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Development of an Evidence-Based Practice Guideline for Prevention of Diaper Dermatitis

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This is to certify that the doctoral study by

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Walden University
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Abstract

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MA, New York University, 1996

BSN, University of Santo Tomas, 1980

Capstone Project Proposal Submitted in Partial Fulfillment

Of the Requirements for the Degree of

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Abstract

Diaper dermatitis, an acute inflammatory reaction of the skin, is one of the most common forms of dermatitis among neonatal and pediatric patients. The problem addressed in this quality improvement project was the absence of an evidence-based practice (EBP) guideline for perineal care which resulted in 4 unexpected cases of diaper dermatitis per 100 hospital days at a non free standing children's hospital. Framed within Rosswurm and Larrabee's model for EBP, the purpose of this project was to develop an educational initiative encompassing an EBP guideline for perineal care, an educational curriculum plan for staff members, and a Power Point presentation to leadership on the educational initiative. A master's prepared pediatric nurse educator served as content expert to evaluate the educational curriculum plan using a dichotomous scale (not met = 1/met = 2) format for the 8 objectives. Each of the 8 items was scored a 2, meaning all objectives were covered in the curriculum. The expert recommended that the methods and procedures used should be placed in the employee orientation process. The educational initiative was presented to the leadership team (n = 11) who evaluated the project using a Likert-type scale ranging from 1 (*strongly disagree*) to 5 (strongly agree). An average score of 5 was given, revealing that the objectives of the presentation were met. The leadership team recommended that the project be implemented. Positive social change may result from this DNP project by facilitating neonatal/pediatric skin integrity through evidence-based nursing care thus promoting patient well-being and prevention of hospital acquired infections.

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Dedication

This work is dedicated to my family. To my husband, Carl, who reminded me to finish my schoolwork before we attended weekend activities/parties and made sure that my work was saved and secured electronically and manually. To my children--Alex, Brittany, Tiziana, and Aaron--who not only gave me smart and gorgeous grandchildren, Sebastian and Cali, but who also helped me typed my papers in the beginning of my DNP journey until I was fast enough to type long papers. I will always be thankful and proud to be a wife, a mother, and a grandmother.

I am honored to share the tears and the joy with my neonatal and pediatric patients and their families, whom I learned to care for unconditionally.

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Lastly, to my family, who believed in me and never doubted that I could finish. You were always there for me. Thank you for all your love, support, encouragement, and patience. I look forward to spending more quality time together.

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Section 1: Overview of the Evidence-Based Project

Introduction

In this DNP quality improvement (QI) project, I emphasized the American Association of Colleges of Nursing (AACN) Essential II: Organizational and Systems Leadership for Quality Improvement and Systems. This essential standard focuses on the importance of developing new understandings of practice management, which includes conceptual, practical, and evidence-based strategies that lead to quality outcomes for patient care within the practice setting (Zaccagnini & White, 2012). The focus of the project was on the skin integrity of pediatric patients, a well-established quality indicator of (a) the nursing care provided in hospital settings, and (b) health care safety and quality service given by healthcare providers to hospitalized neonatal and pediatric patients (American Nurses Association, 1995; Lacey, Smith, & Cox, 2008).

The American Nurses Association (ANA) has always addressed safe and quality nursing care for patients. The ANA's National Center for Nursing Quality has focused on nursing care quality to maintain skin integrity of pediatric patients (ANA, 1995). According to Lacey, Smith, & Cox (2008), the challenges in nursing care for neonatal and pediatric patients stem from the influences of tradition, personal partiality, the continuity of myths, and stubbornness to accept change. Evidence-based practice signifies a shift to quality care in the hospital setting, and gives a comprehensive care and total understanding of the best healthcare practice to neonatal and pediatric patients.

In this QI project, the clinical literature defined *maintenance of skin integrity* as the extent to which the nursing staff actively engaged in actions required to maintain the

skin integrity of patients admitted to the hospital. However, in the non-free-standing children's hospital (NFSCH) where I conducted the QI project, the wound, ostomy, and continence nurse (WOCN) and I conducted a review of medical records and discovered that there were four cases of DD among hospitalized neonatal and pediatric patients per 100 patient days. In the previous quarter there was one case of DD among hospitalized neonatal and pediatric patients. Patient care providers had access to different diaper-care products available in the hospital, but inconsistency in the indication for use and application contributed to the four incidences of DD. Any incident of DD in the hospital, if not taken seriously, will lead to complications; therefore, developing an evidence-based practice (EBP) guideline was necessary in order to provide standardized nursing care to hospitalized neonatal and pediatric patients.

Untreated and unresolved DD can potentially lead to more severe problems including perineal ulcers, excoriations, more intense erythema, papules, vesicles, and a skin eruption (Friedlander, Eichenfield, Leyden, Shu, & Spellman, 2009). These more severe cases of DD cause additional harm including pain, increased susceptibility to infection, a potential increase in the duration of hospitalization, and increased medical expenses (Visscher, 2009). This QI project fostered positive change in nursing practice and will improve the quality and safety of patient care. The EBP guideline provides the foundation for positive changes in practice, and they mark an initial step in research to help prevent DD among neonatal and pediatric patients. I played a central role in maintaining the integrity of the team that worked on the QI project in a highly collaborative and professional manner (AACN, 2006).

Background

DD is an acute inflammatory reaction of the skin in the perineal area, and is an extremely common pediatric condition. There are etiologic factors (e.g., contact with urine and feces, mechanical friction, etc.) associated with the medical condition, as well as other factors (e.g., diarrhea, the use of antibiotic therapy, etc.) that could predispose hospitalized neonates and pediatric patients to developing DD (Adalat, Wall, & Goodyear, 2007; Visscher, 2009). Patients who wear diapers are at high risk due to the presence of these etiologic factors. Noonan, Quigley, and Curley (2006) described DD as a skin alteration that needs skin care, and Heimall, Storey, Stellar, and Davis (2012) determined DD to be a condition that can be prevented and treated by consistent adherence to EBP guidelines. The four cases per 100 patient days of this hospital-acquired condition (HAC) affected the quality of patient care outcomes in this hospital setting. Researchers have consistently shown that EBP is an important healthcare initiative that improves excellence in nursing care (Santo & Choquette, 2013). Newhouse, Dearholt, Poe, Pugh, and White (2007) have shown that the Johns Hopkins nursing EBP model (JHNEBPM) guidelines are essential and have improved nursing care as well as health-related outcomes. The hospital pediatric leadership and I determined that this practice problem needed to be addressed because, prior to my project, the hospital has no EBP guideline to address perineal care.

Problem Statement

The problem addressed in this QI project was the absence of EBP guideline for perineal care in conjunction with four unexpected cases of hospital-acquired DD per 100

hospital days in the neonatal and pediatric patient population. During a quarterly review of electronic patient records, the hospital administration expressed concern over this increase in DD cases, verified by a WOCN nurse practitioner. There were four cases of DD in neonatal and pediatric patients show in this quarterly review, as compared to one case of DD in the previous quarter. These cases were viewed as unacceptable based on the ANA emphasis on (a) nursing care quality needed to maintain skin integrity with zero incidence of DD among pediatric patients, and (b) health care safety and quality service given by healthcare providers to hospitalized neonatal and pediatric patients (ANA, 1995; Lacey, Smith, & Cox, 2008).

The problem at my project site also was compounded by the absence of an EBP guideline for perineal care specifically intended to prevent DD among this particular at-risk population. Nurses have been inconsistent in correctly identifying and applying the appropriate skin-care products to prevent DD. DD is very painful, increases susceptibility to infection, and leads to increase hospital costs and length of stay (Visscher, 2009). Patients who wear diapers are at high risk due to the presence of etiologic factors in the development of DD, such as water/moisture, friction, urine, feces, and presence of microorganisms (Ness, Davis, & Carey, 2013). However, evidence has indicated that providing optimal perineal care, including appropriate skin-care practices, is effective in preventing DD. Blume-Peytavi, Lunnemann, Stamas, Kottner, and Garcia Bartels (2014) pointed out that there was no up-to-date synthesis of evidence upon which to base recommendations for proper skin care of the perineum, and parents and caregivers in this particular study did not receive instruction to prevent DD.

Purpose Statement

The purpose of this QI project was to develop an educational initiative encompassing an EBP guideline for perineal care (see Appendix B), an educational curriculum plan (see Appendix C) for staff members, and a PowerPoint presentation to leadership on the QI project and educational initiative (see Appendix G). A large gap exists between current nursing practices and the recommendations within evidence-based literature regarding perineal care. Therefore, shifting from traditional nursing practices based on intuition, to practices based on scientific evidence regarding perineal care, is crucial in order to prevent DD in the hospital setting and thus reduce or eliminate the incidence of DD.

Goals and Outcomes

According to Compas, Hopkins, and Townsley (2008), concrete, measurable goals and outcome statements are essential components of any effective QI project. The project goals provide direction and identify the long-term expectations of the project, and the project outcomes describe the concrete activities and clear expectations that should be achieved. The goal of this QI project was to introduce a change in nursing practice to promote skin integrity for neonatal and pediatric patients in hospital practices.

I established the following outcomes for the project:

- Outcome 1. Develop a literature review matrix (see Appendix A) that includes a graded literature review and the Johns Hopkins Evidence-Based Practice Guidelines Grading Scale (JHEBPGGS; see Appendix D).

- Outcome 2. Develop an EBP guideline for perineal care to prevent diaper dermatitis among neonatal and pediatric patients (see Appendix B).
- Outcome 3. Develop an educational curriculum plan (see Appendix C).
- Outcome 4. Develop a PowerPoint presentation of the QI project (see Appendix G) that describes the QI project and facilitates the in-service training and implementation of the EBP guideline.

Conceptual Model

Several conceptual models support the integration of evidence-based changes into nursing practice. I developed the EBP guideline for perineal care and the educational plan using the framework of Rosswurm and Larrabee's (1999) conceptual model (RLCM), which emphasizes a shift from traditional nursing practice based on intuition to nursing practice based on scientific evidence. I completed the first four steps in the framework over the course of my project: (a) assess the need for change; (b) connect the problem, interventions, and outcomes; (c) gather the best evidence; (e) design a practice change. I will implement the last two steps after my graduation: (a) implement and evaluate the change in practice; and (b) integrate and maintain the change in practice. The project was framed with a need assessment and ending by integrating evidence with the set of evidence-based practice guideline that were developed using the six steps of the RLCM described by White and Dudley-Brown (2012), I addressed the following:

1. The need for change was examined. Were there EBP guidelines for perineal care to prevent DD in the non-free-standing children's hospital (NFSCH)? The NFSCH electronic record verified by the WOCN nurse practitioner

showed that there were four hospital-acquired incidences of DD among neonatal and pediatric patients per 100 patient days. To date, the hospital has not implemented any EBP guidelines for perineal care. In addition, I conducted (a) a need assessment for practice change, (b) a current practice investigation, and (c) a comparison of different practices in perineal care and DD prevention based on available research literature.

2. The problem was identified that provided the basis for the EBP guideline, and an intervention designed that addressed the problem. The problem provided the basis for EBP guidelines, the intervention addressed the problem, and the assessment facilitated a positive outcome for the patients.
3. The clinical data was compared with data from the review of related literature. The multidisciplinary team reviewed the literature and identified evidence pointing to strengths, weaknesses, gaps, and conflicts in the studies.
4. A proposed change in the EBP guideline was developed by listing activities and processes to prevent DD among neonates and pediatric patients.
5. The proposed change was implemented and evaluated in the location where the QI team will implement the EBP guideline (see Appendix B). The in-service educational curriculum plan (see Appendix C) will be provided to current nurses, physicians (intern residents), ancillary staff members, and new employees as part of their orientation. The team will also invite external resources such as experts in the field of skin integrity to elaborate more in this kind of change. These steps will be implemented after graduation.

6. Integration and maintenance of the new plan of action will be followed through with on the various units of the NFSCH to fully implement the EBP guideline.

Nature of the Project

For this QI project, I examined the literature, organized a multidisciplinary team, and developed EBP guideline for perineal care that the NFSCH could use. Research has indicated that teamwork and collaboration among multidisciplinary team members help them provide high-quality outcomes and safe patient care (Reeves, Macmillan, & Soeren, 2010). The multi-disciplinary team was composed of a pediatric WOCN, the director of Women's and Children's Services (WCS), the pediatric attending physician, one nurse manager from the neonatal intensive care unit (NICU), two nurse managers from the pediatric units, one skin nurse champion from the NICU, and four skin nurse champions from the pediatric units.

After conducting a comprehensive literature review and presenting the findings related to best practices to the team, the team reviewed and identified the evidence and effective methods deemed worthy to be included in the EBP guideline. Through scheduled meetings, the team worked collaboratively to develop the EBP guideline (see Appendix B) and the educational curriculum plan (see Appendix C). The purpose of these materials was to educate current nurses, physicians (intern/residents), ancillary staff members, and new employees as part of their orientation. I created a PowerPoint presentation of the QI project (see Appendix G) to formally introduce the educational initiative of the DNP QI project to the leadership of the WCS.

Content evaluation of the project was accomplished through an ongoing review by the team, as reflected in the meeting minutes, and it included the content expert educational curriculum plan evaluation summary (see Appendix E) and leadership evaluation of the QI project PowerPoint presentation summary (see Appendix I). Scores on the leadership effectiveness scale (see Appendix J) showed that I was an effective leader of the team throughout the development of the QI project.

Definition of Terms

I used the following terms throughout this project:

Conceptual framework: An analytical tool that features concepts structured from a set of organized ideas within various distinct contexts. A conceptual framework provides a context for the project and ensures that the researcher identifies the problem accurately, frames research questions properly, and relies on suitable research literature to justify the project/research (Kelly, 2011).

Diaper dermatitis: An acute inflammatory reaction of the skin in the diaper area, and one of the most common skin conditions in neonatal and pediatric patients wearing diapers. The most common form of DD is bright erythema of the surfaces in closest contact with the diaper, i.e., the buttocks, perineal area, genitals, waistline, pubic area, and inner thighs. The deep folds of the groins are usually spared (Stamatas & Tierney, 2014).

Guidelines: A set of standards, criteria, or specifications to be used or followed in the performance of certain tasks. The purpose of guidelines is to streamline particular processes according to a set routine or practice that may be issued from and used by any

organization to improve and increase the predictability of staff practices (Levin et al., 2010).

Non-free standing children's hospital: A children's facility affiliated with a general hospital, but which provides different pediatric services (*Mosby's Medical Dictionary*, 2009).

Nurse champion: A registered nurse (RN) who actively participates and engages colleagues to accomplish the goals of quality projects. A nurse champion is a positive catalyst who influences nurse-driven quality outcomes (*Mosby's Medical Dictionary*, 2009).

Perineal Care: The practice of maintaining perineum skin integrity and providing relief for perineal discomfort. Perineal care is a cleansing procedure to care for the perineum after elimination, and is a routine part of hygiene care using a clean technique rather than a sterile technique (*Mosby's Medical Dictionary*, 2009).

Assumptions

The following assumptions are statements that I took to be true and used to develop, implement, and evaluate the QI project:

- EBP guideline contains preventive measures to reduce the occurrence of DD to zero.
- Nursing staff members will have the desire to provide the best care possible for their patients.
- The hospital will provide the necessary resources to implement the project and conduct follow-up activities.

Scope and Limitations

In the NFSCH, a recent electronic patient record revealed four cases of DD, as compared to one case of DD in the previous quarter, in hospitalized neonatal and pediatric patients per 100 patient days. Because of the increased number of DD cases and the risk of these patients for acquiring perineal ulcers, excoriations, more intense erythema, papules, vesicles, or skin eruptions, I undertook a QI project. Since older children, teenagers, and adults may encounter the same problems as neonates and pediatric patients, I will consider conducting a similar study in the future for these populations.

According to Burns and Grove (2009), a nurse-driven project can be unsuccessful and compromised due to its limitations. This study had the following limitations: (a) the current nursing practice for perineal care is based on nurses' personal and past experiences; (b) a small number of high-level, evidence-based studies on perineal care to prevent DD were located in the literature review; (c) the time required to educate staff members about the EBP guideline can be extensive; and (d) some nursing staff members adopted an unwilling attitude toward the change required in order to conform to the EBP guideline.

Significance to Nursing

McCurry, Revell, and Roy (2009) suggested that in order to implement project goals and theories in practice, nurses must have a clear understanding of EBP guideline. Once accomplished, this understanding can lead to significant changes in the social environment. The NFSCH identified DD as a hospital-acquired condition (HAC), and its

leaders desired an improvement in patient care. The reduction of incidences of DD to zero will be beneficial to healthcare providers, patients, and their families. The knowledge gained from this EBP project will support and improve the standard of practice and healthcare delivery for individual patients (see Humphrey, Bergman, & Au, 2006). Implementation of the EBP guidelines for perineal care will be an essential component of preventing DD in neonates and pediatric patients. As nurses apply the EBP guideline, they will be equipped with proper skills to prevent DD. The EBP guideline encourages standardized practice in perineal care, support improved patient safety, and facilitate the provision of quality care to patients. In addition, the guideline and the knowledge gained from this QI project will contribute to the epistemology of nursing, shifting nursing practice from treatment based on intuition, to treatment based on scientific, evidence-based practice.

