided in Appendix F.

Population and Sampling

One type of nonprobability sampling is a purposive sample, which I used. A purposive sample is a sample of participants who are intentionally chosen to meet the criterion needed for the study (Grove et al., 2013). The criteria for inclusion were, as follows:

- Must have a master's in nursing or other health related graduate degree.
- Must have an unencumbered licensure as an RN.
- Must have experience with wound care.

I recruited participants based on their clinical expertise and their experience with wounds and documentation; these experts at minimum were masters-prepared nurses or professionals in their field. The experts selected included

- The clinical associate editor of *Advances in Skin & Wound Care* who has the following credentials: PhD, ACNS-BC, CWON, MAPWCA, FAAN, and RN.
- The co-administrator staff development at the HHA.
- A staff nurse who works with wounds and does the auditing for the HHA.
- A nurse practitioner with the credentials of DNP, APN, CWS, and RN who contributed to the development of this project using insights from Thomas (2012).
- An educator from a local college with experience in wounds.

The HHA is a small agency located in the southern region of the United States. The agency consists of two masters-prepared nursing administrators, one masters-prepared RN, two RNs, and two LVNs. The target population was the staff nurse in the HHS.

Analysis and Synthesis

Data Collection Procedures

The expert panelists had 1 week to review the educational module and make recommendations. The Likert scale survey for evaluating the tool was completed by the expert panelists and returned via e-mail and kept in a file in an undisclosed location. All data were collected anonymously using Survey Monkey.

I analyzed data using descriptive statistics. Data analysis was performed as follows: 1) the percentage of the expert panel's overall response was calculated and 2) themes of the expert panel's feedback was placed in themes and analyzed. I used Microsoft Excel to consolidate the data from the survey and also to organize the written feedback.

Protection of Human Subjects

The research for this project was exempt as there was no risk to participants and, thus, did not require review by the Institutional Review Board (IRB). However, I obtained approval from the IRB, as required per the program requirements for expedited review in the Walden University DNP manual.

Summary

The literature review indicates a need for wound care education as a whole with emphasis on documentation, which is specific to home health care. At the completion of the review of the educational module by the expert panelist, the panelists were able to determine whether the module is ready to be implemented in the future. With this module the home health nurse would be developed to a level of competent, in accordance with

Dr. Benner's novice-to-expert model (Benner, 2004). The home health nurse should after the educational module is completed on wound care and documentation; exhibit the ability to document and understand the concept of wound care and documentation at minimal as a competent home health nurse. By understanding the concepts of best practice in wound care and documentation; the home health nurse who will now be competent. The nurse will then be able to achieve greater accuracy and proficiency in the documentation of wound care. As more educational in-services are performed over time, there will be an increase in knowledge of what is expected as an expert clinician.

As addressed in the literature, the general trend and theme is increasing the frequency in education on wound care on all levels of nursing (from scholastic to practice) (Bradley & Rivera, 2010) (Ayello & Baranoski, 2014). The sessions should be done succinctly and consistently to assure optimal outcomes.

Section 4: Findings and Recommendations

Introduction

Local Problem

As discussed in Section 1, the local problem was a lack of compliance in the accuracy of documentation of wounds in the HHA. Examples of noncompliance include the presence of incomplete, inaccurate documentation; lack of client/family education on wounds; minimal presence of provider communication of progression of wounds; and documentation does not meet the minimal CMS and OASIS standards (Guidry, 2015).

Gap in Nursing Practice

According to CMS, even with the current guidelines in place, there are still errors in wound documentation (Baranoski & Ayello, 2016). Nurses from all educational levels have expressed concern that there is inadequate education on wounds and wound documentation (Ayello & Baranoski, 2014). The goal of the project was to have an expert panel validate a staff educational module on wounds and wound documentation that was designed to decrease nurses' knowledge deficit on wounds. The practice-focused question was, will a wound staff educational module validated by an expert panel increase the home health care nurse's knowledge on wound identification and wound care documentation?

Purpose Statement

The purpose of this doctoral project was to validate an educational module for nurses on wound care and wound documentation. A team of five expert panelists including a certified wound care nurse, an administrator from the HHA, a nurse who

contributed to the project, a home health skilled nurse, and a nurse educator reviewed the educational module. The expert panel provided feedback on the content and made recommendations of necessary changes.

Sources of Evidence

The expert panelists were chosen based on their credentials and their experience with wounds. The panelist received an electronic copy of the educational module and were given 1 week to review the module. The expert panelists then evaluated the educational module using a 5-level Likert scale to validate it. The Likert scale responses ranged from *Strongly Agree* (5) to *Not Applicable* (0). Panelists submitted their responses electronically via Survey Monkey (an online survey tool) to ensure confidentiality.

The educational module consisted of a PowerPoint presentation with embedded videos from WoundRounds® and a study packet handout to accompany the PowerPoint presentation. Included in the module was the NDQ (Thomas A., 2012), PUDQ (Thomas A., 2012), and Wound Documentation Audit Tool (Thomas A., 2012). Permission to use these tools are located in Appendices E and F.

I used a purposive sample because the participants had to meet specific inclusion criteria, which were

- Must have a master's in nursing or other health related graduate degree.
- Must have an unencumbered licensure as an RN.
- Must have experience with wound care.

The participants were recruited based on their expertise as discussed in Sections 3. The HHA chosen was a small agency located in the southern region of the United States. At

the time of the project, the agency had two masters-prepared nursing administrators, one masters-prepared RN, two RNs, and two LVNs.

I used descriptive statistics for data analysis. The percentage of the panel's overall responses were calculated, and the panel's feedback was placed into themes and analyzed. The data was organized and collected using a Microsoft Excel spreadsheet. The additional feedback from the expert panelists is included in the results.

Findings and Implications

Analysis and Synthesis

In Table 1, the results of the Likert scale evaluation are provided.

Table 1

Results of Likert Scale Evaluation

Responses	Question 1	Question 2	Question 3	Question 4	Question 5	Question 5
Strongly agree	40%	40%	80%	80%	80%	80%
Agree	60%	60%	20%	20%	20%	20%
Neutral	—	—	—	—	—	—
Disagree	—	—	—	—	—	—
Strongly agree	—	—	—	—	—	—
Not applicable	—	—	—	—	—	—

Table 1 shows the compilation of the results of the Likert scale, in which five expert panelist evaluated the staff educational module. Question 1 stated, “The educational module is easy to read and understandable.” Two of the five panelists answered that they “strongly agreed” that the educational module was easy to read and understandable. The

remaining panelist "agreed" that the educational module was easy to read and understandable. Question 2 stated, "The educational module is user friendly." Again, two of the five panelists chose "strongly agreed" while the remaining three chose "agreed." Question 3 stated, "The educational module addresses the majority of wounds that are seen in the HHS." For this question, four of the five panelists selected "strongly agree"; only one chose "agree." Question 4 stated, "The educational module addresses best practice in wound and wound documentation." Four of the five panelists selected "strongly agree", and only one chose "agree." On Question 5 the panelists were asked to indicate their agreement with the statement, "The educational module is adaptive to other HHS." For this question, four of the five panelist selected "strongly agree", and only one chose "agree." Finally, in Question 6, the panelists were asked to indicate their agreement with the statement, "The intervention is applicable to clinical practice." For this final question, four of the panelists answered "strongly agree" and one "agree."

For Question 7, the panelists were asked for their opinion on the question, "What are your recommendations for this educational module?" Panelist 1 did not have any recommendations. Panelist 2 stated,

> "Be consistent throughout your document with using wither Arabic or Roman numbers for pressure ulcer staging. Correct content. On page 5 you only have stages I-IV for pressure ulcers. You've left out deep tissue injury and unstageable. You correctly identified there are six pressure ulcer stages as defined by NPUAP on page 22. The nursing demographic sheet needs modifications- you have the same the same educational number for number of years that is 30. Please correct

> and add a spot for nurses in the profession greater than 30 years. Also, your age range ends at 40 years, this should be greater as we have nurses practicing that are greater than 40 years old and you are leaving out a large population of nurses. Add RN after MSN in title. Make corrections to bulleting."

Panelist 3 stated, "Change the demographic age to include nurses that are greater than 40 years of age. Under title change MSN to MSN/RN. Increase your years for working as a nurse and in the HHS. Correct page 5 to match page 22 in the study handout. Make sure you have six stages." Panelist 4 stated, "Your demographic needs to address nurses that are greater than 50 years old, because the population of nurses are older. On page 5 add the two additional stages deep tissue injury and unstageable." Panelist 5 expressed, "It is very well done!"

Based on the findings the expert panel has validated the educational module. According to the findings the module should be implemented with recommendations. The module can then be disseminated after corrections are made.

Limitations and Outcomes

Some of the unanticipated limitations were the expressions of the panelist that the demographic of the Nurse Demographic Questionnaire (Appendix E), did not address the true population of nursing. There was a need to address nurses that were older than just their 40s. Also the general population of nurses have been practicing well past 30 years of service. With the questionnaire remaining the same if needed; the data for the demographic of the nurses would be inaccurate. Also, making sure that the staff module is accurate and congruent throughout. Not having the document match on the staging of

wounds could confuse the novice nurse, especially if the nurse is not competent or knowledgeable about wounds. The educational module was update to comply with the recommendations made by the expert panelist.

The outcomes of the changes for the project is that it assists in making the project more global. Making the project more global and assisting in it being implemented across specialties is ultimately the goal. Addressing these corrections will allow for the globalization of this project.

Implications to the individual. Individuals included both the nurse and the client. Use of this module will impact the client through decreased healing times and decreased cost for care.

Implications for the nurse is increase in nurses' knowledge, improvement in client outcomes, decrease in cost for the HHA in care of wounds, and confidence and competence in the care provided.

Implications to the community. For the client it decreases the healing time so that the client can return to work sooner, or so that the caregiver does not develop role strain while trying to take care of a family member with an advanced wound. It also ensures that nurses are following local and national guidelines for the care of clients with wounds. It decreases the time that the clients need wound care, and decreases the cost that government agencies have to reimburse HHAs for.

Implications to the system. The implication to the health care system as a whole is that nurses and facilities are charged with the task to educate themselves and others on wounds. Facilities are being held responsible for the care given to clients that come to

their facilities or use their agencies.   Assisting the nurses in providing prudent wound care by implementing education modules so that the client receives competent care is a benefit. Knowing the negative implications that the lack of education on wounds has on the client and the health care system; the health care systems should require nurses that frequently take care of clients with wounds, to ascertain their certifications in wound care.

Implications to positive social change. Providing this validated staff educational module for the HHS will address the knowledge gaps on wounds and wound documentation. As the nurse’s knowledge on wounds and wound documentation increases, care for wounds and the documentation of wounds improves. Positive client outcomes will result from the implementation of this educational module. Having these improvements will also address the HHA meeting the guidelines for government agency such as (CMS). The HHA will also have an increase in revenue and a decrease in the retraction of funds.

As mentioned in Section 1, DNP graduates have a responsibility to ensure the quality of health care in nursing (Zaccagnini & White, 2011). They are also in a position to have an influence in wound care by utilizing EBP guidelines and staff in-services to improve compliance (Zaccagnini & White, 2011).

Recommendations

Recommendations for Addressing the Knowledge Gap

In Section 2 I discussed the recommendations to improve the current nursing practice problem which is the knowledge deficit on wounds and wound documentation.

After completing this doctoral project, it is evident that, in order to close the knowledge gap on wounds and wound documentation in the HHA, there will need to be

- more education on wounds and wound documentation in school of nursing curriculums.
- More offerings of education or continued education for wounds and wound documentation in the HHS.
- Education and in-services should be provided on a consistent and timely schedule to ensure knowledge and competency.
- Nurses should be tested for competency and knowledge before and after each educational in-service.
- Use of an EBP standardized tool for documentation of wounds; whether electronic or written.
- Use of an EBP standardized tool to audit charts on wound documentation.
- Use of face-face education and modules that are specific to wounds, and wound documentation in the HHS.
- More HHAs should encourage and require nurses to have a set number of continuing education hours (CEUs) on wounds. These nurses should also be encouraged and required to obtain a certification in wound care.

Recommendations for Implementation

It is the final recommendation as a result of this project that the HHA implement the staff educational module with changes from the feedback of the expert panel (Appendix E). The corrections were made as previous list.

Within the educational module or embedded videos from WoundRounds®, the HHA should check each year prior to administering the module for updates on the videos. As nursing and technology changes it is the nurse's and the agency's responsibility to stay up-to-date with best practice. These videos may be found on YouTube ® or WoundRounds® can be contacted for the latest updates.

It is further recommended that the agency implement the modified Wound Documentation Audit Tool (2012) in (Appendix E). This tool is based upon the OASIS guidelines and meets the standards of the CMS. This audit tool will give the agency an accurate evaluation of the documentation that the nurses are doing on their clients with wounds. Based on audit the HHA can remediate the nurses individually based on the findings.

In the future the HHA should consider adding a competency component to the staff educational module. The module as it is test the nurse's knowledge, but it does not test how well the nurse performs the task.

Strength and Limitations of the Project

Project Strengths

One of the strengths noted for this project was the use of an expert panel to validate the staff educational module on wounds and wound documentation. Having an expert panel could assist in noting any deficits in the material being used for the module. Having and expert panel can also provide knowledge and ideas to the project and contribute current EBP and best practice components.

Another strength of the project was the diverse experiences of the participants being used for the expert panel. Having panelist from all aspects of nursing that are exposed to different occurrences with wounds will help with the global use of this module.

Furthermore, the educational module incorporates tools contributed by Thomas (2012) that have already been used in a previous setting for other research studies. This supports that the tool will be able to accurately assess the nurses' knowledge on wounds.

Using standardized tools for documentation and evaluation of documentation is thoroughly discussed in this project, much of the literature supports the use of standardized tools for documentation as well as auditing. Having this addition of a standardized tool for auditing, which is also adapted from Thomas (2012) Wound Audit Tool for Documentation; is also a strength of this project.

With this project being a module that is a PowerPoint with videos embedded, and a study packet handout; home health nurses or any nurse can do the modules from anywhere. This makes the staff module user friendly and accessible when needed, and also transferable to other specialties.

Project Limitations

There are several limitations to this project. The first limitation identified pertains to the educational level and the awareness of the staff that would participate in the module if implemented. There is no proof of education of the nurse that is specific to wounds, or there may be some nurses that have attended conferences and in-services during their career. Using an expert panel to validate the educational module does not show that the

module is effective, because it is not being implemented at this time. Also, there would be a need for me to educate the administrative staff or the personal that does staff education for the HHA on how to implement the module. Additionally, no one has validated an educational module on wounds and documentation of wounds for this setting (HHS).

Within the constraints of limitations, the research must take into consideration sample size. Only having access to one HHA limits the experiences from other HHAs and may pose a problem when generalizing the project amongst other health care systems. Also minimalizing the expert panel to five panelist limits the generalization of the project as well; the validation of the educational module would be based solely on the experiences of five panelists. Groves, Burns, and Gray (2013) explains that a sample is a selected group or element that is included in a study and sampling has a major impact on the ability to generalize research.

Furthermore, although the staff educational module as a pre-posttest component that test knowledge, it doesn't test compentancy. The module is based solely on what the nurse knows, it doesn't test how well the nurse does a task.

The length of time that it may take to view the educational module is a concern. Due to time restraints it must be taken into consideration that the panelist may not be able to evaluate the module in its entirity. As they only have a week to view the staff educational module.

Lastly, having to send the educational module electronically, as a result of some of the expert panelist not being within the same state or region; may pose a problem in a timely turnover of surveys.

Recommendations for future projects with similar topics. Scholars looking to address this topic in the future should consider actually implementing the project and collecting the data from it. It could also be beneficial to determine if there are considerable differences in the mastery of the material from RN vs. LVN. Offering continuing education hours for the modules could convince not only the nurses but the agencies to implement the project. In addition to preforming a pre-posttest of knowledge, future scholars should consider adding a deliberate practice, with competency check of as a component to the module. Lastly, training "super-users" the DNP candidate can train either the administration or the chosen person from the agency that does the education for the other staff. The "super-user" then after learning the how to use and implement the staff educational module; can go and administer the staff educational module to other nurses that work for the agency.

Section 5: Dissemination Plan

In this section I will further discuss my dissemination plan for this project. I updated the staff educational module with the recommendations and feedback of the expert panel. The updated staff module will be given to administration from the HHA. The administration will be given a brief in-service on how to use the module. I will encourage the administrators to contact me as I have offered to do the initial in-service training for their staff as well. The agency will be encouraged to update the module as needed when new guidelines are initiated by governing bodies. The HHA can also contact me to update the module as needed and provide the additional training for the staff.

There are many settings where a wound staff education module could be used. It is greatly needed in the HHS, because there are limited forms of staff education for HHAs. It can also be used in the hospital setting on units that take care of wounds. A staff educational module could also be used in a long-term care facility, nursing home, or rehabilitation hospital where wound care is prevalent. One other setting that could benefit from a staff educational module on wounds and wound documentation is the ambulatory care setting. Often, clients come in to the ambulatory care clinic so follow up on wound healing. Dissemination of this staff educational module to the ambulatory care setting may prove beneficial to leaders of these facilities, health care practioners, and clients.

One of the long-term professional goals for this project is to petition the Texas State Board of Nurses to provide continuing education hours for this module. I would also like to present this project at my local, state, and national professional organizations.

Furthermore, I would like to have it published with revisions after implementing the project. I anticipate submitting the project for publication in my professional organization's journal. I would also like to to introduce and present this staff educational module to other HHAs. Collecting and analyzing data on how the module is used in other HHAs is another goal.

Analysis of Self

Analysis of Self as a Practitioner

As a practitioner, I always felt as though I was not thoroughly prepared to take care of clients with wounds. As new ways to care for different wounds came about, I learned on the job about new treatment methods. Developing and participating in this project has deepened my knowledge on wounds. After years of practicing as a nurse and also doing research for the project, I have concluded that nurses on all levels should have some form of formal training on wounds and wound documentation.

Analysis of Self as a Scholar

I play a dual role as a scholar for not only am I a student, but I also teach nursing. As a student, I recognize the need for more education on wounds and for wounds to be covered in more detail in nursing curriculums. As a professor, I am tasked with implementing more wound care in the classroom and clinical setting. As a professor, after doing this doctoral project; I have made a deliberate effort to add more wound care and identification of wounds into my health assessment lectures. I have also added more lectures on the care of wounds into my medical surgical lectures. In the clinical setting I

encourage my students to pick clients with wounds, and I also give them a day to partner with a wound care nurse.

Analysis of Self as a Project Manager

As a project manager, I can see the improvements and benefits of implementing staff educational modules, especially on wound care. The literature shows that the cost of wound care is expensive and the cost of wounds that are not treated properly can be expensive (Dale & Wright, n.d.). The cost is not only expensive for the institution or agency; it is also expensive for the client (Whitlock, Ryan, Morcom, Spurling, & Janamian, 2014). Proper care of wounds can prevent retraction of funds by the CMS (Baranoski & Ayello, 2016). Legal concerns can be a concern as well as it can cost facilities a considerable amount of money if sued by a client (Yankowsky & Fife, 2013). Properly educating nurses on wounds may pose costs to facilities, but the cost of doing so reduces financial costs in the future, I believe.

Completion of the Project

The completion of this project was challenging. One of my concerns was how I could reach my chosen expert panelists as they do not all live in the same region of the United States as I do. Many of these panelists travel extensively as a part of their jobs as nurses, and reaching them to ask permission and complete surveys posed a great challenge. Making the process electronic, using Survey Monkey, e-mails, and texting, helped to ease the process.

Writing on an advanced level and making sure that I added value to my profession was also challenging. I noticed that throughout this journey and process the very topic

that I chose to address had changed. Technology had changed, and standards had changed. One example of a change is that in 2016 NPUAP change from Roman Numeral to Arabic numbering and classifications on wounds (Ayello et al., 2017). As I wrote, the advances that I supported were being implemented while I completed my project. These advances included more research on wounds, wound education, and the documentation of wounds I still am concerned that there is not enough education for the home health nurse because I had to make these changes to my project in order to make it current and encompassing of EBP. It is my plan in the future to present this project at a nursing conference and/or complete a poster presentation with an abstract.

Summary

Educational modules with competency testing in combination with mentorship programs are a recommendation of this project. Also incorporating the requirement for nurses to receive their wound care certification would increase positive patient outcomes. Extensive orientations and annual or bi-annual competencies to increase the exposure of current best-practice standards in wound care as a whole is encouraged. It is also recommended that prior to implementing educational modules they are reviewed by expert panelists to ensure validity. With the addition of these recommendation a change in wound care should be seen in the HHA.