Summary

In this section, I presented a brief overview of the problem, which is that incidences of hospital-acquired DD at my project site occurred at the rate of four per 100 patient days, and no EBP guidelines have been put in place to prevent DD. I explained the purpose of the project and the approach I took, and described the assumptions and limitations. Further, I defined key terms and described the scope of the project. Successful implementation of this QI project could contribute to a positive change in practice by physicians, nurses, and other bedside caregivers, and may ultimately result in zero DD incidents.

In Section 2, I review research literature that focuses on the significance of guidelines in nursing practice, and discuss (a) the influence and roles of leaders and team members in the development of a QI project, (b) facts on the etiology and risks of DD, (c) prevention and treatment modalities of DD and perineal care, and (d) the application of the RLCM conceptual framework—all of which guided the development of EBP guidelines for perineal care to prevent DD among neonatal and pediatric patients.

Section 2: Review of Scholarly Literature

Introduction

In this section, I offer a review of research literature on DD, the significance of guidelines in nursing practice, the treatment of DD, perineal care, and the RLCM framework I used for this QI project. Researchers have indicated that DD can be treated successfully in outpatient settings, and that hospitalized neonatal and pediatric patients are at increased risk of developing DD (Adalat, Wall, & Goodyear, 2007). For these patients, DD may cause additional harm, may be a source of pain, and may increase susceptibility to infection—all of which may increase hospital expenses as well as the length of stay.

Literature Search Strategy

I began my review of the scholarly literature by searching the following electronic databases and sources: Google Scholar, Pub Med, the Cumulative Index of Nursing and Allied Health (CINAHL), Medline, and the Walden University library. I also consulted sources from professional organizations as well as experts on perineal care. Included in my review were articles published between 1999 and 2014, including the early works of Rosswurm and Larabee (1999), which served as seminal research. I used the following terms for my searches: *diaper dermatitis, guidelines, perineal care, evidence-based treatment for DD,* and *RLCM framework*.

Diaper Dermatitis

DD has been an area of clinical concern since at least the 1950's (Scheinfield, 2005). DD is a skin irritation resulting from infrequent diaper changes and the presence

of moisture in contact with exposed skin. It also can be caused by friction and fecal enzymes (e.g. urea, protease, and lipase) that can contribute to over-hydration of the stratum corneum, resulting in mechanical and chemical abrasion (Friedlander et al., 2009).

Noonan, Quigley, and Curley (2006) published a study in which they investigated the incidences and etiologies of DD among pediatric patients in hospitals. They described DD as one of the skin alterations that needed skin care. They surveyed 252 pediatric patients during a one-day skin prevalence audit in all 15 inpatient units at a university-affiliated tertiary care children's hospital. They found five patients with DD on admission, and 24 patients who developed DD due to the presence of several risk factors such as (a) being on oral antibiotics, (b) having undergone gastrointestinal surgical procedures, and (c) experiencing a change in voiding and stooling patterns.

Ward et al. (as cited in Noonan, Quigley, & Curley, 2006) found that the 17% prevalence of DD in their study was 25% lower than the reported and predicted incidences of DD in children among the general diaper-wearing pediatric population. The authors identified that 60% (n = 148) of hospitalized children younger than 18 years of age were incontinent of urine and/or stool, and 16% of these patients developed hospital-acquired DD. In total, Noonan, Quigley, and Curley (2006) identified 23 cases of DD in patients who had risk factors. These results indicated the importance of being vigilant about skin alterations such as DD, and it also validated the complex skin care involving hospitalized children.

Similarly, Adalat, Wall, and Goodyear (2007) studied the frequency of DD, current treatment practices, and the importance of previously identified etiologic factors of DD. These researchers developed a 28-item questionnaire about DD, and administered it to the parents of 532 children wearing diapers as well as other individuals receiving care in a large United Kingdom (U.K.) district general hospital. Adalat, Wall, and Goodyear found that only 16% were currently experiencing DD, 52% reported having a history of DD, and 48% had never experienced an episode of DD. The study showed that DD in a U.K. inner-city population was usually treated successfully outside of the hospital setting, and was no longer a clinical problem. The study further indicated that the presence of oral thrush ($p < 0.02$), past history of DD ($p < 0.001$), and diarrhea ($p < 0.02$) were statistically significant etiologic factors associated with DD ($\alpha < 0.05$). However, the study showed etiologic factors that could predispose hospitalized neonates and pediatric patients to developing DD in the future.

Evidence-Based Treatment for Diaper Dermatitis

For many healthcare providers, prevention and treatment of DD is a challenging task. DD causes discomfort for the diapered pediatric patients as well as significant distress and anxiety among parents and caregivers (Adalat, Wall, & Goodyear, 2007; Heimall, Storey, Stellar, & Davis, 2012). According to Adam (2009), it is necessary to understand the anatomy, physiology, and biochemistry of the skin in the diaper area and to possess general knowledge about skin protective measures and treatments. The humid and moist environment beneath a diaper makes the skin more susceptible to DD because it is exposed to irritants such as urine and feces.

Humphrey, Bergman, and Au (2006) focused their research on strategies for practically managing DD. They pointed out that the combined influences of wetness, friction, urine, feces, and microorganisms make complete eradication of DD difficult. They also noticed that treatment of DD presented an ongoing challenge for parents, caregivers, and healthcare providers in the hospital setting. The authors presented the "ABCDEs" of DD, a practical approach and treatment:

- Antimicrobial/anti-inflammatory agents may be required if candidiasis is present.
- Barrier creams and ointments should be thick and fragrance-free and applied liberally.
- Cleansing should be done gently to minimize additional friction, and unscented and alcohol free baby wipes should be used for cleaning.
- Diapers should be changed every three to four hours or immediately when soiled, and diaper-free time should be maximized.
- Educating caregivers about the prevention and risk factors of DD is the best strategy for preventing DD.

In another study, Friedlander, Eichenfield, Leyden, Shu, and Spellman (2009), evaluated DD and provided optimal management strategies. They investigated the incidence rate, treatment practices, and the significance of etiologic factors associated with DD. Based on their findings, the authors agreed that DD could be managed better by keeping the diaper area dry and the skin intact, changing diapers frequently, cleansing gently, and using barrier protection.

Adalat, Wall, and Goodyear (2007) explored the current practices related to the prevention and treatment of DD (and the effectiveness of the treatment) by administering a questionnaire to the parents of 532 diaper-wearing patients in a large U.K. district general hospital. A multivariate analysis showed that the use of barrier cream ($p < 0.001$) and frequent diaper change ($p < 0.02$) resulted in less frequent occurrences of DD ($\alpha < 0.05$). Improved parental education (traditional advice has been to change diapers and cleanse skin frequently) and access to proper treatments were critical factors, both in preventing and curing DD. To help prevent DD, Adalat, Wall, and Goodyear recommended the following: parental education and support, a gentle cleansing routine, frequent diaper changes, and a thick application of barrier cream. The authors noted that the risk factors for developing DD as well as standardized prevention and treatment guidelines have been useful in their institution.

Perineal Care

According to Heimall, Storey, Stellar, and Davis (2012), research on high-level, evidence-based perineal care to prevent DD has been limited. These researchers applied the Iowa model of EBP and examined prevalence rates, preventive measures, and treatment tactics used to address DD. For hospitalized diapered patients, they recommended that perineal skin care should focus on prevention. Patients at risk for developing DD should be identified for early prevention. They further recommended that for patients with DD, a definite duration of time to treat DD should be established, and changing of treatment products should be discouraged.

Adalat, Wall, and Goodyear (2007), Friedlander, Eichenfield, Leyden, Shu, and Spellman, (2009), and Blume-Peytavi, Lunnemann, Stamas, Kottner, and Garcia Bartels (2014) have all reported that skin-care practices such as cleaning, bathing, and applying barrier cream helped minimize the occurrence of DD. They further noted that these skin-care practices ensured that DD would be less likely to occur. Ness, Davis, and Carey (2013) also noted that a proactive approach targeting predisposing factors was the best defense against DD.

In my research on perineal care, I explored variables related to DD including poor skin condition, the presence of underlying disease, the type of diaper used, medications the patient is taking, and any cream applied to the perineal area. As of this writing, limited results from controlled trials have been found to support any particular practice for preventing DD. Additionally, a complete understanding of DD risk factors, prevalence rates, and incidence rates has remained limited (Schluer, Halfern, & Schols, 2012).

Model/Theory

Rosswurm and Larrabee (1999) constructed their conceptual model based on relevant EBP theoretical and research literature, the use of standardized research language, and change theory. Their theory guides healthcare professionals through a systematic process (Rosswurm & Larrabee, 1999). Over the course of the literature review, I determined that there is a need for evidence-based changes in healthcare practices related to the treatment of DD. I used a systematic approach to identify the most reasonable evidence to support this EBP QI project, to formulate interventions, and to

evaluate the outcomes. Organizing and synthesizing important concepts within the research literature involved reviewing a broad range of sources to acquire new insights into the problem and to design the practice change (see McEwen & Wills, 2011).

In the study by Libertin, Latacki, and Blair (2015), RLCM framework provided a guided implementation of EBP change together with a six-step organizational and usage plan that prevented catheter-associated urinary tract infection (CAUTI) among a burn-injured patient population. The RLCM provided me an evidence-based structure on which I could develop the EBP guidelines. The model offers groundwork for administering changes in nursing practice. Thurston and King (2004), in an attempt to use the RLCM, not only explained that they found the conceptual model a workable framework for change, but also found that the model should be contextualized in conjunction with EBP strategies and theories.

Gabbay and le May (2004), in their exploration of evidence-based healthcare, suggested that the model could be converted into four main levels: the broad evidence-based healthcare (EBHC) movement, local EBHC policy, practitioner uses of EBHC, and patient application of EBHC. These levels imply that for EBHC to occur, social transformations must take place in values, philosophies, and convictions. The RLCM provided a "change theory" designed to facilitate changes in practice within an institution, and therefore can be used to predict (a) success or failure in terms of an expected behavioral transformation, (b) self-efficacy regarding a personal belief, and (c) the degree to which self-confidence can be established. These aspects are the highlights of this model and demonstrate its value in producing a desired outcome. I thus selected

the evidence-based practice of the RLCM because the model provides healthcare providers guidelines for gathering and using quantitative as well as qualitative data together with clinical proficiency (see Facchiano, Synder, & Nuñez, 2011).

The University of Pittsburgh Health Sciences Library System conducted sessions designed to help locate literature and clinical materials. According to Burns, Dudjak, and Greenhouse,

> These sessions were beneficial in helping nurses build their skills. The hands-on sessions were instrumental in creating an experience of discovery and self-confidence for nurses who had previously perceived such activity to be beyond the limits of their clinical and professional domain. An additional educational format that fostered a cultural change in the nursing staff included the creation of dedicated bulletin boards in each department/unit to showcase EBP activity on an on-going basis. (2009, p. 232)

During the three-month time frame of reviewing the EBP model, the staff nurses chose the Rosswurm and Larrabee model, which also had been used in a tertiary care hospital. The Rosswurm and Larrabee model is concise, and the familiar structure enabled nurses to use the system easily.

The components of the Rosswurm and Larrabee conceptual model include assessing the need for change, formulating a question that is clinical, summarizing the outcome to create a change plan, implementing the plan, and assessing the results. The advantages of the model provide a feedback loop to sustain and/or motivate inquiries about the new practice (Burns, Dudjak, & Greenhouse, 2009). The primary components

of the model mirrored the nursing process: assessing the need for change, formulating a clinical question, synthesizing evidence, designing a change in practice, implementing the change, and evaluating outcomes. In addition, RLCM used a feedback loop design to depict a continuous cycle of evaluating evidence across time and applying the EBP process. The feedback loop is further designed to maintain current practices and stimulate inquiry regarding the possibility of adopting new practices (Burns, Dudjak, & Greenhouse, 2009).

Literature Review Related to the Approach/Methods

Guidelines

The Johns Hopkins nursing evidence-based practice model (JHNEBPM) and accompanying guidelines has contributed to the safety of the hospitalized patients (Newhouse et al., 2007). The model was created and tested by a team of nurses and faculty members at the University of Johns Hopkins and the Johns Hopkins Hospital. The faculty members depicted the three cornerstones of professional nursing (i.e., practice, education, and research) in order to provide excellence in nursing.

In a Montreal, Canada, pediatric oncology unit, Santo and Choquette (2013) adapted and implemented skin-care guidelines to prevent DD in a pediatric oncology population. They identified a problem, conducted a literature review, evaluated the evidence supporting best practices, assessed barriers, identified facilitators, implemented the project, and evaluated the outcomes. They studied each action and the primary outcome, and they described the implementation of the guidelines and the subsequent changes in nursing practices. Following is a summary description of the implementation

strategies and the presentation of the guidelines: The nursing care team received the interactive educational lectures on the guidelines, presented the laminated posters of the guidelines describing skin care in vulnerable areas of the unit as well as patients' bedsides, distributed buttons with logos on how to prevent DD, added a skin-care component in the daily care plan and shift-change handoff, identified recommended creams, and performed weekly chart audits with continuous feedback from stakeholders.

Reports from the nurses in the focus group and within the nursing documentation indicated that the implementation of the guidelines was successful. Not only was the implementation of the guidelines successful, but it also integrated the three core elements of research implementation: the level and nature of the evidence, the context in which the research was placed, and the method in which the process was facilitated. Santo and Choquet (2013) successfully implemented skin-care guidelines that provided consistency in practice in a pediatric cardiology unit to prevent DD.

Similarly, in the United Kingdom (UK) Leeds General Infirmary Pediatric Intensive Care Unit (PICU), Douglas and Berry (2011) discovered inconsistencies in eye-care practices that impaired patients' ocular defense and caused corneal complications. A survey was conducted by telephone and electronic mail (email) designed to illicit information from 17 other PICUs in the UK. These researchers identified differences in the frequency of eye-care, visits, equipment, and cleansing products used, and infection control measures. They sent emails to the members of the multidisciplinary team in the PICU concerning eye care. The relevant responses collected were encouraging, and the responders advocated that an eye-care guideline was a good idea and a necessary tool.

Nadler and Tushman's diagnostic model (NTDM; 1980) was utilized to identify the inconsistencies in eye care practice and that change is essential for delivery of consistent EBP and promote the prevention of corneal complication. The four components of the NTDM were the factors that influenced behavior within the organization: identified tasks, organizational arrangements, informal culture, and individuals. A flow chart for eye-care guideline was formulated with a rationale for high quality evidence-based care and background of the EBP guideline. No data were provided for the effectiveness of the new EBP guideline, but the staff members reacted favorably as they became increasingly knowledgeable and found the tool useful in providing consistent eye-care practices (Douglas & Berry, 2011).

Summary

This section presented a scholarly review of studies that have been conducted on the topic of perineal care to prevent DD, the need for EBP, and the RLCM, upon which this QI project was based. Section 3 describes the approach and method of this QI project, the purpose of which was to develop an educational initiative encompassing an EBP guideline for perineal care (see Appendix B), an educational curriculum plan (see Appendix C) for staff members, and a Power Point presentation of the QI project (see Appendix G) to leadership on the educational initiative. The process of managing the project, a description of the multi-disciplinary team, and plans for implementation and evaluation are presented in the following section.

Section 3: Approach and Method

Introduction

The purpose of this project was to develop an educational initiative encompassing an EBP guideline for perineal care (see Appendix B), an educational curriculum plan (see Appendix C) for staff members, and a Power Point presentation of the QI project (see Appendix G) to leadership on the educational initiative. In Section 3, I describe the approach and method I used to develop the project, the creation and establishment of the multi-disciplinary team, the management of the project and the process of developing the guidelines, the project evaluation, the design of the implementation of the project, and the evaluation plan for the project—all within the framework of the RLCM.

Approach and Method

The approach to this project featured a multidisciplinary team, and the approach was framed within the Rosswurm and Larabee (1999) model, beginning with a needs assessment and ending by integrating evidence with the set of evidence-based practice guideline that were developed: (1) assess the need for change; (2) integrate the problem, intervention, and outcomes; (3) gather the best evidence; (4) design a change in practice; (5) implement and evaluate the change in practice; and (6) integrate and maintain the change in practice (White & Dudley-Brown, 2012).

Multi-Disciplinary Project Team

Leadership

In a successful QI project, an excellent team leader allows members of the QI project team to participate in the planning process (Clarke, 2010). The dialog between team members that occurred during this QI project was problem-oriented and included a great deal of verbal interaction. This verbal interaction is the foundation of communication and teamwork. The management technique I used to keep the team members invested in the project was to inform them about the project as they developed a shared understanding with each other (Kelly, 2011). As team leader, I encouraged members of the team to participate by explaining to them their roles and how the team worked, which created a common and shared understanding.