References

Adderly, U., Evans, K., & Coleman, S. (2017). Reducing unwarrented variation in chronic wound care. *Wounds UK, 13*(4), 22-27. Retrieved from http://www.wounds-uk.com/pdf/content_12057.pdf

Ayello, E. A., & Baranoski, S. (2014). Wound care and prevention: Nursing2014 survey results. *Nursing2014*, 32-40. Retrieved from www.WOUNDCAREJOURNAL.com

Ayello, E. A., Zulkowski, K., Capezuti, E., Jicman, W. H., & Sibbald, R. (2017, February). Educating nurses in the United States about pressure injuries. *Advances in Skin & Wound Care, 30*(2), 83-94. Retrieved from http:// www.WOUNDCAREJOURNAL.com

Baranoski, S., & Ayello, E. (2016). *Wound Care Essentials: Practice Principles* (4th ed.). Philadelphia: Wolters Kluwers.

Butcher, M., White, R. (2014, April 30). Factors affecting cost-effectiveness in wound care decision making. *Nursing Standard*, *28*(35), 51-58. doi: 10.7748/ns2014.04.28.35.51.e7671

Client. (2018). *In Merriam-Webster's online dictionary.* Retrieved from Retrieved from http://www.merriam-webster.com/dictionary/client

Dale, B. A., & Wright, H. D. (n.d.). Say goodbye to wet-to-dry wound care dressing: Changing the culture of wound care management within your agency. *Home Healthcare Nurse, 29*(7), 419-440. Retrieved from http://www.EBSCOhost.com

Davis, A., & Maisano, P. (2016, September/October/November). Patricia Benner: Novice to expert- a concept whose time has come again. *The Oklahoma Nurse*, 13-15. Retrieved from http://www.oklahomanurses.org/Link-Library/OK-Nurse

Ehrenberg, A., & Christina, B. (2003). Nursing documentation of leg ulcers: Adherence to clinical guidelines in a Swedish primary health care district. *Nordic College of Caring Sciences, 17*, 278-284. Retrieved from http://ebscohost.com

Expert. (2018). *In Merriam Webter's online dictionary.* Retrieved from Retrieved from http://www.merriam-webster.com/dictionary/expert

Foundation, T. A. (2013, December). Patient-centered outcomes in wound care. *A White Paper, 1*. Chicago, Illinois, USA: American College of Wound Healing and Tissue Repair and the Angiogenesis Foundation.

Groves, S. K., Burns, N., & Gray, J. R. (2013). *The Practice of Nursing Research: Appraisal, synhesis, and generation of evidence* (7th ed.). St. Louis: Elsevier.

Guidry, R. (2015, June). Assitant Administrator. (K. S. Hebert, Interviewer)

Haisfield-Wolfe, M. E., & Rund, C. (2002). Malignant cutaneous wounds: Developing education for hospice oncology and wound care nurses. *International Journal of Palliative Nursing*, *8*(2), 57-66. doi:10.12968/ijn.2002.8.2.10240

Hampton, S. (2015). Wound management 4: Accurate documentation and wound measurement. *Nursing Times*, 1-6. Retrieved from https://www.nursing times.net/clinical-archive/wound-care/wound-management-4-accurate-documentation-and-wound-measurement/7000509

Home Care Association of Florida. (n.d.). *The Importance of Assessing and Documenting Wounds.* Retrieved from www.homecareFLA.org

Kanegaye, J. T., Cheng, J. C., McCaslin, R. I., Trocinski, D., & Silva, P. D. (2005, July-August). Improved documentation of wound care with a structured encounter form in the pediatric emergency department. *Ambulatory pediatrics*, 5(4), 253-257. Retrieved from http://www.EBSCOhost.com

Kinnunen, U.-M., Saranto, K., Ensio, A., Iivanainen, A., & Dykes, P. (2012, July/August). Developing the standardized wound care documentation model: A Delphi study to improve the quality of patient care documentation. *Journal Wound Ostomy Continence Nurses, 39*(4), 397-407. doi:10.1097/WON.0b013e318259c45b

Knowledge. (2018). *In Merriam-Webster's online dictionary.* Retrieved from Retrieved from http://www.merriam-webster.com/dictionary/knowledge

Korzendorfer, H., & Cantu, A. (2012). Superior documentation means superior wound care: Documentation needs to be specific enough that another caregiver can clearly understand the wound presentation and its treatment. *Provider: Long Term & Post-Acute Care*, 1-2. Retrieved from http://www.providermagazine.com/archives/archives-2012/Pages/0812/Superior-Documentation-Means-Superior-Wound-Care.aspx

Kothari, A., Hovanec, N., Hastie, R., & Sibbald, S. (20*11*). Lessons from the business sector for successful knowledge management in health care: A systemic review. *BMC Health Services Research*, 11(173), 2-11. doi:10.1186/1472-69-63-11-173

Li, D., & Korniewicz, D. M. (2013, January-February). Determination of the effectiveness of electronic health records to documentation pressure ulcers. *MEDSURG NURSING, 22*(1), 17-25. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/23469495

Moattari, M., Moosavinasab, E., Dabbaghmanesh, M. H., & ZarifSanaiey, N. (2014). Validating a web-based diabetes education program in continiuing nursing education: knowledge and competency change and user perceptions on usability and quality. *Journal of Diabetes & Metabolic Disorders, 13*(17), 1-8. doi:10.1186/2251-6581-13-70

Module. (2018). *In Merriam-Webster's online dictionary.* Retrieved from Retrieved from http://www.merriam-webster.com/dictionary/module

Neloska, L., Damevska, K., Nikolchev, A., Pavleska, L., Petreska-Zovic, B., & Kostov, M. (2016, September). The association between malnutrition and pressure ulcers in elderly in long-term care facility. *Open Access Macedonian Journal of Medical Science, 4*(3), 423-427. doi:10.3889/oamjms.2016.094

Ohura, T., Nakajo, T., Okada, S., Omura, K., & Adachi, K. (2011). Evaluation of effects of nutrition intervention on healing of pressure ulcers and nutrtional states (randomized controlled trial). *Wound Healing Society, 19*, 330-336. doi:10.1111/j.1524-475X.2011.00691.x

Patton, L. R. (2009, February). Are community leg ulcer clinics more cost-effective than home care visits? *Journal of Wound Care*, *18*(2), 49-52. Retrieved from http://www.ovid.com

Polit , D. F., & Beck, C. T. (2006). The content validity index: are you sure you know what's being reported? Critique and recommendations. *Research in Nursing & Health, 29*, 489-497. doi:10.1002/nur.20147

Qian, S., & Yu, P. (2014). Fitting clinical workflow: The case for wound care in a residential aged care home. *Investing in E-Health: People, Knowledge and Technology for a Healthy Future*, 130-136. doi:10.3233/978-1-61499-427-5-130

Rodd-Nielson, E., Brown, J., Brooke, J., Fatum, H., Hill, M., & Morin, J. (2013, May/June). Canadian association for enterostoma therapy evidence-based recommendations for conservative sharp wound debridement. *J Wound Ostomy Continence Nurses Society, 40*(3), 246-253. doi:10.1097/WON.0b013e31828fd3fc

Russell, L. (1999, July). The importance of wound documentation and classification. *British Journal of Nursing, 8*(20), 1342-1349. doi:10.12968/bjon.1999.8.20.1342

Schaum, K. D. (2016). Lack of documentation is costly to wound care patients. *Wound Care Journal, 29*(8), 344-346. doi: 10.1097/01.ASW.0000489129.50655.a8

Shepherd, J., & Nixon, M. (2013). Standardising wound care documentation in clinincal practice: The wound healing assessment and monitoring (WHAM) tool. *Wounds UK, 9*(1), 62-66. Retrieved from http://ebscohost.com

Smith, A., Gartlan, J., Clennett, S., Walshe , D., Tomlinson-Smith, A., Boas, L., & Robinson, A. (2010). An audit of the adequacy of acute wound care documentation of surgical inpatients. *Journal of Clinical Nursing, 19*, 2207-2214. doi:10.1111/j.1365-2702.2010.3265.x

Subai, H. I., Balubaid, H. H., & Alhamdan, A. A. (2014, June). The association between nutritional status using mini nutrtional assessment and the severity of pressure ulcer in elderly hospitalized patients at King Abdul-Aziz Medical City in Riyadh. *Middle East Journal of Age and Ageing, 11*(3), 3-11. Retrieved from http://me-jaa.com/June2014/Nutritional.htm

Thomas, A. (2012, September). Assessment of nursing knowledge and wound documentation following a pressure ulcer educational program in a long-term care facility: A capstone project. *Wound Practice and Research, 20*(3), 142-158. Retrieved from http://www.woundsaustralia.com.au/journal/2003_05.pdf

Thomas, C. M., Sievers, L. D., Kellgren, M., Manning, S. J., Rojas, D. E., & Gamblian, V. C. (2015, September/October). Developing a theory-based simulation. *Nurses Education Perspectives*, 340-342. doi:10.5480/15-1673

Tulek, Z., Polat , C., Ozkan, I., Theofanidis, D., & Togrol, R. E. (2016). Validity and reliability of the Turkish version of the pressure ulcer prevention knowledge assessment instrument. *Journal of Tissue Reliability, 25*, 201-208. doi:http://dx.doi.org/10.1016/j.jtv.2016.09.001

Validation. (n.d.). *In Merriam-Webster's online dictionary.* Retrieved from Retrieved from http://www.merriam-webster.com/dictionary/validation

Whitlock, E., Ryan, S., Morcom, J., Spurling, G., & Janamian, T. (2014, March). Wound care costs in general practice: A cross-sectional study. *Australian Family Physician, 43*(4), 143-146. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/24600678

Willis, S., & Sutton, J. (2013). Managing complex palliative wounds an interactive educational approach for district nurses. *International Journal of Palliative Nursing*, *19*(9), 457-462. Retrieved from http://www.EBSCOhost.com

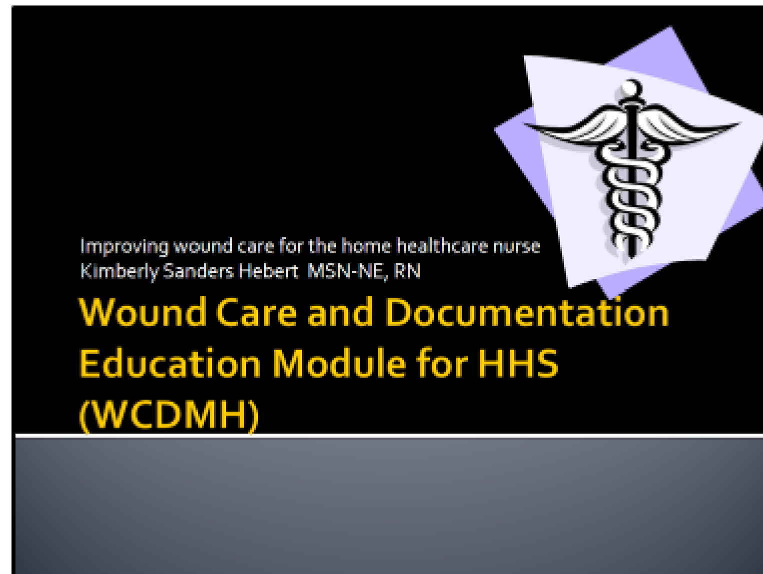
WoundRounds Webinar. (2012, April 21). *Wound assessment and documentation: A practical guide* [Video file]. Retrieved from https://youtu.be/J_luq26wWEY?list=PLap0caaCpJBNYjyLs_-abS8DkLtnPCE6B

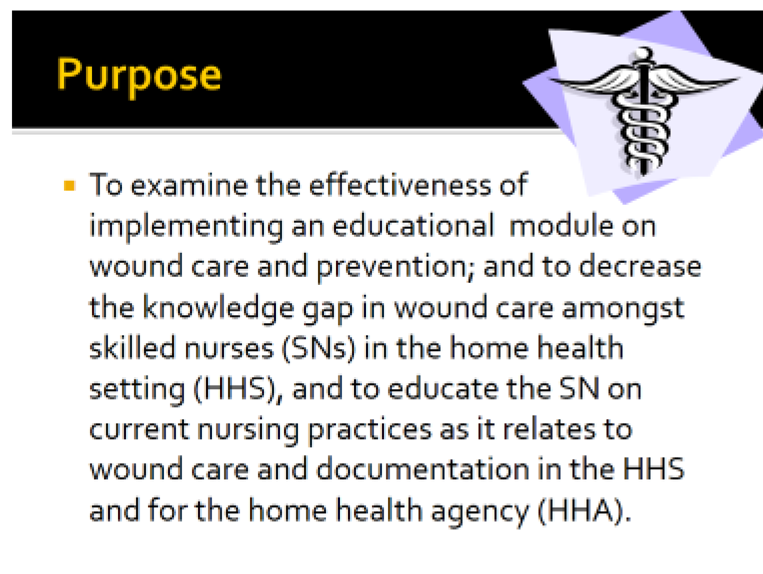
Yankowsky, K., & Fife, C. E. (2013). Avoiding legal pitfalls for home health services in wound care. *Today's Wound Clinic*, 10-13. Retrieved from https://www.todayswoundclinic.com/files/TWC_May2013_Fife.pdf

Zaccagnini, M. E., & White, K. W. (2011). *The doctor of nursing practice essentials: A new model for advanced practice nursing* (Custom ed.). Sudbury, MA: Jones and Bartlett.

Zulkowski, K., Ayello, E. A., & Wexler, S. (2007, January). Certification and education: Do they affect pressure ulcer knowledge in nursing? *Advances in Skin & Wound Care*, 20(1), 34-38. Retrieved from www.woundcarejournal.com

Appendix A: Wound Care Documentation Educational Module for HHS (WCDMH)





Problem

- The charting supports that there is an inaccuracy in the documentation of wounds (according to the chart audit tools based on OASIS guidelines).
- There is a lack of evidence of patient/family education on care of wounds.
- There is a lack of communication with the provider detailing if current wound care is promoting wound healing.
- There is an absence of competency testing and educational sessions for SNs on wound care.

Goals and Objectives

- The SN will at the end of the educational module on wound care and documentation successfully pass by scoring 90% or greater on the wound care post-test.
- The SN will over the course of four weeks, demonstrate improvement in wound care documentation with accuracy scoring of "Met" all documentation is present.

Types of Wounds

ACUTE

- Burns
- Traumatic

CHRONIC

- Pressure
- Arterial Insufficiency
- Venous Stasis
- Diabetic (Neuropathic and Ischemic)

Although acute wounds are a topic that needs to be discussed in wound care practices. For this modules purposes chronic wounds will be covered.

Types of Wounds

- Types of wounds we will cover today are the most prevalent in the HHS according to Dr. Elizabeth Ayello. (Ayello, E. A., & Baranoski, S., 2014).
- Pressure Ulcers
- Lower Extremity Ulcers

Wound Staging: A Practical Guide Module 1

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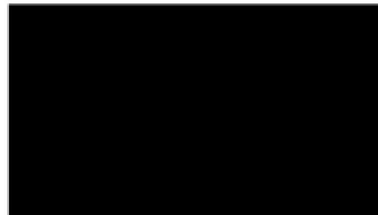

Braden's Scale for the Prediction of Pressure Ulcer Risk: A Practical Guide Module 2

- Please double click black box to begin video

PUSH Tool for Monitoring Pressure Ulcer Healing: A Practical Guide Module 3

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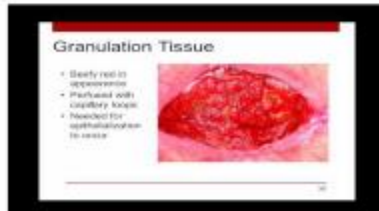

Differentiating Lower Extremity Wounds Module 4

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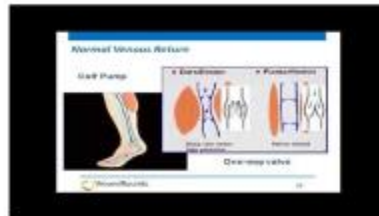

Management and Treatment Options for Lower Extremity Wounds Module 5

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Dressing(s) for Success: Wound Dressing Selection Module 6

Please double click the black box to begin video

Wound Assessment and Documentation Module 7

Please double click the black box to begin video:

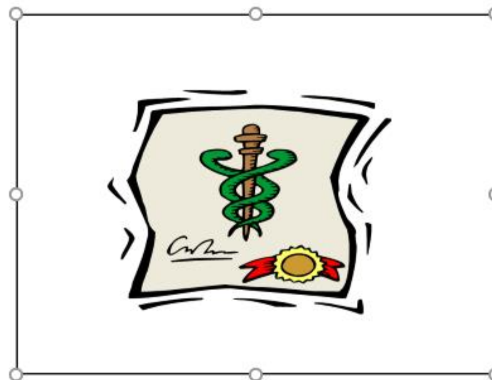
Documentation/Audit

The staff nurses will see in the handout that at this point after the modules are completed, the agency will use this chart audit tool to evaluate their documentation for accuracy.

Helpful Hints

- Communicate progression of wound to physician and agency.
- Be sure to document wounds properly
- Remember infection control and effective hand-washing
- Do not forget patient/caregiver teaching.

Agency Policy for Wound Care



In this section the agency will discuss the policies and procedure they uphold for wound care and documentation.

Acknowledgements

- Special thanks to Telemedicine Solutions LLC for giving permission to incorporate their video webinars for WoundRonds.com®.

References

AHCPR Clinical Practice Guideline website. (n.d.). http://www.ahrq.gov/clinic/cpgonline.htm

Ayello, E. A., & Baranoski, S. (2014, August). Wound care and prevention: Nursing2014 survey results. *Nursing2014*, 32-40. Retrieved from www.WOUNDCAREJOURNAL.com

Fishman, T. D. (2013). Diabetic foot ulcers. Retrieved from http://www.medicaledu.com/diabetic.htm

Freedline, A., & Fishman, T. D. (2013). Traumatic Ulcer. Retrieved from http://www.medicaledu.com/traumati.htm

References

WoundRonds Webinar. (2012, February 23). *Wound staging: A practical guide* [Video file]. Retrieved from https://youtu.be/fEMy9Qmmafs?list=PLap0caaCpJBNYjyLs_-abS8DkLtnPCE6B

WoundRounds Webinar. (2012, April 21). *Wound assessment and documentation: A practical guide* [Video file]. Retrieved from https://youtu.be/J_lnq26wWEY?list=PLap0caaCpJBNYjyLs_-abS8DkLtnPCE6B

WoundRounds Webinar. (2012, June 29). *PUSH tool for monitoring pressure ulcer healing: A practical guide* [Video file]. Retrieved from https://youtu.be/ILNs6AgqFCo?list=PLap0caaCpJBNYjyLs_-abS8DkLtnPCE6B

WoundRounds Webinar. (2012, May 31). *Braden scale for the prediction of pressure ulcer risk: A practical guide* [Video file]. Retrieved from https://youtu.be/NJ2ONEr_aX4?list=PLap0caaCpJBNYjyLs_-abS8DkLtnPCE6B

References

WoundRounds Webinar. (2013, April 18). *Dressing(s) for success: Wound care dressing selection* [Video file]. Retrieved from https://youtu.be/lbZ6t6N66kw?list=PLap0caaCpJBNYjyLs_-abS8DkLtnPCE6B

WoundRounds Webinar. (2013, November 13). *Management and treatment options for lower extermity ulcers* [Video file]. Retrieved from https://youtu.be/hjBpl7RgSyo?list=PLap0caaCpJBNYjyLs_-abS8DkLtnPCE6B

WoundRounds Webinar. (2013, September 17). *Differentiating lower extremity wounds* [Video file]. Retrieved from https://youtu.be/eiH0ACUhYtU?list=PLap0caaCpJBNYjyLs_-abS8DkLtnPCE6B

Appendix B: WCDMH Handout to Accompany Module

Wound Care and Documentation Education Module for HHS (WCDMH):

Improving wound care for the home healthcare nurse

Study Handout to Accompany Modules 1-7 of the WCDMH Presentation

Doctoral Candidate Walden University

Kimberly Sanders Hebert MSN-NE, BSN-RN

1

Disclaimer

This module on wounds is set-up into seven modules. These modules will give you general information, however most these modules focus on pressure ulcers and lower extremity ulcers as these are the most common wounds.

2

Introduction

Prior to beginning, this module your HHA will schedule a time for you to take a written exam to measure your knowledge of wound care and documentation prior to beginning the educational module. Your HHA will either offer this module electronically or written this is up to the HHA's discretion. After completing the module, you will take a posttest. The SN must score a 90% on this exam in order to receive credit for the educational module. The HHA will also audit the charts of the SN for up to four weeks after administering the educational module. The SN must have and accuracy score "Met" on all documentation in order to meet requirements.

Purpose

The purpose of this educational module is to educate the home healthcare skilled nurse (SN) on current nursing practices as it relates to wounds and wound documentation in the home health setting (HHS) as well as the home health agency (HHA). The module will also examine the effectiveness of implementing and educational module on wound care and prevention. It will also decrease the knowledge gap in wound care and documentation amongst SNs in the HHS.