Stetler, Ritchie, Rycroft-Malone, and Charns (2014) recognized that supportive leadership behavior is needed to develop EBP into a reality. My presence as leader was critical in the process of developing and implementing an EBP guideline. Douglas and Berry (2011) have identified the style of leadership that can determine the success or failure in developing and implementing EBP guideline. According to White and Dudley-Brown (2012), successful organizations have leaders who connect people with a purpose and know the strengths and passions of the individuals they lead, thereby fulfilling the vision and mission of the organization. Similarly, Reeves, Macmillan, and Soeren (2010) found that leaders of inter-professional healthcare teams and social care teams could view a member of a different profession as a competitor. However, the division of work to

address complicated patient situations requires a shift in the leadership within the inter-professional team.

Role of Team Members

QI project teams can be very diverse and full of dynamic complexities because different types of expertise within a team may provoke conflicts (Kelly, 2011). In this QI project, one member perceived a particular issue differently than did another team member. Boundary friction among team members was familiar because they all belonged to different professions, and they had encountered professional conflicts in previous experiences. Conflicts within teams can include role ambiguity and personality differences, among others. These conflicts should be dealt with productively to avoid negative consequences within the team. In productive teams, every team member works cohesively as they support each other and work toward the successful outcome of a project (Laureate, 2011).

As the QI project team leader, I delegated responsibilities and encouraged team members to share their existing skills that could contribute to the achievement of the goals and outcome of the QI project. I began organizing the multi-disciplinary team by helping team members (a) see the need for change, (b) develop a set of EBP guidelines for perineal care to prevent DD (see Appendix B), (c) develop an implementation plan, and (d) develop an evaluation tool for the QI project. I led the team and emphasized the importance of communicating positive feedback among the team members. Communicating positive feedback among the team members empowered the team and created a positive working environment (see list below). According to Zori, Nosek, and

Musil (2010), the empowered team members were committed to the goals and vision of the organization, which included providing safe, efficient, quality-driven care. The team included the following members:

- Pediatric WOCN care nurse practitioner.
- Director of the women's and children's services (WCS).
- Pediatric attending physician.
- Nurse managers from the neonatal intensive care unit (NICU) and two pediatric units.
- Skin champion nurses from the NICU and four pediatrics units.

The team was aware that the purpose of the QI project was to develop an educational initiative encompassing an EBP guideline for perineal care (see Appendix B), an educational curriculum plan (see Appendix C) for staff members, and a Power Point presentation of the QI project and educational initiative to leadership. All these educational initiatives would help the hospital achieve the goal of zero incidence of hospital-acquired DD.

Management of the Project and the Process of Guideline Development

The team met every Wednesday for an hour. Team members were committed to the scheduled meetings at the given time. Emergency situations arose from time to time when some members were unable to attend, in which case the member sent a representative to communicate with the group. Good communication between each team member and the team leader took place in order to ensure that critical information was shared. Email was the primary means of communication among the team members. The

minutes of each meeting and the agenda for the subsequent meeting were sent via e-mail each Friday. Meetings started and finished on time as scheduled. The progression of the meeting occurred according to the agendas that were sent through e-mail to all team members. On several occasions and for the purposes of expediency, additional meetings were held in order to address specific issues and needs.

During the first meeting, team members reviewed the data on the incidences of DD in NFSCH. The team members discussed the goals and outcomes of the QI project, and I explained the following aspects of the study:

- The purpose of having a team.
- Step-by-step activity process.
- Structure of the QI project and the leadership stakeholders who support the process.
- How the team would design, implement, and evaluate the EBP guideline as well as the project's measure success (Kelly, 2011).

During the meetings, the team identified the specific data and information that was needed. The team members were assigned to check any data related to DD in their particular area of expertise. I assigned the appropriate members to review different research articles and identify the following components: current literature on DD, reduction and prevention strategies used and in place throughout different units, available products for skin care, experiences of other institutions, and unit-level QI processes.

Based on a review of the literature, the team developed the evidence-based prevention guideline (see Appendix B). Following are the six elements of the new practice guideline for perineal care to prevent DD:

- Perineal skin admission assessment for neonates and pediatric patients wearing diapers.
- Presence of etiologic factors assessment after admission.
- Frequency of diaper change.
- Managing moisture, keeping the patient's skin dry, and applying a barrier.
- Optimization of nutrition and hydration as well as parental and caregiver education

Project Evaluation

The following components comprised the evaluation process:

- An educational curriculum plan evaluation form (see Appendix E) with curriculum evaluation by the pediatric nurse educator.
- An evaluation of the PowerPoint presentation of the QI project form (see Appendix H) by the leadership team.
- An evaluation of my leadership in the QI project by team members using the Leadership Effectiveness Scale survey (see Appendix J).

As reflected in the meeting minutes, the team members conducted the process evaluation by conducting an ongoing process review as they developed the EBP guideline. A pediatric nursing educator evaluated the content of the educational curriculum plan and used the educational curriculum plan evaluation form (see Appendix

E), an eight-item "met/not met" form that I designed to assess the curriculum content. The pediatric nurse educator is a nurse expert in nursing education, holds a master's degree in nursing science, and specializes in pediatric nurse education. The leadership team of the WCS evaluated the educational initiative based on the information I provided in the PowerPoint presentation of the DNP QI project (see Appendix G). They used the leadership evaluation of the PowerPoint presentation of the QI project form (see Appendix H), a Likert-type scale ranging from *1 = strongly disagree*, to *5 = strongly agree*, to evaluate the QI project presentation. The leadership team members are experts in their own field of practice. The director of WCS holds a doctorate in nursing practice, all managers hold master's degrees in nursing science, and the nurse expert who works in the field of nursing education holds a master's degree in nursing science, and specializes in pediatric nurse education. The WOCN nurse is a certified pediatric nurse practitioner and holds a master's degree in clinical research, and the clinical nurses are nurse skin champions. At the end of the QI project, the members of the QI project team evaluated my leadership and completed a Leadership Effectiveness Scale (see Appendix G) survey.

Ethical Considerations

I submitted Form A to the Walden University Institutional Review Board, and was granted permission to proceed with the project. The IRB record number of 07-27-15-0423586 was provided (see Appendix K).

DNP Project Implementation and Evaluation Plan

The implementation and evaluation plan of the QI project adhered to the organization's standard operations protocol for integrating the change of practice into the standard of care. As part of the implementation plan, after graduation from Walden University, the educational curriculum plan (see Appendix C) I developed will be integrated within in-service training sessions that will take place throughout the pediatric department. These in-services will include nurses, physicians (interns/residents), ancillary staff members, and newly hired employees. The employees' in-service training and education sessions will be provided so that staff members will be familiar with the EBP guideline for perineal care to prevent DD and understand the importance of reporting any incidence of DD. The EBP guidelines will be implemented after my graduation.

The QI project team members will be responsible for placing posters of the EBP guidelines for perineal care in the treatment rooms, medication rooms, and nurses' lounges within all pediatric units. The QI project team members also will be responsible for organizing a presentation for the hospital's leadership, delivering poster presentations during special events, providing in-service training sessions for staff members, making the guideline accessible on the hospital's intranet, and obtaining the use of cameras to document DD visually and record improvement in healing across time.

After implementation and dissemination, the QI project will be evaluated quarterly using electronic medical records to determine whether instances of DD have decreased. Improved performance may increase both caregiver confidence and patient

safety, which can be important criteria in measuring the performance of nurses (Chu, Wang, & Dai, 2009).

Summary

In this section, I described the approach and rationale for this DNP QI project—a project I framed using the RLCM which involved a team approach in the development of an educational initiative encompassing an EBP guideline for perineal care (see Appendix B), an educational curriculum plan (see Appendix C) for staff members, and a Power Point presentation to leadership on the educational initiative. In addition, I discussed evaluation of the project, including both content evaluation and summative leadership evaluation. Finally, I offered an overview of the implementation and how the project will be evaluated after it has been implemented following my graduation. In Section 4, I present the findings, the evaluation, and a discussion of the project.

Section 4: Findings, Discussion, and Implications

Introduction

The purpose of this QI project was to develop an educational initiative encompassing an EBP guideline for perineal care (see Appendix B), an educational curriculum plan (see Appendix C) for staff members, and a Power Point presentation of the QI project and educational initiative (see Appendix G) to hospital leadership. The goal of this project was to introduce a change in nursing practice to promote skin integrity for neonatal and pediatric patients in the hospital setting. I developed the following outcomes for the project: (a) a literature matrix (see Appendix A), (b) an EBP guideline for perineal care among hospitalized neonatal and pediatric patients (see Appendix B), (c) an educational curriculum plan (see Appendix C), and (d) a PowerPoint presentation of the QI project (see Appendix G). Implementation and evaluation of the QI project will be conducted after I graduate from Walden University. The purpose of this section is to discuss the findings, the evaluation of outcomes, the implications of the project, the strengths and limitations of the project, and to offer a self-analysis.

Findings, Evaluation, and Discussion of Expert Review

Outcome 1. Literature review matrix (see Appendix A)

Discussion. A comprehensive literature review of studies have been conducted on the topic of perineal care to prevent DD, the need for EBP, and the RLCM, upon which this QI project was based. The literature review matrix was graded literature review and

the Johns Hopkins Evidence-Based Practice Guidelines Grading Scale (JHEBPGGS; see Appendix D).

Evaluation. The 11 members of the QI project team reviewed the literature.

Data. None.

Recommendation. The pediatric educator recommended to use the literature review matrix as guide in the development of EBP guideline and the educational curriculum plan.

Outcome 2. EBP Guideline for Perineal Care to Prevent DD

Discussion. The QI project team, composed of 11 multidisciplinary team members, worked on developing the guideline. My team members and I brought different perspectives and resolved conflicts that were potential obstacles to the development of the EBP guideline.

I presented a comprehensive literature review to the team that supported the use of EBP guideline for perineal care to prevent the occurrence of DD.

Evaluation. The team developed the EBP guideline (see Appendix B), which was approved by the leadership team.

Data. None.

Recommendation. The team recommended a proactive approach by targeting predisposing factors and variables related to DD, such as poor skin condition, the presence of underlying disease, the type of diaper used, medications patients may be taking, and any cream applied to the perineal area.

Outcome 2. The Educational Curriculum Plan

Discussion. I developed this plan based on information found in the literature review. The document consisted of objectives, a content outline, and method of presentation.

Evaluation. A master's-prepared pediatric nurse educator served as content expert to evaluate the educational curriculum plan (see Appendix C) using the Educational Curriculum Plan Evaluation form (see Appendix E), which included a dichotomous scale (*not met = 1/met = 2*) for the 8 objectives.

Data. Each score of the 8 items was scored a 2, meaning all objectives were covered in the curriculum (see Appendix F)**.**

Recommendation. The expert recommended that the methods and procedures used should be placed in the employee orientation process.

Outcome 3. PowerPoint Presentation of the QI Project

Discussion. After the QI project was completed, I presented the initiative and the educational curriculum plan using a PowerPoint presentation to the eleven leadership members of the WCS. I provided a hardcopy of the educational curriculum plan (see Appendix C) to all attendees.

Evaluation. I presented the educational initiative to members of the leadership team who evaluated the DNP QI project using a Likert-type scale ranging from *1 = strongly disagree* to *5 = strongly agree* (see Appendix H).

Data. (see Appendix I). An average score of *5 = strongly agree* was given, revealing that the objectives of the presentation were met.

Recommendations. The leadership team recommended that the DNP QI project be implemented after my graduation from Walden University.

Leadership Effectiveness Scale Evaluation (LES)

Discussion. The pediatric nurse educator and I identified the LES (Day and Sin, 2011) as useful for evaluating the effectiveness of my leadership. The authors of the LES rated the items for effective leaders across time. The scale consists of the following activity items: "this person is a team leader," "this person helps to set the direction of the team in meeting project goals," "this person helps to support team members in meeting project goals," and "this person helps to connect individual contributions with team project goals" (Day and Sin, 2011).

Evaluation. At the last meeting, the team members (n = 11) were asked to use the LES to anonymously evaluate my leadership abilities during the development of the project. At the end of our meeting, completed forms were collected. Because two members of the team were absent, I hand delivered the evaluation forms to both of them, and thus was able to gather all the data within the completed questionnaires.

The evaluation used a 5-point Likert-type scale (1 = *strongly disagree*, to 5 = *strongly agree*).

Data. Following is the descriptive analysis of team member responses to the LES:

- This person is a team leader. Average score = 5.
- This person helps to set the direction of the team in meeting project goals. Average score = 5.

- This person helps to support team members in meeting project goals. Average score = 5.
- This person helps to connect individual contributions with team project goals. Average score = 5.
- This person helps the team learn. Average score = 5.

Recommendations. None

Applicability to Healthcare Practice

The guideline for perineal care will be applicable to professional practice by providing evidence-based practices for patient care in preventing DD. If these guidelines are followed, money spent on healthcare will be reduced, the quality of patient care will increase, and the safety of the patients will be improved. The EBP guideline for perineal care to prevent DD (see Appendix B) will affect the organization's policy, practice, and research, and these guidelines will affect a social change among nurses.

In this QI project, I translated current evidence from the research literature into practice by improving and optimizing healthcare outcomes. The EBP guideline will be implemented because the guideline promotes a consistent preventive approach for DD, will assist in achieving the goal of zero incidences of DD, and will increase the quality of care and the safety of patients.

Implications

The development of an EBP guideline for perineal care to prevent DD will affect the organization's policy, practice, and research, and will affect a social change among nurses.

Policy

The procedures of the EBP guidelines will be incorporated into the hospital nursing policies. Careful considerations will be given to whether these guidelines are parallel to the organization's strategic plan of reducing the discomfort of patients, and whether they result in quality, cost-effective services (Kelly, 2011).

According to Lau, San Miguel, and Chow (2010), there should be a continuous auditing of, monitoring of, and adhering to the policies in order to achieve the goals and objectives of the QI project, which are to provide safe and quality care to patients. Nurses and other staff members involved in implementing the EBP guideline should be provided with regular education sessions concerning the prevention of DD as part of an EBP policy that provides safe and effective patient care.

Practice

The development of EBP guideline for perineal care has been central to my role as a leader. This QI project provides an avenue for advanced practice in nursing (APN), provides an opportunity to lead the organization in solving problems at the bedside, and promotes the use of EBP in practice. The process can be challenging, but implementing the EBP guideline will improve nurses' understanding about how to prevent DD. This QI project will help staff members understand perineal care and DD prevention, while at the same time aligning theory and practice (Fawcett & Garity, 2009). The application of these guidelines in the organization will facilitate quality care and safety because APN providers base their care practices on the best and most current research available (Grove, Burns, & Gray, 2013).

Research

EBP results from investigation, research, and critical inquiry. EBP serves as the source of guidelines in the development of EBP guideline for perineal care to prevent DD and provides helpful ways to modify traditional healthcare practices (McEwen & Wills, 2011). In addition, if the development and implementation of the EBP guidelines meets the target goal, the organization can be a model and a pioneer among other NFSCHs. Researchers may examine the possibility of applying the EBP guideline for perineal care to older patients, including adults who are at risk of developing DD. The information gained in this research can further lead to the application of EBP guideline for perineal care among the population of patients who are incontinent and may acquire DD from wearing diapers.

Researchers may want to identify what the RLCM can accomplish as they go through the process of implementing a practice change and gathering data and information related to the practice issue. Researchers are interested to identify which factors contribute to the development of DD. If there is no improvement, the researchers may review and modify the EBP guideline. In addition, if the EBP guideline for perineal care is successfully implemented, researchers will be able to disseminate the results to other facilities and share new and improved ways of preventing DD among neonatal and pediatric diaper-wearing patients.

Social Change

The DNP program prepares nurses to be knowledgeable and skillful. It allows them the opportunity to develop the abilities to facilitate positive social change within their

practice setting, within communities, and within society. These qualities are clearly stated in the AACN (2006) essentials to the DNP, where the doctorate in nursing provides the most rigorous academic preparation for nursing practice (AACN, 2006). Positive social facilitates neonatal/pediatric skin integrity through evidence-based nursing care thus promoting patient well-being and prevention of hospital acquired infections.

The EBP guideline for perineal care to prevent DD among hospitalized neonatal and pediatric patients will reduce the incidence of DD to zero, and the quality outcome of care received by patients will potentially increase. APN providers play an important role in the comfort and care of children in the hospital. The avoidance of pain and adverse effects of diaper dermatitis through the provision of evidence-based practice for perineal care can impact the emotional well-being of families as well as the physical well-being of children. EBP integrates nursing practice and assists healthcare systems.

The knowledge gained from this DNP project supports and improves the quality outcomes of the care and standardized practice of individual patient care (Humphrey, Bergman, & Au, 2006). EBP's integration into nursing practice help healthcare systems to achieve more cost-effective care with improved patient outcomes. Doctoral-level knowledge and skills are essential for creating social change and implementing system-wide changes for the purpose of making healthcare systems safe and efficient. This DNP QI project supports the AACN's model for advanced practice nursing in accordance with Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking. As a result of completing this project, I acquired and applied new knowledge to specific problems and challenges in my practice. The team to address

current and future practical issues can use the knowledge obtained from the scientific foundation of the DNP curriculum immediately.

Strengths and Limitations

Strengths

I was able to improve the quality of patient care and introduce evidence-based practice to the unit. The developed educational initiative encompassing an EBP guideline for perineal care can address the problem of diaper dermatitis that can improve patient outcomes. This DNP QI project facilitating neonatal/pediatric skin integrity through evidence-based nursing care can promote patient well-being and prevent of hospital acquired infections, can solidify nursing practice, pioneer the reduction of DD through proper nursing care, and likewise demonstrate what an advance practice DNP can do at the bedside.

Limitations

There were limitations associated with this project. During the literature search, there was a lack of high-level evidence-based studies focused on perineal care to prevent DD (Heimall, Storey, Stellar, & Davis, 2012). There was also the fear that implementing the EBP guidelines is a long process and staff members may prefer to use traditional nursing practices based on their personal and past experiences.

Recommendations to Address Limitations

Access to the literature review should be provided to the practicing staff. DNP students should be allowed to introduce the developed EBP guideline, implement their projects, and evaluate their projects as part of the DNP project.

Analysis of Self

As Scholar

In my role as an APN provider in pediatrics, I identified the need to explore this topic based on the need of the patients. I researched and developed a plan to provide a solution to the problem from an evidence-based perspective. I learned what it means to look for evidence and fulfill my academic and professional goals, which are to improve health care delivery, to improve patient outcomes, and to teach nursing science in my practice. I made a pledge to be a continuous life-long learner as I integrate evidence-based change into practice in four ways:

1. Sharing advanced knowledge and expertise with other healthcare providers.
2. Mentoring staff nurses to conduct research based on questions regarding their daily practice.
3. Providing lectures and workshops to nursing practitioners in the community.
4. Involving with scholarly and academic writing in the areas of expertise.

As Practitioner

As an advanced practice nurse in pediatric surgery, I shared evidence-based literature related to the QI project with the Women's and Children's Services team as well as the multi-disciplinary team. I expanded my knowledge by supporting the development, implementation, evaluation, and dissemination plan for this QI project based on information from the literature. I was able to develop a practice change that potentially is able to influence the outcome of proper nursing care of patients who may be at risk of acquiring DD. I attended different conferences, webinars, and grand rounds and

performed a scholarly literature search of innovative methods and ideas specific to this QI project. I combined knowledge and expert skills with best research practices and best nursing practices in my own discipline and other related profession (Zaccagnini & White, 2012).

As Project Manager

I demonstrated leadership qualities related to the AACN DNP Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking (AACN, 2006). The leadership role I experienced as a project manager incorporated my clinical expertise as a leader within the organization. My understanding of the research process, my advanced knowledge, and my expertise guided me as the QI project leader and manager throughout the project.

Moreover, the DNP student collaborated with inter-professional and multi-disciplinary staff members, and shared evidence-based practices from the literature review and examined the scientific evidence. I was thankful that the team supported me as the QI project leader during the development of the EBP guideline. I coordinated with team members and led the process of designing the implementation and evaluation plan. In addition, I also identified the goals and outcomes of this QI project, examined the step-by-step and activity processes, identified possible structures that would support the process, and monitored the team's performance (Kelly, 2011).

Contribution to My Professional Development

I learned and applied new knowledge to specific problems and challenges as a part of my professional development. The knowledge I gained from developing the EBP

guideline for perineal care to prevent DD and an educational plan for staff members may be put to use immediately in the hospital as well as the community. My ability to apply what has been learned transfers to other opportunities that may require evidence-based knowledge. I will be sharing my skills with Walden University and the School of Nursing, and I am willing to facilitate positive social change.

Walden University and School of Nursing's vision statement, mission statement, and goals are directly related to my professional development. Walden University provides the highest academic preparation for doctor of nursing practice (DNP) candidates through a scientific foundation of practice to address current and future practice issues within the healthcare industry. In addition to the benefits of conducting a comprehensive literature review, this QI project enhanced my knowledge and promoted my educational development. I pursued my passion and expertise by expanding my knowledge and contributing to the advanced care setting.

I experienced the highest academic preparation from Walden University in the process of researching and addressing current and future practice issues. I became knowledgeable and skillful, and I learned to facilitate positive social change. I gained EBP knowledge and applied this knowledge to specific problems and challenges (Walden University, 2015).

Summary and Conclusion

The goal of this QI project was to introduce a change in nursing practice to promote skin integrity for neonatal and pediatric patients in the hospital practice through the development of an educational initiative encompassing an EBP guideline for perineal

care (see Appendix B), an educational curriculum plan (see Appendix C) for staff members, and a Power Point presentation to leadership on the educational initiative. I led a multidisciplinary team and developed the EBP guideline that will facilitate a change in nursing practice. My leadership skills played a major role during the planning, development, implementation, and evaluation of this QI project. My management and leadership skills helped me lead the multi-disciplinary team successfully. The team worked collaboratively towards the development of the EBP guideline that will enable nurses to provide quality care and safe treatment of neonatal and pediatric patients.

Section 5: Scholarly Product

Abstract for Poster Presentation

For dissemination, the scholarly product abstract was submitted to and accepted by the 2016 American Pediatric Surgical Nurses Association (APSNA) Annual Scientific Conference in San Diego, California. This presentation was held on May 12-16, 2016. I presented the EBP guideline for perineal care to prevent DD poster (Appendix N) at the conference.

Authors: Nanita F. Lim-Sulit, MA, RN, PNP

Presenter: Nanita F. Lim-Sulit, MA, RN, PNP

Title: Development of an Evidence-Based Practice (EBP) Guideline for Perineal Care to Prevent Diaper Dermatitis (DD)

Background: DD is an acute inflammatory reaction of the skin in the diaper area and one of the most common forms of dermatitis among neonatal and pediatric patients wearing diapers. An EBP guideline for perineal care to prevent DD in a non-free standing children's hospital (NFSCH) was developed. The conceptual framework for this project was Rosswurm and Larrabee's (1999) conceptual model. The model guided the project through a systematic process that resulted in transforming the current practice to an evidence-based practice. Evidence has suggested that EBP is an important healthcare initiative, fosters excellence in nursing care, and provides improved outcomes.

Method: The DNP candidate led the hospital team. She conducted a comprehensive literature review and presented findings related to best practices to the team. The team identified the most effective practices to prevent DD and included these practices in the

EBP guidelines. The RLCM framework was incorporated in the project design and guided the multi-disciplinary team through the entire process of changing the current practice to an evidence-based practice.

Outcome: The outcome included (a) an EBP guidelines for perineal care to prevent DD among hospitalized neonatal and pediatric patients, (b) an educational curriculum plan for staff members, and (c) a Power Point presentation to leadership of the organization on the educational initiative in the development of the EBP guideline.

Significance: McCurry, Revell, and Roy (2009) suggested that in order to apply project goals and theories in practice, nurses must have knowledge of EBP guidelines. Once acquired, this knowledge can lead to significant changes in the social environment. The NFSCH identified DD as a hospital-acquired condition (HAC) and desired an improvement in patient care. The reduction of incidences of DD to zero will be beneficial. The knowledge gained from this EBP project will support and improve the standard of practice and improve the healthcare of individual patients (Humphrey, Bergman, & Au, 2006). Implementation of the EBP guideline for perineal care will be essential in preventing DD among neonates and pediatric patients. As the nurses apply the EBP guideline, they will be equipped with proper skills to prevent DD. The EBP guideline have standardized practice in perineal care, improved patient safety, and provided quality care to patients. In addition, the EBP guideline will contribute to the epistemology of nursing practice, thus shifting traditional nursing based on intuition to scientific evidence-based practice. This will result in improving perineal care to prevent DD among neonates and pediatric patients.

References

Adalat, S., Wall, D., & Goodyear, H. (2007). Diaper dermatitis-frequency and contributory factors in hospital attending Children. *Pediatric Dermatology, 24*(5), 483-488. doi:10.1111/j.1525-1470.2007.00499.x

Adam, R. (2008). Skin care of diaper area. *Pediatric Dermatology, 25*(4), 427-433. doi: 10.1111/j.1525-1470.2008.00725.x

Albanese, M. P., Evans, D. A., Schantz, C. A., Bowen, M., Disbot, M., Moffa, J. S., … Polomano, R. C. (2010). Engaging clinical nurses in quality and performance improvement activities. *Nursing Administration Quarterly, 34*(3), 226–245. doi:10.1097/NAQ.0b013e3181e702ca

American Nurses Association (ANA). (1995). *Nursing report card for acute care.* Washington, DC: Author.

Balik, B., Conway, J., Zipperer, L., & Watson, J. (2011). *Achieving an exceptional patient and family experience of inpatient hospital care* (IHI Innovation Series White Paper). Retrieved from the Institute for Health Care Improvement website: http://www.IHI.org.

Bernabe, K. Q. (2012). Pressure ulcers on pediatrics. *Current Opinion Pediatrics, 24*(3), 352-356. doi:10.1097/MOP.0b013e32835334a0

Blume-Peytavi, U., Lunnemann, L., Stamas, G. N., Kottner, J., & Garcia Bartels, N. (2014). Prevention of diaper dermatitis in infants: A literature review. *Pediatric Dermatology, 31*(4), 413-429. doi:10.1111/pde.12348

Bowers, B. (2011). Managing change by empowering staff. *Nursing Times, 107*(32/33), 19-21. Retrieved from https://www.nursingtimes.net/download ac=1236479

Burns, H., Dudjak, L., & Greenhouse, P. (2009). Building an evidence-based practice infrastructure and culture: A model for rural and community hospitals. *The Journal of Nursing Administration, 39*(7), 321-325.

Chu, H., Wang, C., & Dai, Y. (2009). A study of a nursing department performance measurement system: Using the balanced scorecard and the analytic hierarchy process. *Nursing Economics*, *27*(6), 401–407. doi:10.1111/j.1365-2834.2009.01026.x.

Clarke, D. J. (2010). Achieving teamwork in stroke units: The contribution of opportunistic dialogue. *Journal of Interprofessional Care, 24*(3), 285–297. doi:10.3109/13561820903163645

Compas, C., Hopkins, K. A., & Townsley, E. (2008). Best practices in implementing and sustaining quality of care. A review of the quality improvement literature. *Research in Gerontological Nursing*, *1*(3), 209–216. doi:10.3928/00220124-20091301-07

Courtney, B. A., Ruppman, J. B. & Cooper, H. M. (2006). Save our skin: Initiatives cuts pressure ulcer incidence in half. *Nursing Management, 37*(4), 36-45. doi: 10.1097/00006247-200604000-00010

Day, D. V. & Sin, H. (2011). Longitudinal tests of an integrative model of leader development: Charting and understanding developmental trajectories. *The Leadership Quarterly*, *22*(3), 545-560. doi:10.1016/j.leaqua.2011.04.011

Douglas, L., & Berry, S. (2011). Developing clinical guidelines in eye care for intensive care units. *Nursing Children and Young People, 23*(5), 14-20. doi:10.7748/nycp2011.06.23.5.14.c8539

Facchiano, L., Synder, C.H., & Nuñez, D. (2011). A literature review on breathing retraining as a self-management strategy operationalized through Rosswurm and Larrabee's evidence-based practice model. *Journal of the American Academy of Nurse Practitioners, 23,* 421–426. doi:10.1111/j.1745-7599.2011.00623.x.

Fawcett, J., & Garity, J. (2009). Chapter 1: Research and evidence-based nursing practice. In *Evaluating Research for Evidence-Based Nursing,* (pp. 3–20). Philadelphia, PA: F. A. Davis.

Fitzpatrick, J. (2010). Connecting or disconnecting the dots between researches and evidence-based practice. *Applied Nursing Research, 23*(1), 1. doi:10.1016/j.apnr.2009.10.001.

Friedlander, S. F., Eichenfield, L. F., Leyden, J., Shu, J., & Spellman, M. C. (2009). Diaper dermatitis: Appropriate evaluation & optimal management strategies. *Contemporary Pediatrics,* 2-14.

Gabbay, J. & le May A. (2004) Evidence based guidelines or collectively constructed mindlines?' Ethnographic study of knowledge management in primary care. *British Medical Journal, 329,* 1013-1019doi:http//dx.doi.org/10.1136/bnj.329.7473.1013

Gozen, D., Caglar, S., Bayraktar, S., & Atici, F. (2013). Diaper dermatitis care of newborns human breast milk or barrier cream. *Journal of Clinical Nursing,* 23, 512-523. doi:10.1111/jocn.12047

Grant, B., Colello, S., Riehle, M., & Dende, D. (2010). An evaluation of the nursing practice environment and successful change management using the new generation magnet model. *Journal of Nursing Management, 18*(3), 326–331. doi:10.1111/j.1365-2834.2010.01076.x.

Grove, S. K., Burns, N., & Gray, J.R. (2013). *The practice of nursing research: appraisal, synthesis, and generation of evidence (7th ed.).* St. Louis, Missouri: Elsevier Sanders.

Heimall, L. M., Storey, B., Stellar, J. J., & Davis, K. F. (2012). Beginning at the bottom: Evidenced-based care for diaper dermatitis. *The American Journal of Maternal/Child Nursing, 37*(1*),* 10-16. doi:10.1097/NMC.0b013e31823850ea

Humphrey, S., Bergman, J. N. & Au, S. (2006) Practical management strategies for diaper dermatitis. *Skin Therapy Lett, 11*(7), 1-6.

Johnson, P., & Raterink, G. (2009). Implementation of a diabetes clinic-in-a-clinic project in a family practice setting: Using the plan, do, study, act model. *Journal of Clinical Nursing, 18*(14), 2096–2103. doi:10.1111/j.1365-2702.2008.02774.x.

Kelly, D. L. (2011). *Applying quality management in healthcare (3rd ed.).* Chicago, IL: Health Administration Press.

Lacey, S., Smith, J., & Cox, K. (2008). *Patient safety and quality: An Evidence-Based Handbook for Nurses.* Agency for Healthcare Research and Quality Publication: No. 08-0043.

Lau, B., San Miguel, S., & Chow, J. (2010). Policy and clinical practice. Audit tools to measure adherence. *Renal Society of Australian Journal, 6*(1), 36-40.

Laureate Education, Inc. (Executive Producer) (2011). *Organizational and systems leadership for quality improvement*. Baltimore, MD: Author.

Levin, R. F., Keefer, J. M., Marren, J., Vetter, M., Lauder, B., & Sobolewski, S. (2010). Evidence-based practice improvement: Merging 2 paradigms. *Journal of Nursing Care Quality, 25*(2), 117–126. Retrieved from the Walden Library databases.

McCurry, M. K., Revell, S. M. H., & Roy, C. (2009). Knowledge for the good of the individual and society: Linking philosophy, disciplinary goals, theory, and practice. *Nursing Philosophy, 11*(1), 42-53. doi:10.1111/j.1466-769X.2009.00423.x

McEwen, M., & Wills, E. M. (2011). *Theoretical Basis for Nursing (3rd ed.).* Philadelphia, PA: Lippincott Williams & Wilkins.

McNabney, M. K., Willging, P. R., Fried, L. P., & Durso, S. C. (2009). The "continuum of care" for older adults: Design and evaluation of an educational series. *Journal of the American Geriatrics Society*, *57*(6), 1088–1095.

Mosby's Medical Dictionary (2009). *Medical Dictionary (8th ed).* Elsevier. Retrieved from http://medical-dictionary.thefreedictionary.com/perinealcare.

Ness, M. J., Davis, D.M., & Carey, W.A. (2013). Neonatal skin care: A concise review. *International Journal of Dermatology, 52*(1), 14-22. doi:10.1111/j.1365-4632.2012.05687.x

Newhouse, R., Dearholt, S., Poe, S., Pugh, L. C., & White, K. (2007). Organizational change strategies for evidence-based practice. *The Journal of Nursing Administration, 37*(12), 552-557. doi: 10.1097/01.NNA.0000302384.91366.8f

Noonan, C., Quigley, S., & Curley, M. A. Q. (2006). Skin integrity in hospitalized infants and children: A prevalence survey, *Journal of Pediatric Nursing, 21*(6) 445–453. doi:10.1016/j.pedn.2006.07.002

Oermann, M. H., & Hays, J. C. (2011). *Writing for publication in nursing* (2nd ed.). New York, NY: Springer Publishing Company.

Pasek, T. A., Geyser, A., Maria Sidoni, M., Harris, P., Warner, J. A., Spence, A.,… Weicheck, S. (2008). Skin care team in the pediatric intensive care unit: A model for excellence. *The Journal for High Acuity, Progressive, and Critical Care Nursing, 28,* 125-135.

Pipe, T. B., Wellik, K. E., Buchda, V. L., Hansen, C.M., & Martyn, D.R. (2005). Implementing evidenced –based nursing practice. *Urology Nursing, 25(5)*, 365-370. Retrieved from the Walden Library using the CINAHL Plus with Full Text database. □

Planas, L. G. (2008). Intervention design, implementation, and evaluation. *American Journal of Health-System Pharmacy, 65*(19), 1854–1863. Retrieved from the Walden Library using the Academic Search Complete database.

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

Pronovost, P. J., & Lilford R. (2011). A road map for improving the performance of performance measures. *Health Affairs, 30*(4), 569-573. doi: 10.1377/hlthaff.2011.0049

Reeves, S., Macmillan, K., & Soeren, M. V. (2010). Leadership of interprofessional health and social care teams: A socio-historical analysis. *Journal of Nursing Management, 18*(3), 258–264. doi:10.1111/j.1365-2834.2010.01077.x

Rosswurm, M. A., & Larrabee, J. H. (1999). A model for change to evidence-based practice. *Journal of Nursing Scholarship, 31*(4), 317-322.