Problem

There is a lack of compliance in the accuracy of documentation of wounds in the HHA as evidence by; the presence of incomplete, inaccurate documentation, lack of client/family education on wounds, minimal presence of provider communication of progression of wound, and documentation does not meet the minimal CMS and OASIS standards. There is also an absence of competency testing and educational sessions for SNs on wound care.

Goals and Objectives

1. The SN will at the end of the educational module on wound care and documentation successfully pass by scoring 90% or greater on the wound care post-test.
2. The SN will over the course of four weeks, demonstrate improvement in wound care documentation with accuracy scoring of "Met" all documentation is present.

Understanding Wounds

Topics

- **Types of Wounds** (pressure ulcers/lower extremity wounds)
- **Etiology of Wounds** (pressure ulcers/lower extremity wounds)
- **Treatment of Wounds** (pressure ulcers/lower extremity wounds)
- **Best-practice in Wound Care**
- **Documentation of Wounds**
- **Agency Policy and Practices**

Types of Wounds

For this modules purposes wounds can be categorized as Acute and Chronic. In this module we will focus on Chronic wounds.

Acute wounds can be caused by, but not limited to: burns and traumatic wounds.

Chronic wounds can be caused by but not limited to: pressure ulcers, arterial insufficiency, venous stasis, and diabetic (neuropathic and ischemic)

The types of wounds that will be covered in this educational module are the most prevalent wounds in the HHS according to Dr. Elizabeth Ayello (Ayello & Baranoski, 2014).

Module 1-3

In the following modules you will view videos on the topic of Pressure Ulcers. These modules are to accompany the below written information on Pressure Ulcers.

Module 1-Wound Staging: A Practical Guide Slide 10 (51:12)

Module 2- Braden's Scale for the Prediction of Pressure Ulcer Risk: A Practical Guide Slide 12 (49:38)

Module 3- PUSH Tool for Monitoring Pressure Ulcer Healing: A Practical Guide Slide 14 (46:07)

Pressure Ulcers

- Pressure ulcers arise due to a combination of situations and factors.
- On a cellular level, ischemia occurs to tissue when too much pressure is applied to one area for a prolonged period of time. This pressure is usually from a bony prominence on one side and a hard surface on the other side. The soft tissue between these two surfaces is subjected to abnormal pressure. The ischemia produced leads to tissue necrosis.

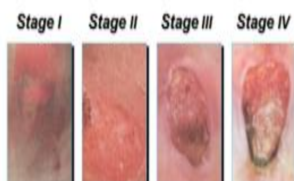
- The tissue closest to the bone is typically the first tissue to undergo necrosis. Therefore, visible skin discoloration or redness may actually be an indicator of underlying adipose or muscular necrosis.
- It has been demonstrated that the capillary pressure on the arterial side is around 30-32 mmhg and around 12 mmhg on the venous side. Sustained pressures at values higher than these may result in circulatory compromise and tissue necrosis.
- Frictional and shearing forces also play roles in tissue necrosis and must be reduced or eliminated.
- General health, skin texture and turgor, patient's mobility (during sleep or on an OR table), nutritional status and body weight (too thin and too heavy are both problematic) must all be evaluated and corrected in order to reduce the risk of a pressure sore.
- Learn how to properly stage pressure ulcers or go to the Agency for Health Care Policy and Research (AHCPR) Guideline for an explanation of staging, treatment and prevention.

(Freedline, A., & Fishman, T. D. 2013)

Pressure Ulcer Staging

***There are six total stages in wounds. ***

Pressure Ulcer Staging



Deep Tissue Injury

- Deep tissue injuries may appear as a bruise purple in color or maroon. They can be painful blood filled areas that can form a blister. May be caused by shearing of the skin. The temperature of the affected area could be warm to touch or cool to touch in comparison to some of the surrounding tissues. The skin may also fill boggy, and/or firm in some cases.

(Ayello & Baranoski, 2014)

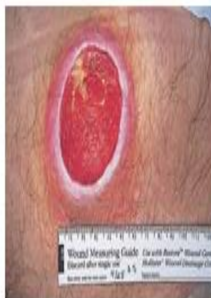
Stage I

- Stage I ulcers may be superficial, or they may be a sign of deeper tissue damage. Stage I pressure ulcers are not always reliably assessed, especially in patients with darkly pigmented skin.
- Non-blanchable erythema of intact skin, the heralding lesion of skin ulceration. In individuals with darker skin, discoloration of the skin, warmth, edema, induration, or hardness may also be indicators.

- A Stage I pressure ulcer is an observable pressure related alteration of intact skin whose indicators as compared to the adjacent or opposite area on the body may include changes in one or more of the following:
  skin temperature (warmth or coolness), tissue consistency (firm or boggy feel) and/or sensation (pain, itching).
  The ulcer appears as a defined area of persistent redness in lightly pigmented skin, whereas in darker skin tones, the ulcer may appear with persistent red, blue, or purple hues.

(Freedline, A., & Fishman, T. D. 2013)

Stage II



- Partial thickness skin loss involving epidermis, dermis, or both. The ulcer is superficial and presents clinically as an abrasion, blister, or shallow crater.

(Freedline, A., & Fishman, T. D. 2013)

Stage III

- Full thickness skin loss involving damage to or necrosis of subcutaneous tissue that may extend down to, but not through, underlying fascia. The ulcer presents clinically as a deep crater with or without undermining of adjacent tissue.

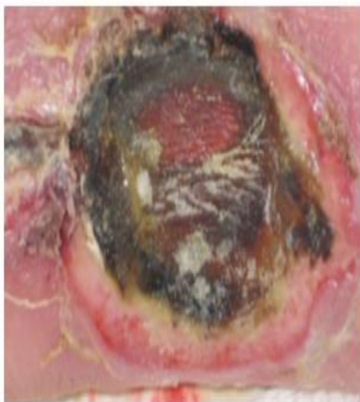
(Freedline, A., & Fishman, T. D. 2013)

Stage IV

- Full thickness skin loss with extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structures (e.g., tendon, joint capsule). Undermining and sinus tracts also may be associated with Stage IV pressure ulcers.

(Freedline, A., & Fishman, T. D. 2013)

Unstageable



- Unstageable wounds are full thickness tissue loss the base of the wound may be covered in gray, tan, yellowish, green or brown. The wound may also have eschar present which could be black in color or even tan and brown.

(Ayello & Baranoski, 2014)

Pressure Ulcer Assessment

Wound (Ulcer) Assessment

- Assessment is the starting point of ulcer treatment. The entire patient, not just the ulcer, must be assessed.
- Note the size, depth, necrotic and granular tissue present
- Reassess at least weekly or sooner if deterioration of the ulcer is noted. Clean pressure ulcer with adequate blood flow should show some improvement in 2 - 4 weeks.

- Monitor the overall medical condition of the patient and watch for other complications like amyloidosis, endocarditis, maggot infestation, meningitis, peptic arthritis, squamous cell carcinoma in the ulcer, systemic complications of topical treatment, etc.

Nutritional Assessment

- Perform a Nutritional assessment at least every 3 months for patients at risk for malnutrition. Vitamin and mineral supplements may be necessary. Positive nitrogen balance and protein intake are important as well.

Pain Assessment

- The goal is to eliminate the cause of the pain, to provide analgesia, or both. Cover the wound, adjust support surface, reposition, give analgesia as needed or appropriate in an effort to reduce pain.

Psychosocial Assessment

- The goal is to create an environment conducive to patient adherence to the pressure ulcer treatment plan.

(Freedline, A., & Fishman, T. D. 2013)

Treatment for Pressure Ulcers

Treatment Load Management

The goal of load management is to create an environment that enhances soft tissue viability and promotes healing of the pressure ulcer(s).

- The vigilant use of proper positioning and support surfaces are important.
- Avoid positioning patients on a pressure ulcer. Do not use donut-type-devices.
- Use devices like pillows or foam to keep the heels off the bed, keep knees and ankles from touching.
- Maintain the head of the bed at the lowest degree medically necessary.
- No evidence to show that any one support surface consistently performs better than another.
- A patient should avoid sitting if he/she has an ulcer on a sitting surface.
- Move a sitting patient at least once an hour.

Ulcer Care

Initial ulcer care involves debridement, wound cleansing, dressing application and possible adjunctive therapy.

- Debridement should be performed to remove moist, devitalized tissue. Small wounds can be debrided at bedside, extensive wounds in the operating room or special procedure room.
- Stable heel ulcers with eschar DO NOT need to be debrided. Edema, erythema, fluctuance or drainage would necessitate eschar debridement.
- Wound Cleansing - Weigh benefits of cleaning against trauma to tissue bed caused by the cleaning. Do not use povidone iodine, iodophor, sodium hypochlorite solution, hydrogen peroxide and acetic acid as they have been shown to be cytotoxic. Use normal saline at a pressure between 4 and 15 pounds per square inch (psi).
- Dressings - An ideal dressing should protect the wound, be biocompatible, and provide ideal hydration. The cardinal rule is to keep the ulcer tissue moist and the surrounding intact skin dry.
- Electrotherapy has been shown to be effective in pressure ulcer treatment.

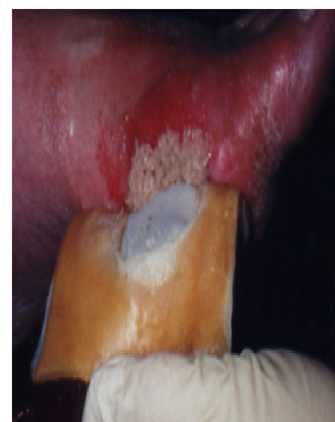
(Freedline, A., & Fishman, T. D. 2013)

Types of Debridement

	Autolytic Debridement	Enzymatic Debridement
Description	Autolysis uses the body's own enzymes and moisture to re-hydrate, soften and finally liquefy hard eschar and slough. Autolytic debridement is selective; only necrotic tissue is liquefied. It is also virtually painless for the patient. Autolytic debridement can be achieved with the use of occlusive or semi-occlusive dressings which maintain wound fluid in contact with the necrotic tissue. Autolytic debridement can be achieved with hydrocolloids, hydrogels and transparent films.	Chemical enzymes are fast acting products that produce slough of necrotic tissue. Some enzymatic debriders are selective, while some are not.
Best Uses	✓ In stage III or IV wounds with light to moderate exudate	✓ On any wound with a large amount of necrotic debris. ✓ Eschar formation
Advantages	✓ Very selective, with no damage to surrounding skin. ✓ The process is safe, using the body's own defense mechanisms to clean the wound of necrotic debris. ✓ Effective, versatile and easy to perform ✓ Little to no pain for the patient	✓ Fast acting ✓ Minimal or no damage to healthy tissue with proper application.
Disadvantages	✓ Not as rapid as surgical debridement ✓ Wound must be monitored closely for signs of infection ✓ May promote anaerobic growth if	✓ Expensive ✓ Requires a prescription ✓ Application must be performed carefully only to the necrotic tissue.

	an occlusive hydrocolloid is used	✓ May require a specific secondary dressing ✓ Inflammation or discomfort may occur

	Mechanical Debridement	Surgical Debridement
Description	✓ This technique has been used for decades in wound care. Allowing a dressing to proceed from moist to wet, then manually removing the dressing causes a form of non-selective debridement. ✓ Hydrotherapy is also a type of mechanical debridement. It's benefits vs. risks are of issue.	✓ Sharp surgical debridement and laser debridement under anesthesia are the fastest methods of debridement. ✓ They are very selective, meaning that the person performing the debridement has complete control over which tissue is removed and which is left behind ✓ Surgical debridement can be performed in the operating room or at bedside, depending on the extent of the necrotic material.
Best Uses	✓ Wounds with moderate amounts of necrotic debris	✓ Wounds with a large amount of necrotic tissue. ✓ In conjunction with infected tissue.
Advantages	✓ Cost of the actual material (i.e. gauze) is low	✓ Fast and Selective ✓ Can be extremely effective
Disadvantages	✓ Non-selective and may traumatize healthy or healing tissue ✓ Time consuming ✓ Can be painful to patient ✓ Hydrotherapy can cause tissue maceration. Also, waterborne pathogens may cause contamination or infection. Disinfecting additives may be cytotoxic.	✓ Painful to patient ✓ Costly, especially if an operating room is required ✓ Requires transport of patient if operating room is required.



http://www.medicaledu.com/debridhp.htm

Maggot Debridement Therapy (MDT)
✓ Maggot Debridement Therapy (MDT) is the medical use of live maggots (fly larvae) for treating non-healing wounds. ✓ In maggot debridement therapy (also known as maggot therapy, larva therapy, larval therapy, bio debridement or bio surgery), disinfected fly larvae are applied to the wound for 2 or 3 days within special dressings to keep them from migrating. The literature identifies three primary actions of medical grade maggots on wounds: 1. They clean the wounds by dissolving dead and infected tissue ("debridement"); 2. They disinfect the wound (kill bacteria); 3. They speed the rate of healing. (Sherman, R. A. 2013)

Managing Bacterial Colonization and Infection

- All stage II III, IV ulcers are invariably colonized by bacteria. Topical antibiotics are appropriate. Watch for response and sensitivity.
- Swab cultures should not be used. They will only show surface contaminants.
- Use needle aspiration to obtain fluid or soft tissue biopsy for determining infecting organism.
- Bone biopsy is the gold standard for assessing osteomyelitis. WBC, ESR and plain x-ray have a positive predictive value 69 percent when all three tests are positive.
- Use appropriate systemic antibiotic therapy for patients with bacteremia, sepsis, advancing cellulitis or osteomyelitis.
- Use sterile instruments and clean dressings during wound care. Treat the most contaminated ulcer LAST in patients with multiple wounds. Change gloves and wash hands between patients.
- Operative repair- includes direct closure, skin grafting, skin flaps, musculocutaneous flaps and free flaps.

(http://www.medicaledu.com)

Nursing Implications for Pressure Ulcers

Educate

- Family members and caregivers.
- Stress prevention and treatment.
- Discuss etiology, pathology, risk factors, terminology, principles of wound healing, nutritional support, cleaning, infection control, positioning, prevention, product selection, documentation.

- Monitor outcomes and identify deficiencies.

Wound Care Products

➢ Absorptive Dressing ➢ Alginates ➢ Antimicrobials ➢ Cleansers ➢ Closure Devices (new) ➢ Collagen ➢ Compression Dressing & Wraps (Leg) ➢ Composite Dressing ➢ Contact Layer ➢ Enzymatic Debriders ➢ Fillers (wound) ➢ Foam Dressings ➢ Growth Factors (see Tissue Engineering and Growth Factors) http://www.ahrq.gov/clinic/cpgonline.htm	➢ Hydrocolloid ➢ Hydrofiber ➢ Hydrogel ➢ Hydrogel Impregnated Gauze ➢ Hydrogel Sheet ➢ Measuring Devices ➢ Miscellaneous Devices ➢ Negative Pressure Wound Therapy (NPWT) ➢ Odor Absorbing ➢ Scar Therapy and Makeup ➢ Skin Care ➢ Skin Substitutes ➢ Therapeutic Shoe Gear ➢ Tissue Engineering / Growth Factors ➢ Transparent Films

Module 4-5

In the following modules you will view videos on the topic of Lower Extremity Ulcers. These modules are to accompany the below written information on Lower Extremity Ulcers.

Module 4- Differentiating Lower Extremity Wounds (50:01)

Module 5- Management and Treatment Options for Lower Extremity Wounds (51:16)

Lower Extremity Ulcers

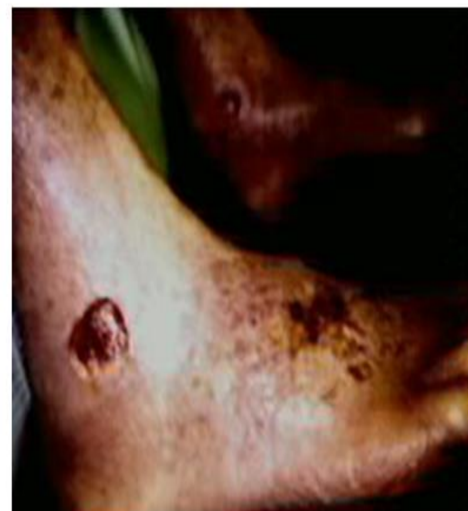
Lower extremity ulcers are considered chronic wounds. Lower extremity ulcers are identified as:

- Arterial Ulcers
- Venous Ulcers
- Diabetic Ulcers

Arterial Ulcers

Causes	➢ Complete or partial arterial blockage may lead to tissue necrosis and / or ulceration.
Signs and Symptoms	➢ Pulselessness of the extremity ➢ Painful ulceration ➢ Small, punctate ulcers that are usually well circumscribed ➢ Cool or Cold skin ➢ Delayed capillary return time (briefly push on the end of the toe and release, normal color should return to the toe in 3 seconds or less) ➢ Atrophic appearing skin (shiny, thin, dry) ➢ Loss of digital and pedal hair ➢ Can occur anywhere, but is frequently seen on the dorsum (top) of the foot.
Diagnosis	➢ Utilize noninvasive vascular tests such as Doppler, waveform, Ankle Brachial Indices (ABI) and Transcutaneous Oxygen Pressure measurements (TCPO2) to aid in your diagnosis. Duplex scanning and arteriograms may also be performed if indicated. ➢ Large vessel disease must be differentiated from small vessel disease. A blockage in a large artery may be removed or bypassed. Narrowing of smaller arterial vessels is more difficult to address.
Treatment	➢ Treatment: Treatment of an arterial ulcer has many goals. The primary goal is to increase the circulation to the area in question. This can be done surgically or medically (with oral pills) depending on the cause of the ulcer and the patient's overall medical condition. ➢ Many clinicians like the keep an arterial wound somewhat dry, as they have found that too much moisture can lead to problems. Usually, topical treatment is very conservative.

Freedline, A., & Fishman, T. D



Note how this patient has arterial ulcers on the lateral malleolus and dorsum of the near foot as well as the medial malleolus of the far foot. Freedline, A., & Fishman, T. D

Venous Ulcers

Etiology of Venous Ulcers:

- It has been reported that venous ulcerations are the most common type of ulcer affecting the lower extremities.
- The normal vein has valves that prevent the backflow of blood. When these valves become incompetent, the backflow of venous blood causes venous congestion. Hemoglobin from the red blood cells escapes and leaks into the extravascular space, causing the brownish discoloration commonly noted.
- It has been shown that the transcutaneous oxygen pressure of the skin surrounding a venous ulcer is decreased, suggesting that there are forces obstructing the normal vascularity of the area.
- Lymphatic drainage and flow also plays a role in these ulcers.
- The typical venous ulcer appears near the medial malleolus, is in combination with an edematous and indurated lower extremity, is shallow, is not too painful and may present with a weeping discharge from the leg.
- Non-invasive vascular studies should be performed on both legs and for both the arterial and venous structures. Reason: 1) Assess venous return 2) You shouldn't apply compressive dressings or devices if the arterial circulation is impaired.
- You want to rule out a possible deep venous thrombosis as the source of the venous congestion.

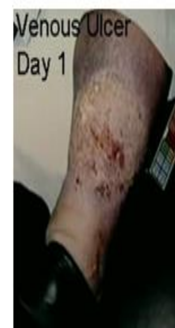
Freedline, A., & Fishman, T. D

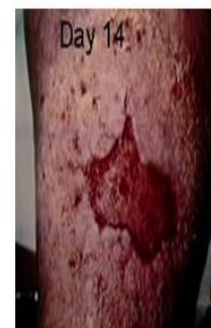
Treatment of Venous Ulcers

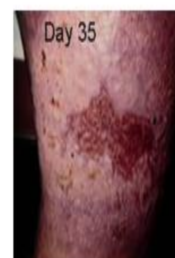
- Treatment of venous ulcers can be frustrating and lengthy. Goals should be directed at keeping the ulcer infection free, absorbing any excess discharge, maintaining a moist wound environment, supplying compression (typically in the range of 40 mmhg), promoting activity of the patient and the involved extremity and managing the patient's medical problems. Controlling the edema is a primary concern.
- Compression can be achieved via multi-layer compression dressings, stockings or mechanical pumping devices.

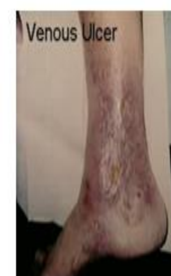
Freedline, A., & Fishman, T. D

Healing Venous Ulcer









The patient in the images presented with this stasis ulcer which had been present for one and one half year. Treatment consisted of debridement, Woundress, Allevyn and a dry sterile dressing.