Santo, A. E., & Choquette, A. (2013). Experience of adapting and implementing an evidence-based nursing guideline for prevention of diaper dermatitis in a pediatric oncology setting. *International Journal of Evidenced-Based Healthcare, 11*(2), 121-127. doi: 10.1111/1744-1609.12019

Schluer, A. B., Halfer, R. J., & Schols, J. M. (2012). Pediatric pressure ulcer prevalence: Multicenter, cross-sectional, point prevalence study in Switzerland. *Ostomy Wound Manage, 58*(7), 18-31.

Shirey, M. R. (2011). Establishing a sense of urgency for leading transformational change. *Journal of Nursing Administration, 41*(4), 145–148. doi: 10.1097/NNA.0b013e3182118550

Stamatas, G. N. & Tierney, N. K. (2014). Diaper dermatitis: Etiology, manifestations, prevention, and management. *Pediatric Dermatology, 31*(1), 1-7. doi:10.1111/pde.12245

Stetler, C. B., Ritchie, J. A., Rycroft-Malone, J. & Charns, M. (2014). Leadership for evidence-based practice: Strategic and functional behaviors for institutionalizing EBP. *Worldviews on Evidence-Based Nursing, 11*(4), 219-226. doi: 10.111/wvn.12044

Terry, A. J. (2012). *Clinical research for the doctor of nursing practice.* Sudbury, MA: Jones & Bartlett Learning.

Thurston, N. E. & King, K. M. (2004) Implementing evidence-based practice: Walking the talk. *Applied Nursing Research 17,* 239–247.

Visscher, M. O. (2009). Recent advances in diaper dermatitis: Etiology and treatment. *Pediatric Health, 3*(1), 81-98.

Walden University (2013). *Student publications: Vision, mission, and goals.*

Waxman, K. T., & Maxworthy, J. (2010). The doctorate of nursing practice degree and the nurse executive: The perfect combination. *Nurse Leader, 8*(2), 31-32.

White, K. M., & Dudley-Brown, S. (2012). Evidenced-based practice. In K. White (Ed.) *Translation of evidence into nursing and health care practice* (pp. 3-22). New York, NY: Springer.

C. Tymko (2011). Clinical scholarship and evidence-based practice. In Zaccagnini, M. E., & White, K. W. (Eds), *The doctor of nursing practice essentials: A new model for advanced practice nursing* (pp. 61-136). Sudbury, MA: Jones & Barlett publishers.

Zori, S., Nosek, L. J., & Musil, C. M. (2010). Critical thinking of nurse managers related to staff RNs' perceptions of the practice environment. *Journal of Nursing Scholarship, 42*(3), 305–313. doi:10.1111/j.1547-5069.2010.01354.

Appendix A

Literature Review Matrix

Full Reference	**Theoretical/ Conceptual Framework**	**Research Question(s)/ Hypotheses**	**Methodology**	**Analysis & Results**	**Conclusions**	**Grading the evidence**
Adalat, S., Wall, D., & Goodyear, H. (2007). Diaper dermatitis-frequency and contributory factors in hospital attending Children. Pediatric Dermatology, 24(5). 483-488.	Descriptive Theory	What is the frequency of DD in hospital pediatric practice? What are the effective treatments practices for DD? What are the current importance of previously identified etiologic factors of DD.	Qualitative Survey/ Questionnaires Parents of children wearing diapers in pediatric hospital, inpatient and outpatient of Birmingham Heartland and Solihull NHS Trust were asked to answer 28-item questionnaire.	52 % of parents from 532 hospitalized children in diapers reported history of DD and multi variate analysis demonstrated the risk of DD to be associated with oral thrush, past history of disease, frequency of diaper changes, and diarrhea. For logistic regression, current and recurrent episode of DD was dependent variable and other factors were independent variables.	The authors identified the significance of etiologic factors and risk factors in the development of DD and the treatments practices, and frequency of diaper change associated with the development of DD. They developed standardized prevention and treatment guidelines that were useful to the institution.	Level IV
Blume-Peytavi, U., Lunnemann, L., Stamas, G. N., Kottner, J., &	Descriptive analysis	Are there up to date syntheses of the available evidence to develop recommendation for DD prevention	Systematic literature review was performed in the PubMed to identify relevant randomized, investigative,	The search strategy revealed 227 articles but only13 studies published in	The evidence from the 13 articles that were systematically reviewed supported that baby wipes or water and washcloths have	Level V

GarciaBartels, N. (2014). Prevention of diaper dermatitis in infants: A literature review. Pediatric Dermatology, 31 (4), 413-29.		practices. What are the efficacy of non medical skin care practices for diapered area of healthy, full term infants ages 0-24 months	reviewed, or observative articles on skin care and related strings such as skin barrier, cleansing, cream, and diaper between 1970 to 2012. They have inclusion and exclusion criteria for the two reviewers working independently to assess the titles and abstracts of the articles. Internet search using Google as the search engine was conducted to obtain additional relevant information	English were identified that evaluated different skin practices to keep healthy skin and prevent DD. The main topics on skin care included: Effects of cleansing procedures (water, washcloths, and baby wipes), effects of bathing procedure, and effects of topical products.	comparable effects on diapered skin and maintain skin barrier. They confirmed the recommendations by experts of bathing twice weekly but found limited evidence that skin pH and adding baby cleanser and baby cream respectively could reduce TEWL. Most experts recommended barrier preparation containing zinc oxide or petrolatum to protect the skin from wetness and may help reduce severity of DD. However, there were no trials found to compare the effectiveness of topical product to no barrier. There were 2 trials that compared Vitamin A & D and oil to standard ointments and were found to be effective to prevent DD. Since there was no clear published evidence whether skin practices such as cleansing, bating, and application of topical preparation could prevent DD further studies are needed to show effectiveness on a clinical level.	
Friedlander, S. F., Eichenfield, L. F.,	Descriptive Analysis	How to evaluate DD appropriately? What are the Optimal	Systematic review of the appropriate evaluation and optimal	DD arises from the interaction and or	DD is a common problem, accounted for frequent visit to pediatricians, and	Level V

Leyden, J., Shu, J., & Spellman, M. C. (2009). Diaper Dermatitis – Appropriate evaluation & optimal management strategies. Contemporary Pediatrics, 2-14.		management strategies of DD	management of DD	combination of different etiologic factors such as prolonged contact with urine and feces that compromise barrier function of stratum corneum and caused frictional damage to the skin. DD preventive measures include: proper gentle cleansing and diapering routines. DD can be manage by keeping diaper area dry and stratum corneum intact by: frequent diaper change every 2 hours or when soiled or wet, gentle cleansing, use of barrier cream (40% zinc), 1% hydrocortisone, and if >3days r/o candidiasis or other metabolic	concerns families. Appropriate approach to diagnosis and treatment are essential. Adherence to proper cleansing and diapering routines are the key measures for prevention of DD. Infection and presence of other microorganism must be properly diagnosed and treated. Treatments include barrier protection (petrolatum/zinc), minimizing contact with urine and feces, and eradicating infectious organisms	

				and nutritional disorders.		
Gozen, D., Caglar, S., Bayraktar, S., & Atici, F. (2013). Diaper dermatitis care of newborns human breast milk or barrier cream. Journal of Clinical Nursing, 23, 512-523. doi: 10.1111/jocn.12047	Randomized, controlled, prospective, and experimental study	What are the effectiveness of human breast milk and barrier cream (40 % zinc oxide with cod liver oil formulation) application for skin care of newborns in the NICU on the healing process of DD.	They studied the term and preterm newborns in the NICU who developed DD while in the NICU of a university hospital of Istanbul between February - October, 2010. On completion of the study a total od 63 newborns treated DD with human breast milk (30) and barrier cream (33) groups were contacted.	Study data based on the individual properties (gender, mean gestational age, feeding methods, antibiotic use, diaper area cleansing method, diaper brands, and pre lesion score of newborns) in the treatment of DD were comparable and statistically significant between both use of breast milk and barrier cream ($p > 0.05$). The mean number of clinical improvement days was not significant ($P = .0294$) but the post lesion score of the barrier cream group was statistically significantly lower ($P = .002$) than the	Barrier cream have more effective results than treatment with human breast milk in treatment of DD particularly treatment of newborns with moderate to severe DD.	Level IV

				human breast milk group		
Heimall, L. M., Storey, B., Stellar, J. J., & Davis, K. F. (2012). Beginning at the bottom: Evidenced-based care for diaper dermatitis. The American Journal of Maternal/Child Nursing, 37(1), 10-16. doi:10.1097/NMC.0b013e31823850ea	Iowa Model of EBP	What are the current standard nursing practices for perineal care. What are the current evidences that support prevention and treatment of DD.	Systematic literature review, benchmarking with other pediatric hospital, consultation with other experts, and evaluation of current nursing practice thru survey of 195 patients from six inpatient units prior to revising the existing perineal care nursing standards.	Literature showed only 12% level II & I evidence for effective prevention and treatment of DD. Most of the evidence were non randomize, single descriptive, literature reviews, or expert opinions. These evidence have consensus around the use of zinc oxide and petrolatum as effective barriers against potential perineal skin irritants and macerations, types of diapers in which diapers that delivered continuous zinc and petrolatum based reduced DD and skin erythema, frequency of diaper change: every 2 hours or	As supported by literature, the existing standard was revised that included improvements in practice, education of skin care champions who will educate staff and support practice improvement. Products for prevention and treatments were updated for prevention and treatment of DD.	Level IV

				sooner if diaper area is wet or soiled, process of cleansing the diaper area: soft cloth and water or baby wipes, and subsequent application of diaper care products: thick application of the products and refrain from rubbing.		
Humphrey, S., Bergman, J. N. & Au, S. (2006) Practical management strategies for diaper dermatitis. Skin Therapy Lett, 11(7), 1-6.	Descriptive Theory	Described the practical management strategies of DD	Discussed and described the pathogenesis, clinical features, risk factors, and treatment of DD through literature review.	The clinical features of DD and risk factors in the development of DD were basis of the practical management strategies for DD. Treatments include: choice of diaper, Barrier cream, cleansing, presence of infection, use of corticosteroids and use of other agents specific to the infection.	DD is a common dermatological condition affecting diapered children. Causes of DD are wetness, friction, urine and feces, and presence of secondary infections. Targeting the etiologic factors is the best defense in the development of DD as a proactive approach in the management of DD.	Level V

Ness, M. J., Davis, D.M., & Carey, W.A. (2013). Neonatal skin care: A concise review. International Journal of Dermatology, 52(1), 14-22.	Descriptive Analysis and review of medical literature	What are the aspects of neonatal skin care? What are skin care practices For newborns and hospitalized neonates.	Review of medical literature regarding aspects of neonatal skin care and what are the skin care practices for newborns and hospitalized neonates.	The authors include in the manuscript the current recommendation on neonatal skin cleansing and antisepsis, umbilical cord care, use of emollients, prevention of DD, and preventing and treating pressure ulcers, wounds, and other skin injuries in hospitalized neonates.	Pay attention to the unique physiology of neonatal skin care, mild cleansing, and emollient enhance skin barrier maturation and repair. Topical products must be used with caution due to percutaneous absorption risk and frequent neonatal skin assessment for extravasation, pressure ulcer, and other types of injuries.	Level V
Noonan, C., Quigley, S., & Curley, M. A. Q. (2006). Skin Integrity in Hospitalized Infants and Children: A Prevalence Survey, Journal of Pediatric Nursing, 21(6) 445–453. doi:10.1016/j.pedn.2006.07.002	Descriptive Theory	To describe the spectrum of alteration in skin integrity and skin care needs of hospitalized young patients.	I day skin prevalence audit in a tertiary care university children's hospital. of the following alteration in skin care: DD, pressure ulcer, IV infiltration, device related injuries, and other epidermal injuries and direct physical examination.	Found 60% of incontinent of stool and urine hospitalized children less the 18 years of age had 16% with hospital acquired DD. Data presented identified alteration in skin integrity: DD, pressure ulcer, IV infiltration, device related injuries, and other	1. Skin integrity is a Quality indication of nursing care in acute setting. 2. Descriptions of skin alteration and skin care needs reflect and validate complexity of in patient nursing care and can help guide staff education and resource allocation.	Level IV

				epidermal injuries, skin integrity care challenges, help guide staff education and resources allocation, encourage evidence based management protocol, and served as bench mark for similar children's facilities.	3. Both human sufferings and financial expenses are cost of alteration in skin integrity. 4. Interventions that arise at maintaining skin integrity are often not evidenced-based in the pediatric acute care environment and could be potentially harmful.	
Pasek,T.A., Geyser, A., Maria Sidoni, M., Harris, P., Warner, J. A., Spence, A.,… Weicheck, S. (2008). Skin care team in the pediatric intensive care unit: A model for excellence. The Journal for High Acuity, Progressive, and Critical Care Nursing, 28, 125-135.	Descriptive Theory	Who are the skin care team of the PICU? What are the cares provided by the skin care team to patients in a technology- rich environment like the PICU?	Descriptive analysis of skin care team in the PICU.	The PICU skin care team provides a core group with the expertise to provide care for patients with complex and variable skin cares needs.	The PICU skin care team is made up of professional staff nurses. They are involved with all inpatients skin care councils and nurse practice councils. The PICU skin care team provides expertise in skincare through skin care rounds, trains and educates staff, promotes policy, and leads evidence-based initiatives on skin care. Availability of skin care team in the PICU enhances resource ability, communication, and care follow-through.	Level IV

Rosswurm, M. A., & Larrabee, J. H. (1999). A model for change to evidence-based practice. Journal of Nursing Scholarship, 31(4), 317-322.	Theoretical and research literature related to evidence-based practice, research utilization, standardized language, and change theory	What model can guide nurses and other healthcare providers through a systematic process for the change to evidence-based practice? Will this model support EBP changes derived from a combination of qualitative and quantitative data, clinical expertise and quality-improvement information.	The model was developed using sources identified on searches of Medline CINAHL, and systematic reviews available on the internet. Review topics were focused on evidence based medicine and nursing, research utilization, and change process. Clinical expertise and quality-improvement were other sources included.	The EBP improve the quality of patient care and enhanced clinical judgment of the practitioners. The practitioners knew how to obtain data, interpret, and integrate the best available research evidence with patient data and clinical observation. The developed framework was useful to other practitioners who want to change to EBP in a variety of settings. The patient's outcomes reflected discipline-specific and showed the accountability of each discipline. Nurses' contribution to patient's outcome was measured when nurses	Practitioners need skills and resources to appraise, synthesize, and diffuse the best evidence into practice. Patient outcomes must reflect discipline-specific and interdisciplinary accountabilities. The collaboration among the researchers and multi-disciplinary practitioners enhanced the diffusion of practice innovation.	Level V

				consistently use standardized language to define patient's problems, interventions, and outcome. Practitioners needed time and support to access database and synthesize evidence for practice change, The administrations provided infrastructure for EBP to develop and diffuse throughout the entire organization.		
Santo, A. E., & Choquette, A. (2013). Experience of adapting and implementing an evidence-based nursing guideline for prevention of diaper dermatitis in a pediatric oncology setting. International Journal of Evidenced-Based Healthcare,	Knowledge to action framework	Able to adapt and implement skin care guideline to prevent DD in the pediatric oncology population	Knowledge to action (KTA) process framework guided the problem identification and the literature review, adaptation and implementation of new guideline. During this process different tools were used to identify and review selected knowledge, (Appraisal of Guidelines Research Evaluation Instrument), to taylor and adapt knowledge to the	The guideline was successfully implemented as reported by nurses in focus group sessions and as measured by changes in nursing documentation.	The organization used the KTA framework and took the following three core elements of Promoting Action on Research Implementation in Health Services framework (PARIHS): level & nature of evidence, context where the research was placed, and method on which the process was facilitated for the successful adaptation of the guideline for prevention of DD in pediatric oncology patient.	Level IV

11(2), 121 -127. doi:10.1111/ 1744- 1609.12019			local context (ADAPTE process), to implement interventions (Registered Nurses of Association of Ontario toolkit), and to evaluate outcomes (Qualitative analysis). A convenience sample of stakeholders from in-patient pediatric oncology unit was recruited as focus group.			
Visscher, M. O. (2009). Recent advances in diaper dermatitis: Etiology and treatment. Pediatric Health, 3(1), 81-98.	Descriptive study design	What are the incidence and etiology of diaper dermatitis in infants and adults? What are the scientific basis for repair of diaper skin barrier damage? How will recent developments in DD treatment be available in the future?	The author included the most recent views about the skin structure, function and development, etiology of DD, and treatment of DD through review of scholarly literature. [	DD is a common condition and the incidence rates vary depending upon patient demographi cs and specific study methods. The majority of diaper rash is contact dermatitis and candida infection may be present. The etiology of DD includes: alteration in the skin hydration, skin irritants, mechanical	The cause of DD is well described since the 1980's.	Level IV

				friction, diet skin pH, age, gestational age, antibiotic therapy, diarrhea and medical condition. DD developed when stratum corneum barrier structure is disrupted and defective causing inflammation, increase permeability and increase keratinocyte proliferation. The etiologic factors determined the severity of DD and how it is treated. The effectiveness of treatments is affected by the lack of standardized assessment methods of DD. DD continues to occur but disposable diapers with absorbent gelling materials and breathable		