Diabetic Foot Ulcers

- Diabetics are prone to foot ulcerations due to both neurologic and vascular complications.
- Peripheral neuropathy can cause altered or complete loss of sensation in the foot and /or leg. Similar to the feeling of a "fat lip" after a dentist's anesthetic injection, the diabetic with advanced neuropathy loses all sharp-dull discrimination. Any cuts or trauma to the foot can go completely unnoticed for days or weeks in a patient with neuropathy. It's not uncommon to have a patient with neuropathy tell you that the ulcer "just appeared" when, in fact, the ulcer has been present for quite some time. There is no known cure for neuropathy, but strict glucose control has been shown to slow the progression of the neuropathy.
- Charcot foot deformity occurs as a result of decreased sensation. People with "normal" feeling in their feet automatically determine when too much pressure is being placed on an area of the foot. Once identified, our bodies instinctively shift position to relieve this stress. A patient with advanced neuropathy loses this important mechanism. As a result, tissue ischemia and necrosis may occur leading to plantar ulcerations. Microfractures in the bones of the foot go unnoticed and untreated, resulting in disfigurement, chronic swelling and additional bony prominences.
- Microvascular disease is a significant problem for diabetics and can lead to ulcerations. It is well known that diabetes is called a small vessel disease. Most of the problems caused by narrowing of the small arteries cannot be resolved surgically. It is critical that diabetics maintain close control on their glucose level, maintain a good body weight and avoid smoking in an attempt to reduce the onset of small vessel disease.

Case Study: This patient is an insulin dependent diabetic who presented with the above ulcer. The lesion was present for almost 3 years. Treatment consisted of wound cleansing, aseptic surgical debridement, application of Castellani's paint to the wound edges, a hydrogel to the wound base covered by Allevyn foam dressing. Molded shoes with a plastizote insert were also obtained.

Treatment for Diabetic Foot Ulcers

First, you must determine the cause of this ulcer. Is it neuropathic, ischemic or a combination? Base your treatment protocol on the etiology of the ulcer. Assuming that there is adequate perfusion to heal a plantar ulcer, one should have appropriate shoe modifications made to disperse weight away from the ulcerative area. Absorb any excess discharge and maintain a moist wound environment with appropriate product selection. Keep the wound edges dry. Make sure no sinus tracking occurs. Watch for infection. Debride necrotic debris and the hyperkeratotic rim as they are niduses for infection.

Module 6-7

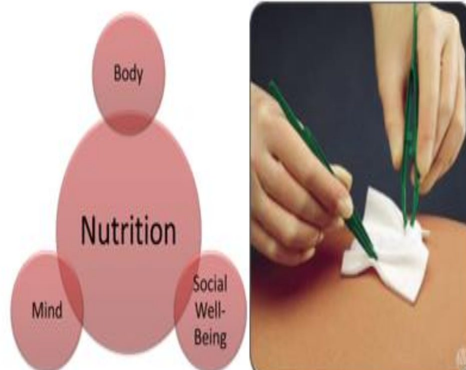
The following videos will address best practice in wound care and dressings as well as documentation of wounds.

Module 6- Dressing(s) for Success: Wound Dressing Selection (58:54)

Module 7- Wound Assessment and Documentation: A Practical Guide (57:01)

Things to Know:

- ✓ Wounds with adequate vascular supply should be treated with moist wound therapy.
- ✓ Within 4 weeks healing wounds that are being treated should be healed by 30%.
- ✓ Wounds without adequate vascular supply should be kept dry.
- ✓ The Braden Scale is used to predict pressure ulcer risk.



- ✓ Nutrition is also very important when teaching and educating your patient about wounds.
- ✓ Wet to dry dressings although a topic of controversy, should be mainly used on wounds that necrotic debris.
- ✓ Adherent dressings are not recommended for simple skin tears as they remove and damage the healing skin.

- ✓ Although it is the common practice for patients to be repositioned every 2h. It is important to know that best practice is to reposition the patient according to their support surface.
- ✓ Be aware of Stage I pressure ulcers in dark pigmented skin it may be difficult to identify.
- ✓ National Pressure Ulcer Advisory Panel (NPUAP)
- ✓ Although topical enzymes may be on hand for your agency, they still require prescription prior to use.
- ✓ There are six stages in the NPUAP pressure ulcer classification.
- ✓ Most common method of culturing a wound for the nurse is to swab.
- ✓ The gold standard for treating venous ulcers is compression stockings.

- ✓ The best choice for routinely cleaning chronic wounds is a commercial cleanser.
- ✓ Minor surgical debridement should be performed by licensed healthcare professionals specified in each state.
- ✓ Pressure ulcer rate is one of the National Database of Nursing Quality Indicators NDNQI nurse sensitive indicator, and one of the quality improvement initiatives from the American Nurses Association ANA.

- ✓ Pressure ulcer prevention is best managed with an interdisciplinary wound care team.
- ✓ There is a need for more wound care education and competency testing.

Ayello, E. A., & Baranoski, S. (2014, August)

Documentation

Wound Documentation Audit Tool

Facility: ___________
Reviewer: ___________
Date of Review: ___________
Unit: ___________

Nurse:									
Characteristics of Wound: Yes/No or N/A									
1. Location									
2. Etiology									
3. Size									
4. Exudate									
5. Tissue Type									
6. Periwound									
7. Treatment used									
8. Pain addressed									
9. Offloading Devices used									
10. Direction of healing									
11. Client teaching on wound									
12. Provider communication									
Nurse:									
Characteristics of Wound: Yes/No or N/A									
1. Location									
2. Etiology									
3. Size									
4. Exudate									
5. Tissue Type									
6. Periwound									
7. Treatment used									
8. Pain addressed									
9. Offloading Devices used									
10. Direction of healing									
11. Client teaching on wound									
12. Provider communication									

This tool has been adapted from Dr. A. Thomas to include the needs for this doctoral studies. (Thomas, 2012)

After you have completed the video modules and taken the test for this topic, your documentation will be audited using the above tool which meets OASIS standards and the standards of CMS.

Before beginning documentation of wounds the nurse must first answer two questions:

1. What are your agency standards?
2. What is required by the state to document?

After the above two questions are answered there are other items for the nurse address.

- What caused the wound?
- Approximately how long has the client had the wound.
- Is there an odor?
- What size is the wound? Are there multiple wounds? What are their sizes?
- Label the wounds if there are multiple wounds. (i.e. A, B, C or #1, #2, #3)
- What types of dressings are being used?
- If using vacuum therapy document pressure.

- How does the wound look? Is it necrotic, is there exudate? Is the wound well approximated?

- Was there patient and caregiver teaching done?
- What is the patient's nutritional status?
- How often are the dressing changes being done?
- How much drainage and the color?
- What is the wound being cleaned with?
- Communications with team, and other disciplines involved in the care of the wound.

How Can Wounds Be Documented?

- Written documentation
- Media (pictures and imaging)
- Electronic medical record

Equipment Needed to Take Care of Wounds

✓ Measuring tape	✓ Dressing as indicated in order
✓ Camera	✓ Gloves
✓ Cotton tip applicators	✓ Chuck Pads
✓ Gauze and sterile gauze	✓ Tape
✓ Cleaner and/or normal saline as indicated in order	✓ Vacuum
✓ Culture swab if needed	✓ Biohazard bag or trash bag
✓ Towels	

Important Nursing Tips

Helpful Hints

- Communicate progression of wound to physician and agency.
- Be sure to document wounds properly
- Remember infection control and effective hand-washing
- Do not forget patient/caregiver teaching.

Agency Policy on Wound Care

In this section your agency will discuss with you the policies and procedures they uphold for their facility.

Acknowledgements

Special thanks to Telemedicine Solutions LLC for giving permission to incorporate their video webinars for WoundRonds.com®.

References

AHCPR Clinical Practice Guideline website. (n.d.). http://www.ahrq.gov/clinic/cpgonline.htm

Ayello, E. A., & Baranoski, S. (2014, August). Wound care and prevention: Nursing2014 survey results. *Nursing2014*, 32-40. Retrieved from www.WOUNDCAREJOURNAL.com

Fishman, T. D. (2013). Diabetic foot ulcers. Retrieved from http://www.medicaledu.com/diabetic.htm

Freedline, A., & Fishman, T. D. (2013). Traumatic Ulcer. Retrieved from http://www.medicaledu.com/traumati.htm

WoundRonds Webinar. (2012, February23). *Wound staging: A practical guide* [Video file]. Retrieved from https://youtu.be/fEMy9Qnnafs?list=PLap0czaCpIBNYjyLs_-abS8DkLmPCE6B

WoundRounds Webinar. (2012, April 21). *Wound assessment and documentation: A practical guide* [Video file]. Retrieved from https://youtu.be/J_1uq26vvWEY?list=PLap0czaCpIBNYjyLs_-abS8DkLmPCE6B

WoundRounds Webinar. (2012, June29). *PUSH tool for monitoring pressure ulcer healing: A practical guide* [Video file]. Retrieved from https://youtu.be/ILNs6AggFCo?list=PLap0czaCpIBNYjyLs_-abS8DkLmPCE6B

WoundRounds Webinar. (2012, May31). *Braden scale for the prediction of pressure ulcer risk: A practical guide* [Video file]. Retrieved from https://youtu.beNlDONEr_aX4?list=PLap0czaCpIBNYjyLs_-abS8DkLmPCE6B

WoundRounds Webinar. (2013, April 18). *Dressing(s) for success: Wound care dressing selection* [Video file]. Retrieved from https://youtu.be/ItZ6t6N66kw?list=PLap0caaCpIBNYjyLs_-abS8DkLtnPCE6B

WoundRounds Webinar. (2013, November 13). *Management and treatment options for lower extermity ulcers* [Video file]. Retrieved from https://youtu.be/hjBpI7RgSyo?list=PLap0caaCpIBNYjyLs_-abS8DkLtnPCE6B

WoundRounds Webinar. (2013, September 17). *Differentiating lower extremity wounds* [Video file]. Retrieved from https://youtu.be/eiH0ACUhY6U?list=PLap0caaCpIBNYjyLs_-abS8DkLtnPCE6B

Appendix C: Likert Scale Evaluation

Wound Care and Documentation Module for the HHS (WCDMH)

Directions: Please evaluate the tool entitled Wound Care and Documentation Module for the HHS (WCDMH), by bubbling in the space of the answer choice you choose.

1. **The educational module is easy to read and understandable.**

Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1	Not Applicable 0
o	o	o	o	o	o

2. **The educational module is user friendly.**

Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1	Not Applicable 0
o	o	o	o	o	o

3. **The educational module addresses the majority of wounds that are seen in the HHS.**

Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1	Not Applicable 0
o	o	o	o	o	o

4. **The educational module addresses best practice in wound care and documentation.**

Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1	Not Applicable 0
o	o	o	o	o	o

5. **The educational module is adaptive to other HHS.**

Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1	Not Applicable 0
o	o	o	o	o	o

6. The intervention is applicable to clinical practice.

Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1	Not Applicable 0
o	o	o	o	o	o

This tool is adapted from (Grove et al., 2013).