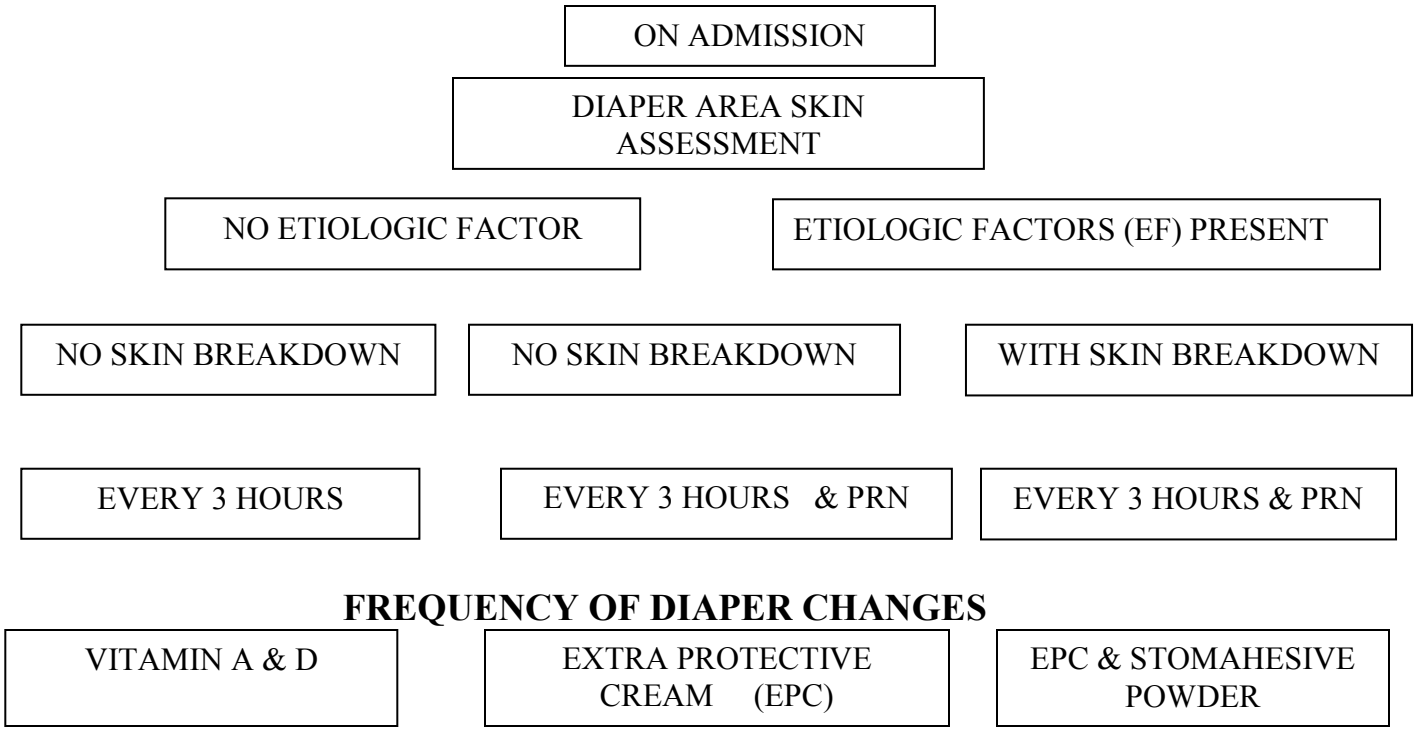
				outer sheets, were technological improvements that have decreased the severity of DD. Topical treatments for DD facilitate recovered compromised skin barrier by providing semi-permeable layer' or 'film' to facilitate the repair of the stratum corneum barrier, a physical shield to reduce/ prevent contact with irritants, ingredients to deactivate specific fecal components and materials that remains in contact with the skin surface. Skin protectant products (barrier creams and moisture barriers) are not required to		

				demonstrate effectiveness in controlled clinical trials prior to approval for use. Published research on the effects of skin care products and diaper rash treatments among premature and high-risk infants and elderly incontinent subjects, particularly in clinical settings, is especially limited. All skin care products should be evaluated for the presence of irritating components prior to use in these populations. Recent reports on the effects of topical oils, vernix caseosa, stratum corneum ceramides and skin surface pH on the development and restoration		

				of epidermal barrier function may provide the basis for improved treatments for irritant diaper dermatitis. Further developments in assessment methodologies and in determination of the biological factors that impact response to treatment are warranted		

Appendix B

Evidence-Based Practice Guideline for Perineal Care to Prevent Diaper Dermatitis



PARENTAL/CAREGIVER EDUCATION A MUST!!!!!

BARRIER APPLICATION/DIAPER CARE INSTRUCTIONS

- Diaper change: every 3 hours or immediately when soiled
- Wiping: gently wipe the skin with w/ wet wipes (NO RUBBING): Pat dry
- If using barrier ointment, wipe the stool. Do not completely wipe the ointment.
- Reapply the ointment
- Place a fresh diaper

Appendix C

Educational Curriculum Plan

Problem: The problem addressed in this QI project was the absence of a set of EBP guideline for perineal care, which has resulted in four unexpected cases per 100 days of hospital-acquired DD among the neonatal and pediatric patient.

Purpose: The purpose of this QI project was to develop an educational initiative encompassing an EBP guideline for perineal care (see Appendix B), an educational curriculum plan (see Appendix C) for staff members, and a Power Point presentation of the QI project (see Appendix G) to leadership on the educational initiative. The EBP guideline and the educational plan will decrease the gap between the present nursing practice in perineal care and the knowledge of evidence-based literature in the perineal care and will introduce a change in nursing practice.

Goal: The project goal was to introduce a change in nursing practice to promote skin integrity for neonatal and pediatric patients in the hospital practice.

Time	Objectives	Content Outline	Evidence	Method of Presenting
5 min	The individual participant will understand the objectives of the educational curriculum plan in regards to the overview of the QI project, project significance and incidence of the problem/problem statement, Significance of EBP guideline to address practice change.	A. QI Project Overview: The QI project focused on new knowledge of practice management that includes conceptual, practical, and evidence-based strategies for quality outcomes of patient care within the practice setting. B. Project Significance: The developed guideline for perineal care will facilitate a change in nursing practice to provide quality outcome of patient care received and safety for the patients. The EBP guideline will support and improve quality outcome of patient care and standardized practice for perineal care. C. Incidence of the Problem/Problem Statement a. Electronic patients record showed 4 incidences of DD/100 days.	Zaccagnini.M. E., & White, K. W.	Power Point Slide/discussion

		b. Absence of EBP guideline for perineal care in the organization D. Significance of EBP guidelines in Practice Change Once developed, the knowledge learned will lead to significant changes in the social environment of the organization. As the nurses apply the EBP guideline, they will have significant impact on the prevention of DD that will reduce the incidence and will acquire great potential to increase quality of care and safety for the patients. As one of the hospital acquired conditions (HAC), the desire for improvement in patient care and the reduction of incidence of DD to zero will be critical. The knowledge gained from this EBP project will support and improve the standard of practice toward individual patients. Implementation of the EBP guideline for perineal care will be an essential process to prevent DD in neonates and pediatric patients wearing diapers. a. The Johns Hopkins Nursing Evidence-based practice model (JHNEBPM) and guidelines contributed to the safety of the patients. The model was created and tested by a team of nurses and faculty at the University of Johns Hopkins and the Johns Hopkins Hospital. The faculty members depicted the three cornerstones of professional nursing practice, education, and research in order to deliver the excellence in nursing.	Newhouse, R., Dearholt, S., Poe, S., Pugh, L. C., & White, K.	
3 min.	The individual participant will be able to define and describe the characteristics of DD	Background A. Diaper Dermatitis a. One of the most common types of dermatitis among neonatal & pediatric diaper wearing patients. b. The most common form of DD comprises of bright erythema of the surfaces in closest contact with the diaper, such	Stamatas, G. N. & Tierney, N. K.	PowerPoint Slide/ Discussion

		as the buttocks, the perineal area, the genitals, waistline and pubic area, and the inner thighs. c. Significant hospital acquired condition (HAC) that could lead to severe perineal ulcers, excoriations, intense erythemas, papules, vesicles, and skin eruptions. d. Very painful, increases susceptibility to infection, and leads to increase hospital costs and length of stay.	Heimall, L. M., Storey, B., Stellar, J. J., & Davis, K. F	
12 min	The individual participant will learn the different research findings supporting the EBP guideline for perineal care as an important health care initiative and improve quality outcome and excellence in nursing care.	Scholarly Literature A. Comprehensive literature review supporting EBP guideline for perineal care and best practices to prevent DD a. Importance of Skin Assessment on Admission Absence or Presence of signs of DD: a) Erythema b) Excoriation c) Ulceration For hospitalized diapered patients, researchers recommended that patients at risk for developing DD should be identified for early prevention strategy. For patients with signs of DD, a definite time frame to treat DD could be established (immediately after skin assessment until signs of DD disappeared).	Ness, M. N., Davis, D.M., & Carey, W.A. Heimall, L. M., Storey, B., Stellar, J. J., & Davis, K. F Friedlander, S.F., Eichenfield, L. F., Leyden, J., Shu, J., & Spellman, M. C.	PowerPoint Slide/Discusion

		b. Appropriate skin care practices that were most effective when it comes to DD: a) Cleansing, bathing, and application of barrier cream as these practices ensured that DD would less likely to occur. c. Proactive approach: a) Targeting predisposing factors and variables related to DD such as poor skin condition, the presence of underlying disease, type of diaper used, medications the patient is taking, and any cream applied to the perineal area were considered in the prevention of DD. b) Emphasis on the humid and moist environment under the diaper made the skin more susceptible to DD due to being exposed to irritants such as urine and feces d. The understanding of the anatomy, physiology, and biochemistry of the skin in the diaper area and the knowledge to protect the skin to treat and prevent DD were necessary. a) Development of DD is multifactorial b) Presence of irritants, such as stool and urine. c) Friction on the skin. d) Presence of these factors cause disruption in the integrity of the dermis and maceration of stratum corneum and epidermis. e) The humid and moist	Blume-Peytavi, Lunnemann, Stamas, Kottner, and Garcia Bartels, N. Adalat, S., Wall, D., & Goodyear, H. Adam, R. Humphrey, S., Bergman, J.N., & Au, S. Gozen, D., Caglar, S., Bayraktar, S. & Atici, F Santo, A. E. & Choquette, A.	

		environment under the diaper made the skin more susceptible to DD due to being exposed to irritants such as urine and feces.	Adalat, S., Wall, D., & Goodyear, H.	
		f) Studies showed that using EBP incorporated in the skin care guidelines to prevent DD, protect skin, and treat DD successfully improved nursing practice for quality patient care	Vischerr, M. O.	
		e. Explored and identified evidences that although DD is usually self-limited, treated successfully in the outpatient setting and is not a common problem in the hospital, hospitalized neonatal and pediatric patients wearing diapers are at increased risk of developing DD.	Noonan, C., Quigley, M. A., & Curley, M. A.	
		f. The development of DD may cause additional harm and maybe a source of pain, may increased susceptibility to infection and may lead to increase hospital cost and length of stay.		
		g. Patient who has urine and stool incontinence developed hospital-acquired DD. The early identification of incontinence was important to prevent skin alteration and complex nursing care in hospitalized children.	Santo, A. E. & Choquette, A.	
		B. Evidence-Based Practice: EBP guideline		
		a. Guidelines were set as standards, criteria, or specifications used or followed in the performance of certain tasks.		
		b. The purpose of a guideline is to streamline particular processes according to a set routine or practice that may be issued from and used by any organization.	Noonan, C., Quigley, M. A., & Curley, M. A.	
		c. Guidelines make the action of the staff better and predictable.	Ness, M. N., Davis, D.M., & Carey, W.A.	
		C. Implementation of skin care guidelines provided consistency in practice		
		a. Skin care guidelines were adapted and		

		implemented in Montreal, Canada to prevent DD among pediatric oncology population. The organization used the KTA framework and took the following three core elements of Promoting Action on Research Implementation in Health Services framework (PARIHS): level & nature of evidence, context where the research was placed, and method on which the process was facilitated for successful adaptation of the guideline for prevention of DD. b. Each guideline, primary outcome describing the implementation of the guidelines, and change in nursing practices were studied. c. Implementation of skin care guidelines provided consistency in practice in a pediatric cardiology unit to prevent DD. d. Evidence-based treatment of DD was identified including: Antimicrobial/anti-inflammatory, skin barrier selection (petrolatum, Vitamin A & D, and Zinc), gentle cleansing, frequent diaper change, education on prevention, development, and management of DD. e. A proactive approach was the best defense against DD targeting the predisposing factors: wetness, friction, urine and feces, microorganisms, and if taking any medication such as antibiotics, chemotherapeutic agents, f. Perineal skin care that were focused on prevention: a) Diaper change every 3 - 4 hours or immediately when soiled. b) Gently cleansing the skin, no rubbing. c) Use of appropriate emollients and barrier cream such as: • Vitamin A & D for patient with no signs	Heimall, L. M., Storey, B., Stellar, J.J., & Davis, K. F. Ness, M. N., Davis, D.M., & Carey, W.A. Schluer, A.B., Halfern, R.J., & Schols, J. M. Friedlander, S.F., Eichenfield, L. F., Leyden, J., Shu, J., & Spellman, M. C. Heimall, L. M., Storey, B., Stellar, J.J., & Davis, K. F. Gozen, D., Caglar, S., Bayraktar, S. & Atici, F	

		of DD • Extra protective Cream (40 % zinc) for patients with signs of DD • EPC with stomahesive powder if with excoriated DD.		
6 min	The individual participant will be able to discuss the role of a leader and members of a multidisciplinary team and describe the approach and strategies of team development towards a successful outcome of the project.	Approach & Development of the EBP Guideline for Perineal Care to Prevent DD A. Team development: A multidisciplinary team was formed and worked collaboratively in the development of the EBP guideline, educational plan, and implementation, and evaluation plan. a. Role of leader: a) Excellent leadership looked after the success of the team in the development of the QI project. b) Dealt with conflicts productively to avoid bringing down the team. b. Role of members a) Worked effectively with each other toward common goals and outcomes: To develop an EBP guideline for perineal care to prevent DD among neonatal and pediatric patients wearing diapers that would lead the hospital toward zero incidence of hospital acquired DD. b) Invested in the QI project and were aware that there were common and shared understanding within the team. c) Worked cohesively as they supported each other toward the successful outcome of a project.	Kelly, D. L.	Power Point Slide

		B. Introduction of the team members a. Pediatric WOCN care nurse practitioner b. Director of the women's and children's services (WCS) c. Pediatric Attending Physician d. Nurse Managers from neonatal intensive care unit (NICU), and 2 pediatric units. e. Skin champion nurses: one each from NICU, and 4 pediatrics units		
3 min	The individual participant will be able to describe the conceptual framework that guided the process of the EBP guideline development, management of the project, implementation and the evaluation plan of the project	Conceptual Framework Describe Rosswurm and Larrabee Conceptual Model (RLCM). Six steps of RLCM: a) Assess the need for change. The need for change was assessed. The need for an EBP guideline for perineal care to prevent DD in the organization was established through the electronic record verified by the WOCN nurse practitioner. The record showed that there was a hospital-acquired incidence of DD among neonatal and pediatric patients wearing diapers. The incidence was 4/100 patient/days during the quarterly review. The hospital has no EBP guideline for perineal care to date. b) Connect problems, interventions, and outcomes. The problem was the basis of EBP guideline, the intervention addressed the problem, and the assessment facilitated a positive outcome for the patients. c) Gather the evidence. The best evidences were gathered synthesized from various pieces of evidence from the literature review. The developed multidisciplinary team critically reviewed and identified multiple resources of evidences for strengths, weaknesses, gaps, and conflicts in the studies and findings.	Rosswurm, M. A. & Larrabee, J. H. White, K. M. & Dudley-Brown, S.	

		d) Design a practice change A practice was designed. The process and activities to address the proposed change was planned and designed. The team developed the EBP guideline for perineal care to prevent DD among neonates and children wearing diapers. e) Implement and evaluate the change in practice. After graduation, this QI team will implement EBP guideline once the in-service education plan with curriculum guide is provided to current nurses, physicians (intern/residents), ancillary staff and new employees as part of their orientation. The multi-disciplinary team will follow-up and will evaluate the usage, adaptation, or rejection of the proposed change in practice. f) Integrate and maintain the change in practice. The different patient's units in the organization will integrate the EBP guideline into standard of care and maintain the practice change.		
5 min	The individual participant will be able to describe the management and treatment strategies of DD.	Management and Treatments of DD A. The following challenges for parents, care givers, and health care providers in the treatment of DD were identified in the hospital setting: a. Learning the management strategies as the focus for the treatment of DD such as: antimicrobial/anti-inflammatory, skin barrier selection, gentle cleansing, frequent diaper change, and education on prevention/development of DD The combined influences of wetness, friction, urine and feces, and microorganisms made it difficult to completely eradicate DD. B. Treatments of DD: A B C D E a. Antimicrobial/anti-inflammatory may be required if candidiasis is	Humphrey, S., Bergman, J.N., & Au, S. Blume-Peytavi, U., Lunnemann, L., Stamas, G. N., Kottner, J., & GarciaBartels, N.	Power point slide

		present. a) When DD fails to respond to barrier management, candida DD is considered and treat with anti-fungal cream. If oral thrush is present, oral antifungal treatment is considered. b) Seek antifungal treatment for breastfeeding mom with symptoms of diaper candidiasis to prevent passing infection back and forth. b. Barrier selection should be thick and fragrance-free and applied liberally c. Cleansing should be done gently to minimize additional friction and unscented and alcohol free baby wipes could be use for cleaning. d. Diaper should be change 3-4 hours or immediately when soiled and maximize diaper-free time. e. Education on prevention and risk factors for DD. The best strategy for treatment of DD is prevention.	Friedlander, S.F., Eichenfield, L. F., Leyden, J., Shu, J., & Spellman, M. C. Ness, M. N., Davis, D.M., & Carey, W.A. Adalat, S., Wall, D., & Goodyear, H. Heimall, L. M., Storey, B., Stellar, J.J., & Davis, K. F.	
10 min	The individual participant will be able to learn and describe the EBP guideline for perineal care to prevent DD.	The EBP guideline for perineal care flow chart A. Discuss the flow chart The following are the six elements of the new practice guidelines for perineal care to prevent DD: a. Perineal skin admission assessment for neonates and pediatric patients wearing diapers: (1) No signs and symptoms of DD (2) With signs and symptoms of DD such as : redness, excoriation, and ulceration		Presentation of the flow chart in the Power point slide

		b. Presence of etiologic factors assessment after admission: a) Poor skin condition b) Presence of underlying disease c) Medications the patient is taking c. Frequency of diaper change: every 3-4 hours or immediately when soiled. d. Keeping patient's skin dry and moisturize. by applying appropriate emollients and cream: a) Vitamin A & D for patient with no signs of DD b) Extra protective Cream (EPC) for patients with signs of DD. c) EPC with stomahesive powder if with DD. e. Parental and caregiver education. a) Diaper change: every 2 hours or immediately when soiled. b) Wiping: gently wipe the skin with wet wipes (no rubbing), pat dry. c) If using barrier ointment, wipe the stool. Do not completely wipe the ointment. d) Reapply ointment e) Place a fresh diaper. These elements were addressed because close monitoring and early detection of compromised skin were critical to formulate intervention in the prevention of DD.	Heimall, L. M., Storey, B., Stellar, J.J., & Davis, K. F. Adalat, S., Wall, D., & Goodyear, H. Friedlander, S.F., Eichenfield, L. F., Leyden, J., Shu, J., & Spellman, M. C. Blume-Peytavi, Lunnemann, Stamas, Kottner, and Garcia Bartels, Ness, M. N., Davis, D.M., & Carey, W.A.	
8 min	The individual participant will learn and identify the different perineal products, when to use the specific product, and the	Introduction to the perineal care products available in the organization A. Perineal care products: a. Vitamin A & D b. Extra Protective Cream (EPC) B. Video presentation/Hands on application C. Questions & Answers		Video presentation of perineal care. Hands on to practice

	proper way to apply products.			how to apply perineal care products

Appendix D

Permission from Johns Hopkins Nursing Evidence-Based Practice Models and Tools

IJHN Learning System

Johns Hopkins Nursing Evidence-Based Practice Model and Tools

Thank you for submitting the requested information. You now have permission to use the JHN EBP model and tools.

Click here to download the tools. Reminder: You may not modify the model or the tools. All reference to source forms should include "©The Johns Hopkins Hospital/The Johns Hopkins University."

We offer an excellent online course about our model/tools. It is an engaging online experience, containing interactive elements, self-checks, instructional videos, and demonstrations of how to put EBP into use. The course follows the EBP process from beginning to end and provides guidance to the learner on how to proceed, using the tools that are part of the Johns Hopkins Nursing EBP model. Take a sneak peek of the course.

Click here for more information about our online course. Group rates available, email ijhn@jhmi.edu to inquire.

Do you prefer hands-on learning? We are offering a 5-day intensive Boot Camp where you will learn and master the entire EBP process from beginning to end. Take advantage of our retreat-type setting to focus on your project, collaborate with peers, and get the expertise and assistance from our faculty. Click here to learn more about EBP Boot Camp.

Appendix E

Content Expert Educational Curriculum Plan Evaluation Form

Date:

Student: Nanita F. Lim-Sulit

Name of Reviewer:

Products for Review: Educational Curriculum Plan

Instructions: Please review each objective related to the educational curriculum plan and content. The answer will be a met or not met with comments if there is a problem understanding the content or if the content does not speak to the objective.

At the conclusion of this educational experience, the participant will be able to:

OBJECTIVES	NOT MET 1	MET 2	Comments
1. The individual participant will understand the objectives of the educational curriculum plan in regards to the overview of the QI project, project significance and incidence of the problem/problem statement, Significance of EBP guideline to address practice change.			
2. The individual participant will be able to define and describe the characteristics of DD.			
3. The individual participant will learn the different research findings supporting the EBP guideline for perineal care as an important health care initiative and improve quality outcome and excellence in nursing care.			
4. The individual participant will be able to discuss the role of a leader and members of a multidisciplinary team and describe the approach and strategies of			

team development towards a successful outcome of the project.			
5. The individual participant will be able to describe the conceptual framework that guided the process of the EBP guideline development, management of the project, implementation and the evaluation plan of the project			
6. The individual participant will be able to describe the management and treatment strategies of DD.			
7. The individual participant will be able to learn and describe the EBP guideline for perineal care to prevent DD.			
8. The individual participant will learn and identify the different perineal products, when to use the specific product, and the proper way to apply products.			

Appendix F

Content Expert Educational Curriculum Plan Evaluation Summary

1= Not Met 2= Met

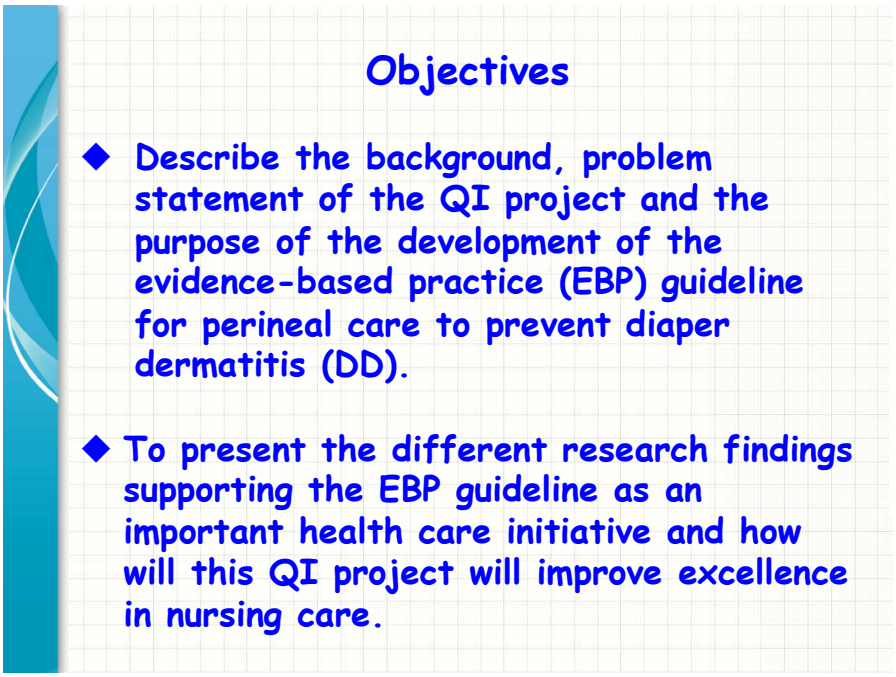
OBJECTIVES	NOT MET 1	MET 2	Comments
1. The individual participant will understand the objectives of the educational curriculum plan in regards to the overview of the QI project, project significance and incidence of the problem/problem statement, Significance of EBP guideline to address practice change.		2	
2. The individual participant will be able to define and describe the characteristics of DD.		2	
3. The individual participant will learn the different research findings supporting the EBP guideline for perineal care as an important health care initiative and improve quality outcome and excellence in nursing care.		2	
4. The individual participant will be able to discuss the role of a leader and members of a multidisciplinary team and describe the approach and strategies of team development towards a successful outcome of the project.		2	
5. The individual participant will be able to describe the conceptual framework that guided the process of the EBP guideline development, management of the project, implementation and the evaluation plan of the project		2	
6. The individual participant will be able to describe the management and		2	

treatment strategies of DD.			
7. The individual participant will be able to learn and describe the EBP guideline for perineal care to prevent DD.		2	
8. The individual participant will learn and identify the different perineal products, when to use the specific product, and the proper way to apply products.		2	

All objectives were “met”

Appendix G

Power Point Presentation of the Quality Improvement Project



Objectives

- Describe the approach and the development process of the EBP guideline for perineal care to prevent DD.
- To present the educational/in-servicing plan for the staff for the implementation of the EBP guideline for perineal care to prevent DD after graduation from Walden University

PROJECT BACKGROUND

- DD is an acute inflammatory reaction in the perineal skin
- One of the most common dermatitis among neonatal & pediatric diaper wearing patients.

PROJECT BACKGROUND

- Bright erythema & excoriation of the surfaces in closest contact with the diaper, i.e. the buttocks, the perineal area, the genitals, waistline and pubic area, and the inner thighs. The deep folds of the groins are usually spared.

(Stamatas & Tierney, 2014)

PROJECT BACKGROUND

- A common preventable pediatric problem (Heimall, Storey, Stellar, & Davis, 2012).

PROJECT BACKGROUND

NFSCH electronic patient's record showed 4 incidences of DD/100 days.

Absence of EBP guideline for perineal care in the organization: a non free standing children's hospital (NFSCH).

PROBLEM STATEMENT

- The problem addressed was the unacceptable incidence of hospital acquired DD in the neonatal and pediatric patient population wearing diapers.

  Concern of the administration/providers

  Severe cases of perineal skin breakdown.

  Abscence of EBP guideline

  Increased susceptibility to infection and increased hospital cost and length of stay (Visscher, 2009).

PURPOSE

- To develop an EBP guideline (Appendix A) for perineal care to prevent diaper dermatitis among hospitalized neonatal and pediatric patients.
- To develop an education plan (Appendix B) with a curriculum guide for the staff.
- The EBP guideline and the educational plan will decrease the gap between the present nursing practice in perineal care and the knowledge of evidence-based literature in the perineal care.

Goal of the QI project

The goal of this QI project was to introduce a change in nursing practice to promote skin integrity for neonatal and pediatric patients wearing diapers in the hospital practice.

Outcomes of the QI Project

- Development of an EBP guideline for perineal care (Appendix A) to prevent diaper dermatitis among neonatal and pediatric patients
- Development of an educational plan (Appendix B) for the staff.

Outcomes of the QI Project

The educational plan for the staff would include:

- a graded literature review that was used by Johns Hopkins Evidence Based Practice Guidelines Grading Scale (JHEBPGGS, (Appendix C)

Outcomes of the QI Project

- A PowerPoint presentation of the QI project (Appendix D) to facilitate the in services of the EBP guideline educational component of the EBP guideline for stakeholders.

Development Process to Develop the EBP Guideline for Perineal Care

- Multi disciplinary team was created.

Team members:

Pediatric wound and ostomy care nurse practitioner

Director of the women's and children's services (WCS)

Attending Pediatric Physician

Development Process to Develop the EBP Guideline for Perineal Care

- Multi disciplinary team was created.

Team members:

Nurse Managers from neonatal intensive care unit (NICU), nursery, and pediatric units

Skin nurse champions from NICU, nursery, and pediatrics units.

ROSSWURM & LARABEE'S CONCEPTUAL MODEL

(RLCM) (Rosswurm & Larrabee, 1999)

1. Assess the need for change in practice.
2. Connect the problem, interventions, and outcomes.
3. Gather the best evidence.
4. Design a practice change.
5. Implement and evaluate the change in Practice.
6. Integrate and maintain the Change in Practice.

ASSUMPTIONS

- Will have preventive measure to reduce the occurrence of DD to zero.
- Nursing staff will have the desire to provide the best care possible for their patients.
- Hospital stakeholders leadership will support and will provide the resources for the project.

LIMITATIONS

- Current nursing practice was based on their personal and past experiences;
- Lack of high-level evidence-based studies for perineal care to prevent DD on literature review (Heimall, Storey, Stellar, & Davis, 2012);
- Length of time to in service staff of the EBP guideline could be a long process;
- Nursing staff are not willing to change to EBP guideline.

HOW DID WE ADDRESS THE LIMITATIONS

- Organization's stakeholder's leadership supported the development of the QI project to address the problem identified as strategy in the translation process.
- Continuous assistance will be provided for the stakeholders as they embrace any challenges in the practice change and until they can positively accept them by psychologically adapting new ways of practicing in terms of managing changes.

HOW DID WE ADDRESS THE LIMITATIONS

- Available literature and pieces of evidence supported the recommended intervention and practice change, and evidences-or consensus-based recommendations to guide best practice could be easily communicated to all the staff involved (White & Dudley-Brown, 2012).

HOW DID WE ADDRESS THE LIMITATIONS

- Reflect more on the evidence. Developed EBP guideline will represent the most current practice in perineal care, will be compared to other facilities, and will support a formal research at the organizational level.

LITERATURE REVIEW

- DD is self limited & treated as outpatient (Adalat, wall, & Goodyear, 2007)
- Success of guidelines in practice (Santo & Choquette, 2013).
- Team members invested in the QI project (Kelly, 2011 & Laureate, 2011).
- Leadership in success of QI project (White & Dudley-Brown, 2012).

LITERATURE REVIEW

- Risk factors in hospitalized neonates and pediatric patients wearing diapers (Gozen, Caglar, Bayraktar, & Atici, 2013).
- Evidence-based treatment of DD. (Friedlander, Eichenfield, Leyden, Shu, & Spellman, 2009).
- Perineal skin care focused on prevention (Ness, Davis, & Carey, 2013).

SIGNIFICANCE TO NURSING

- Support and improve quality outcomes of patient care and standardized practice toward perineal care of individual patients (Humphrey, Bergman, & Au, 2006).
- Parental satisfaction on the care received.
- Essential to prevent DD in neonates and pediatric patients wearing diapers.
- Significant impact in the reduction of the incidence of DD to zero.

Educational/In-Service Plan for the Implementation of the QI Project

Weekly scheduled didactic education/in-service for the Unit Staff for both days and nights shift

- 40 minutes power point presentation/discussion.
- 20 minutes hands on practice using the EBP guideline

Educational/In-Service Plan for the Implementation of the QI Project

Eight newborn & pediatric units

- Plan for 2 months in-service
- EBP guideline posters will be posted to all the units in the NFSCH.

EBP Guideline for Perineal Care to Prevent DD

ON ADMISSION

DIAPER AREA SKIN ASSESSMENT

NO ETIOLOGIC FACTOR	ETIOLOGIC FACTORS (ET) PRESENT	
NO SKIN BREAKDOWN	NO SKIN BREAKNOWN	W/ SKIN BREAKDOWN
EVERY 3 HRS	EVERY 3 HRS &PRN	EVERY 3 HOURS & PRN
	(FREQUENCY OF DIAPER CHANGE)	
VITAMIN A & D	EXTRA PROTECTIVE CREAM (EPC)	EPC & STOMAHESIVE POWDER

PARENTAL/CARE GIVER EDUCATION A MUST !!!!

EBP Guideline for Perineal Care to Prevent DD

PARENTAL AND STAFF EDUCATION

BARRIER APPLICATION:

DIAPER CARE

- Diaper change: every 3 HRS. or immediately when soiled
- Wiping : gently wipe the skin with w/ wet wipes (NO RUBBING): Pat dry
- If with barrier ointment, wipe the stool. Do not completely wipe the ointment.
- Reapply the ointment
- Place a fresh diaper

EBP Guideline for Perineal Care to Prevent DD

Video Presentation

EVALUATION

- Team will evaluate the goal of the QI project:

Did the EBP guideline reduce the unacceptable incidence of hospital acquired DD to zero. Did the QI project facilitated a change in nursing practice to EBP through the development of an EBP guideline for perineal care to prevent diaper dermatitis amongst neonatal and pediatric diaper wearing patients

EVALUATION

- QI project evaluation plan:

Review of Electronic Patient Records
Was the EBP guideline implemented as planned?

Did the QI project meet the goals and objectives?