What are your recommendations for this educational module?

Appendix D: Wound Care and Documentation Module for HHS

Nurse Demographics Questionnaire

Name: ____

Date: ____

- Please complete each item by marking in the bubble next to your answer.
- Please note data collected her will be confidential.

Age:	o <25 o 25-29 o 30-34 o 35-39 o 40-44	o 45-54 o 55-64 o >65
Sex:	o Male	o Female
Race:	o White only o Black/African---American only o American Indian/Alaska Native o Asian only	o Native Hawaiian/Pacific Islander o Hispanic o Other_________________ o Multiple-races
Title:	o LPN o ADN/RN	o BSN/RN o MSN/RN
Year first qualified as a nurse:	o 1960s o 1970s o 1980s o 1990	o 2000s o2010s Other_________________
Highest nursing education:	o Nursing diploma/degree o Associates degree o Bachelorette degree	o Master's degree o Postgraduate Certificate o Other degree
Number of years as a nurse:	o <2 o 3---5 o 6---10 o 11---15	o 16---20 o 21---25 o 26---30 o >31
Number of years at HHU, Inc.:	o <2 o 3---5 o 6---10 o 11---15	o 16---20 o 21---25 o 26---30 o >31
Previous wound education:	Outside HHU, Inc.: **_Yes _No** Within one year: **_Yes _No**	If yes, Length of the program: o <1hour o 1-2 hours o 2-4 hours o >4

This tool has been adapted from Dr. A. Thomas to include the needs for this doctoral studies. (Thomas A. , 2012)

Name: ____

Date: ____

Pressure Ulcer and Wound Documentation Questionnaire

Circle the BEST answer:

1) Which statement(s) are true about pressure ulcers: **1 point**

a. They are localized areas of tissue damage
b. They tend to occur at bony sites
c. They are caused by prolonged pressure
d. The patient/resident's nutrition status affects the development of a pressure ulcer
e. All of the above

2) Which sites are the most susceptible to pressure ulcer development? **1 point**

a. Sacrum and heels
b. Temporal (side) area of the head
c. Soft tissue areas
d. Abdominal areas
e. All of the above

3) To prevent pressure ulcers from developing, which of the following steps should NOT be taken? **1 point**

a. Routinely observe high-risk bony skin areas
b. Turn patient/resident only upon their request
c. Minimize pressure
d. Keep the skin dry and clean
e. Depending on the patient/resident's condition, encourage physical activity and a balanced diet

4) A pressure ulcer can form in: **1 point**

a. Less than 2 hours
b. 24 hours
c. 3 days
d. 1 week
e. 2 weeks

5) How often should the nurse assess and document skin condition? **1 point**

a. Daily
b. Once a shift
c. Upon admission and discharge, every shift, and a patient condition warrants
d. Upon admission and discharge

6) What can the nurse do when one of the patients has discoloration of the skin (red, purple, blue) indicating pressure? **1 point**

a. See what happens over the next 24 hours
b. Let the next nurse know about it. Start a skin care plan
c. Place the patient on a pressure-reducing surface and explain to the patient and family that the patient needs to limit pressure to the area
d. B & C from above

7) Which of the following repositioning techniques are key in preventing pressure: **1 point**

a. Turning residents/patients at least every two hours while in bed
b. Repositioning residents/patients confined to a chair at least hourly
c. Floating heels
d. Padding between bony areas
e. All of the above

8) What are the layers of the skin? **1 point**

a. Epidermis and dermis
b. Epidermis, dermis, and subcutaneous
c. Epidermis and subcutaneous
d. Dermis and subcutaneous
e. None of the above

9) A wound that extends through the epidermis and part way into the dermis is classified as a: **1 point**

a. Chronic wound
b. Acute wound
c. Partial-thickness wound
d. Full-thickness wound
e. Stage III

10) If you see multiple colors in a wound bed, you should describe the wound according to the: **1 point**

a. Percentage of these types
b. List healthy color you see
c. Color most visible
d. Darkest color you see

True or false

Circle the BEST answer:

11) A Stage III pressure ulcer is a partial thickness skin loss involving the epidermis and/or dermis **1 point**

a. True
b. False

12) Eschar is good for wound healing **1 point**

a. True
b. False

13) It is important to massage bony prominences to promote circulation and prevent pressure ulcers: **1 point**

a. True
b. False

14) Shear is the force that occurs when the skin sticks to a surface and the body slides **1 point**

a. True
b. False

15) A thin and bright red drainage is described as sanguineous **1 point**

a. True
b. False

This tool has been adapted from Dr. A. Thomas to include the needs for this doctoral studies. (Thomas A., 2012)

Appendix E: Permission to Use Wound Questionnaire With Accompanying Tools

To Dr. Thomas,
My name is Kimberly Hebert I am currently working on my Doctorate of Nurse Practice at Walden University. I am working on my proposal for the Graduate Nurse Project. The title of my project proposal is *Validating a Home Health care Staff Educational Module for Wounds and Wound Documentation*. It is my wish that you would allow me to implement your tools Nurse Demographic Questionnaire, Pressure Ulcer and Wound Documentation Questionnaire, along with the Wound Documentation Audit Tool by Thomas (2012) for my two hour educational in-service wound care and documentation for home health care nurse. I have found that your research and tool would be an extreme asset to my research project. I plan to have an expert panel to validate a staff educational module. It is my desire to obtain a copy of your tool and ask for permission to use and alter the tool as it fits my doctoral project population and time constraints. I may be reached via email [redacted] or telephone [redacted].

Thank you in advance,

Kimberly Sanders Hebert

Kimberly Sanders Hebert MSN-NE RN
Doctoral of Nursing Practice Student
Walden University
[e-mail address redacted]
[e-mail address redacted]
Houston, TX [zip code redacted]
[telephone number redacted]

Permission to use toll

AT

Anita Thomas <anitathomas1@gmail.com>

Wed 7/19/2017, 4:54 PM

Yes, that would be fine.

KH

Kimberly Hebert

Reply all

Wed 7/19/2017, 4:46 PM

anitathomas1@gmail.com;

kimberlysandershebert@yahoo.com

This message was sent with high importance.

Action Items

Good evening Dr. Thomas,

I've spoken with you in past and received verbal permission to use you tool from you Thomas (2012) study on assessing nursing knowledge and wound documentation. I would like to have permission to send you a formal electronic letter to have permission to use the tools from your study. Please let me know if this is possible.

Thank you,
Kimberly Hebert

Kimberly Sanders Hebert MSN-NE RN

Appendix F: Permission to Use WoundRounds ® Video Webinars

7/26/2017 edu

RE: FW: Use of webinars for research

Dona Hewitt <dc >

Fri 4/1/2016 12:10 PM

To: Kimberly Hebert < >;

You're welcome Kimberly!

Dona

Dona Hewitt, Account Manager | User Acceptance/Customer Support |
| Telemedicine Solutions, LLC | www.woundrounds.com |
| d |

"We exist because We Improve People's Quality of Life"

From: Kimberly Hebert [ma
Sent: Friday, April 01, 2016 11:48 AM
To: Dona Hewitt
Subject: Re: FW: Use of webinars for research

Ms. Hewitt,

I agree to all terms presented in previous email. Thank you so much for your support.

Kimberly Hebert

On Apr 1, 2016 11:38 AM, "Dona Hewitt"

Hello Kimberly,

Telemedicine Solutions will be happy to grant you rights to use the Webinars for the purposes stated in your email below. **Please acknowledge by return email your agreement to the terms outlined below.** Best wishes for success with your project.

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(4) The authorization provided hereby is non-transferrable to any other entities.

Dona

Dona Hewitt, Account Manager | User Acceptance/Customer Support |
| Telemedicine Solutions, LLC | www.woundrounds.com |
| off

"We exist because We Improve People's Quality of Life"

-----Original Message-----
From: websupport@woundrounds.com [mailto:websupport@woundrounds.com]
Sent: Thursday, March 31, 2016 6:33 PM
To: Support
Subject: Use of webinars for research

System Message: PROD

Path: http://cp.mcafee.com/d/FZsS720QcxNJ5xYQsIe3AnbCXCT4T7XCzBNMSUCU-zt5cSUCU_sQsK3zqdTQSjhOYCevdQrmmH6oaclrwx6Hs4asKrclrwx6Hs4asKr76zBAwwWU_R-pj73DTeLsKCOOZPxEVussjWyaqRQRrLfYG7DR8OJMddECQjt-johhd7dXIEL6XCM0uHbsoGT12dmU8kVv0LVWS2lojSQMDjwu7CM1krmmH6oaclrwx6Hs4asKrpsjpdxeDCy2HFEw05a6NEq87qNd44vF-NIjdFL6ZemI

Facility:

Phone:

Contact Name: Kimberly Hebert

Contact Email:

Hello,

I am Kimberly Hebert and I am currently a doctoral student at Walden University. I will be doing my capstone project on Implementing Wound Care Educational Sessions in the Home Healthcare Setting. I would like to ask permission to use your videos for my in-service they are very informative and are given by an expert clinician in

wound care. Please let me know if this is at all possible and what are the steps I need to take in order to make this possible. Thank you so much in advanced.

Warmest regards,

Kimberly Hebert

Appendix G: Site Agreement

The doctoral student, Kimberly Sanders Hebert is involved in Staff Education that will be conducted under the auspices of our organization. The student is approved to collect formative and summative evaluation data via anonymous staff questionnaires, and is also approved to analyze internal, de-identified site records that I deem appropriate to release for the student's doctoral project. This approval to use our organization's data pertains only to this doctoral project and not to the student's future scholarly projects or research (which would need a separate request for approval).

I understand that, as per DNP program requirements, the student will publish a scholarly report of this Staff Development Project in ProQuest as a doctoral capstone (with site and individual identifiers withheld), as per the following ethical standards:

a. In all reports (including drafts shared with peers and faculty members), the student is required to maintain confidentiality by removing names and key pieces of evidence/data that might disclose the organization's identity or an individual's identity or inappropriately divulge proprietary details. If the organization itself wishes to publicize the findings of this project, that will be the organization's judgment call.

b. The student will be responsible for complying with our organization's policies and requirements regarding data collection (including the need for the site IRB review/approval, if applicable).

c. Via a Consent Form for Anonymous Questionnaires, the student will describe to staff members how the data will be used in the doctoral project and how the stakeholders' autonomy and privacy will be protected.

I confirm that I am authorized to approve these activities in this setting.

Signed,

Co-administrator