References

Adalat, S., Wall, D., & Goodyear, H. (2007). Diaper dermatitis-frequency and contributory factors in hospital attending Children. *Pediatric Dermatology, 24*(5). 483-488. doi: 10.1111/j.1525-1470.2007.00499.x

Friedlander, S. F., Eichenfield, L. F., Leyden, J., Shu, J., & Spellman, M. C. (2009). Diaper Dermatitis/ Appropriate evaluation & optimal management strategies. *Contemporary Pediatrics,* 2-14.

Heimall, L. M., Storey, B., Stellar, J. J., & Davis, K. F. (2012). Beginning at the bottom: Evidenced-based care for diaper dermatitis. *The American Journal of Maternal/Child Nursing, 37*(1), 10-16. doi: 10.1097/NMC.0b013e31823850ea

Humphrey, S., Bergman, J. N. & Au, S. (2006) Practical management strategies for diaper dermatitis. *Skin Therapy Letter, 11*(7), 1-6. Kelly, D. L. (2011). *Applying quality management in healthcare (3rd ed.).* Chicago, IL: Health Administration Press.

Gozen, D., Caglar, S., Bayraktar, S., & Atici, F. (2013). Diaper dermatitis care of newborns human breast milk or barrier cream. *Journal of Clinical Nursing,* 23, 512-523. doi: 10.1111/jocn.12047

Kelly, D. L. (2011). *Applying quality management in healthcare (3rd ed.).* Chicago, IL: Healt h Administration Press.

Laureate Education, Inc. (Executive Producer) (2011). *Organizational and systems leadership for quality improvement*. Baltimore, MD: Author.

Levin, R. F., Keefer, J. M., Marren, J., Vetter, M., Lauder, B., & Sobolewski, S. (2010). Evidence -based practice improvement: Merging 2 paradigms. *Journal of Nursing Care Quality, 25*(2), 117–126. Retrieved from the Walden Library databases.

References

Mosby's Medical Dictionary (2009). Medical Dictionary (8th ed). Elsevier. Retrieved from http://medical-dictionary.thefreedictionary.com/perinealcare.

Ness, M. J., Davis, D. M., & Carey, W.A. (2013). Neonatal skin care: A concise review. *International Journal of Dermatology, 52*(1), 14-22. doi:10.1111/ j.1365-4632.2012.05687.x

Rosswurm, M. A., & Larrabee, J. H. (1999). A model for change to evidence-based practice. *Journal of Nursing Scholarship, 31*(4), 317-322.

Santo, A. E., & Choquette, A. (2013). Experience of adapting and implementing an evidence-based nursing guideline for prevention of diaper dermatitis in a pediatric oncology setting. *International Journal of Evidenced-Based Healthcare, 11*(2), 121-127. doi: 10.1111/1744-1609.12019

Stamatas, G. N. & Tierney, N. K. (2014). Diaper dermatitis: Etiology, manifestations, prevention, and management. *Pediatric Dermatology, 31*(1), 1-7. doi:10.1111/pde.12245

Visscher, M. O. (2009). Recent advances in diaper dermatitis: Etiology and treatment. *Pediatric Health, 3*(1), 81-98.

White, K. M., & Dudley-Brown, S. (2012). Evidenced-based practice. In K. White (Ed.) *Translation of evidence into nursing and health care practice* (pp. 3-22). New York, NY: Springer.

QUESTIONS?
COMMENTS....

Appendix H

Leadership Evaluation of the Quality Improvement

Project PowerPoint Presentation Form

Goal:	To evaluate the presentation of development of the quality improvement project				
Activity Name:	Quality Improvement Project PowerPoint Presentation: Development of EBP Guideline for Perineal Care				
Direction: Circle the number you think best evaluates this activity					
Legend:	**1 = Strongly disagree**	**2 = disagree**	**3 = Neither Agree or Disagree**	**4 = Agree**	**5 = Strongly Agree**
Objective 1: Describe the quality improvement project background, problem statement, assumptions, and limitations.	**1**	**2**	**3**	**4**	**5**
Objective 2: Present different research findings supporting the EBP guideline as an important health care initiative and improve excellence in nursing care.	**1**	**2**	**3**	**4**	**5**
Objective 3: Describe the approach and methods to develop an evidence-based practice (EBP) guideline.	**1**	**2**	**3**	**4**	**5**
Objective 4: Discuss the educational plan with the curriculum guide to in service the staff to learn the EBP guideline for perineal care to prevent DD.	**1**	**2**	**3**	**4**	**5**

Presenter provided objectives relative to the goal.	**1**	**2**	**3**	**4**	**5**
Presenter effectively used teaching methods and learning aids.	**1**	**2**	**3**	**4**	**5**
The PowerPoint presentation was easy to follow.	**1**	**2**	**3**	**4**	**5**
Attendees have no knowledge of the topic before activity	**1**	**2**	**3**	**4**	**5**
Attendees have full knowledge of the topic after activity	**1**	**2**	**3**	**4**	**5**

Appendix I

Leadership Evaluation of the Quality Improvement Project

PowerPoint Presentation Summary

1= strongly disagree, 2= slightly disagree, 3= agree, 4= slightly agree, 5= strongly agree

Evaluators	Objective #1	Objective #2	Objective #3	Objective #4	Average Score
1	5	5	5	5	5
2	5	5	5	5	5
3	5	5	5	5	5
4	5	5	5	5	5
5	5	5	5	5	5
6	5	5	5	5	5
7	5	5	5	5	5
8	5	5	5	5	5
9	5	5	5	5	5
10	5	5	5	5	5
11	5	5	5	5	5

Evaluators	Provided objectives relative to the goal	Effectively used teaching methods and learning aids	Power Point Presentation was easy to follow	No Knowledge Before the Topic	Have Full Knowledge After the Topic	Average Score
1	5	5	5	5	5	5
2	5	5	5	5	5	5
3	5	5	5	5	5	5
4	5	5	5	5	5	5
5	5	5	5	5	5	5
6	5	5	5	5	5	5
7	5	5	5	5	5	5
8	5	5	5	5	5	5
9	5	5	5	5	5	5
10	5	5	5	5	5	5
11	5	5	5	5	5	5

Appendix J

Leadership Effectiveness Scale (LES)

Goal:	**To evaluate the leadership effectiveness in the quality improvement project development.**					
Activity Name:	**Leadership in the Development of DNP Quality Improvement Project: Evidence-Based Practice Guideline for Perineal Care to Prevent Diaper Dermatitis**					
Leader: Nanita F. Lim-Sulit						
Legend:	**1 = Strongly disagree**	**2 = disagree**	**3 = Neither Agree or Disagree**	**4 = Agree**	**5 = Strongly Agree**	
The person is a leader.			**1**	**2**	**3**	**4**	**5**
This person helps to set the direction of the team in meeting project goals.			**1**	**2**	**3**	**4**	**5**
This person helps to support team members in meeting project goals.			**1**	**2**	**3**	**4**	**5**
This person helps to connect individual contribution with the team project goals.			**1**	**2**	**3**	**4**	**5**
This person helps the team learn.			**1**	**2**	**3**	**4**	**5**

Appendix K

Institutional Review Board Approval

IRB Materials Approved - Nanita Lim-Sulit

IRB <IRB@waldenu.edu> Mon, Jul 27, 2015 at 6:21 PM
To: Nanita Lim-sulit <nanita.lim-sulit@waldenu.edu>, IRB <IRB@waldenu.edu>
Cc: dnp <dnp@waldenu.edu>, Joan Moon <joan.moon@waldenu.edu>

Dear Ms. Lim-Sulit,

This email is to notify you that the Institutional Review Board (IRB) confirms that your study entitled, "Development of an Evidence-Based Practice Guideline for Perineal Care to Prevent Diaper Dermatitis (DD)," meets Walden University's ethical standards. Our records indicate that your project does not include the types of activities that require a traditional IRB review. This Confirmation of Ethical Standards (CES) has an IRB record number of 07-27-15-0423586.

This confirmation is contingent upon your adherence to the exact procedures described in the final version of the IRB materials that have been submitted as of this date. This includes maintaining your current status with the university and this confirmation of ethical standards is only valid while you are an actively enrolled student at Walden University. If you need to take a leave of absence or are otherwise unable to remain actively enrolled, this is suspended.

If you need to make any changes to your project, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive confirmation with a status update of the request within 1 week of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for projects conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with these policies and procedures related to ethical standards in research.

When you submitted your IRB application, you made a commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to you.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained at the IRB section of the Walden web site or by emailing irb@waldenu.edu:

http://researchcenter.waldenu.edu/Application-and-General-Materials.htm

Please note that this letter indicates that the IRB has approved your project. You may not move forward with your project, however, until you have received the Notification of Approval to Conduct the Project e-mail. Once you have received this notification by email, you may move forward with your project.

Both students and faculty are invited to provide feedback on this IRB experience at the link below:

http://www.surveymonkey.com/s.aspx?sm=qHBJzkJMUx43pZegKlmdiQ_3d_3d

Sincerely,

Libby Munson

Research Ethics Support Specialist

Office of Research Ethics and Compliance

Email: irb@waldenu.edu

Fax: 626-605-0472

Phone: 612-312-1341

Office address for Walden University:

100 Washington Avenue South

Suite 900

Minneapolis, MN 55401

Information about the Walden University Institutional Review Board, including instructions for application, may be found at this link:
http://researchcenter.waldenu.edu/Office-of-Research-Ethics-and-Compliance-IRB.htm

Appendix L

American Pediatric Surgical Nurses Association Abstract Guidelines

Instructions for the submission of abstracts

The Call for Abstracts has been extended and will close October 28, 2015.

1. All are welcome to submit an abstract for the 25th Annual APSNA Scientific Conference. Membership is not required for submission, selection, and presentation.
2. Abstracts are to be completed and submitted online via the APSNA website.
3. Only fully completed abstract submissions will be reviewed.
4. All submissions undergo blinded peer-review by three members of the APSNA Program Committee.
5. Notification of abstract acceptance will be no later than November 4, 2015.
6. Confirmation of acceptance by primary author is required by November 11, 2015.

Mentoring MENTORING is now available (pre-submission) for abstract authors. Contact The APSNA Director of Program if you are interested in being connected with mentor.

General Submission Guidelines

Authors are asked to identify their preferred mode of presentation (poster, podium/short oral, round table, or general session). The Program Committee reserves the right to offer an alternative type of presentation to meet the needs of the conference program.

Original abstracts are preferred. However, abstracts that have been previously published or presented prior to submitting to APSNA will be considered.

- Abstracts must include the following section headers:
  - Evidence-Based or Original Research heading
    :Background, Objectives, Methods, Results, Conclusions
  - Innovation in Patient Care/Case Study/Reports heading
    : Background, Purpose, Design/Implementation, Evaluation/Outcomes, Implications for Practice
- Authors are asked to check accuracy of spelling, grammar, and punctuation. Your poster/oral presentation abstract will appear in print exactly as you submit it; thus any errors, misspellings, incorrect hyphenations, or deviations from good

grammatical usage will appear in the published abstract.

- When using abbreviations, spell out in full the first mention, followed by the abbreviation in parentheses.
- We highly suggest finishing your submission in one sitting, however, you can use the "Save and Continue Later" feature within the Abstract Submission Form. It is important to note the expiration date when saving and be sure to revisit the form from the same computer and browser where you began the form.
    - Note: The abstract submission form has been tested with Internet Explorer and Firefox for Windows PC's, as well as Safari and Firefox on MAC. You may experience difficulties in different or older versions of browsers.
- Industry representatives (i.e., from device/pharmaceutical/food company) may submit an abstract. Conflict of interest must be stated. CNE contact hours may not be provided.
- Submission of an abstract constitutes a commitment by the author to present a poster/oral session at the APSNA Annual Scientific Conference, if accepted.
- Presenters are responsible for all conference fees, travel, lodging, and cost of presentation material development.
- EXTENDED Deadline for abstract submission is October 28, 2015. Submissions received after this date will not be accepted for review.
- Secondary Authors: For purposes of APSNA Annual Scientific Conference planning, are defined as:
    - POSTER presentations: all authors listed on a poster
    - ORAL presentations: all co-presenters
    - Identified Secondary Authors/Additional Speakers must fill out biographical and conflict of interest form
- If you do not receive an e-mail confirmation within 24 hours after submitting your abstract, it is your responsibility to contact the APSNA Director of Program to make sure we have received your submission.
- Regardless of acceptance status, an e-mail notification will be sent to you on or before November 4, 2016.
- For questions or additional information please contact APSNA Director of Program

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Helpful Links:

1. APSNA's Guidelines on How to Complete the Online Abstract Form
    1. APSNA's Guidelines on How to Complete the Online Abstract Form Including Educational Design
2. Abstract Development
    1. Writing a Conference Abstract

    2. Writing Abstracts and Developing Posters for National Meetings
3. Creating Learning Objectives
    1. APSNA's Developing Learning Objectives Tool
    2. NAPNAP Guidelines for Continuing Education (refer to Appendix A – page 24)
    3. Creating and Writing Learning Objectives
    4. Writing Objectives Using Bloom's Taxonomy
4. APSNA's Abstract Evaluation Criteria
    1. APSNA Abstract Evaluation Rubric
5. Designing Scientific Posters
    1. Develop a Poster and Publish the Manuscript
       General Session from 2015 APSNA Annual Conference
    2. APSNA Poster Guidelines
    3. APSNA Sample Poster
    4. Creating Effective Poster Presentations
    5. Poster Template Samples
       Template #1
       Template #2

Appendix M

Acceptance Letter from American Pediatric Surgical Nurses Association

To: Lim-Sulit, Nanita
Attachments:
(4)Download all attachments
2016APSNA_SpeakerPacket_R~1.docx (55 KB)[Open as Web Page];
2016_APSNA_Poster Guidelin~1.pdf (438 KB)[Open as Web Page];
apsna_postersample_2016.pdf (21 KB)[Open as Web Page];
2016PosterContract_LimSulit.docx (58 KB)[Open as Web Page]
Inbox
Sunday, November 29, 2015 9:22 PM

Hello Nan!

Thank you for your poster abstract submission "Development of an Evidence-Based Practice (EBP) Guideline for Perineal Care to Prevent Diaper Dermatitis (DD)" for the 2016 APSNA 25th Annual Scientific Conference.

Your abstract has been accepted. I would like to formally invite you to present your content at the conference.

Please read the following e-mail carefully as it contains a lot of very important information.

1) Attached is the Speaker Agreement Form. Please complete and send back to me.

2) Attached is a Release of Information form. Please complete and send back to me.

3) Attached are the APSNA Poster Guidelines and a sample poster. Please refer to these documents as you work on your poster.
4) I need to confirm ALL of the secondary authors who will be listed on your poster. If there are more authors on your poster than were previously listed in the abstract submission, I will need to know. I will need a Bio/Conflict of Interest form from each of those authors. (I will be sending a second e-mail that contains your actual abstract submission. Please use that to double check your secondary authors as well as to use it as you build your poster.) This step is important for the educational credits that will be assigned to the posters.
5) The deadline for poster submission (to me) is April 1, 2016. This is an absolute deadline.

6) As you work on your poster, I wanted to make sure that you are aware that APSNA offers cash prizes for the three posters deemed “most influential” by the conference attendees. So, you will want to make your poster pertinent at well as visually appealing!
7) Poster set up at conference site: Thurs., May 12, 2016 - 12-5pm.
8) Poster author sessions: I will send you information at a later date for the sessions where you will be required to be at your poster.
9) Please check the APSNA website often. http://www.apsna.org/ Registration will open in January 2016. Poster authors are required to register for the conference. Other information about conference logistics will also be placed onto the website. The website will be updated frequently.

Please review the documents closely and return items listed above by December 11, 2015

Please let me know if you have any questions or concerns about the Program planning, requested items, or questions that might come up as you work on your poster.

I look forward to viewing your poster and seeing you in San Diego!
Thanks so much!

-Kathy
Kathy Leack MS RN
Program Chair (2014-2016), American Pediatric Surgical Nurses Association (APSNA)
Children's Surgery Center Program Manager
Pediatric General Surgery Clinical Nurse Specialist
Children's Hospital of Wisconsin
9000 W. Wisconsin Avenue - West 9
Milwaukee, WI 53201
414-266-6564
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Appendix N

Poster Presentation

DEVELOPMENT OF AN EVIDENCE-BASED PRACTICE GUIDELINE FOR PERINEAL CARE TO PREVENT DIAPER DERMATITIS AMONG NEONATAL & PEDIATRIC PATIENTS WEARING DIAPER

NANITA F. LIM-SULIT, RN, PNP, MA

BACKGROUND

- Diaper dermatitis (DD) is an acute inflammatory reaction of the skin in the perineal area and common preventable pediatric skin condition. Etiologic factors such as contact with urine and feces, mechanical friction associated with the medical conditions, diarrhea, and the use of antibiotic therapy predisposed the hospitalized neonates and pediatric patients wearing diapers to develop DD. Patients who wear diapers are at high risk to develop DD due to these etiologic factors.

PROBLEM STATEMENT

- The hospital administration expressed concern on the electronic patient records that showed 4/100 patient/days hospital-acquired incidences of DD among neonatal and pediatric patients wearing diapers compounded by absence of EBP guideline for perineal care specifically intended to prevent diaper dermatitis among this at-risk population.
- DD causes severe cases of perineal skin breakdown.
- DD increases susceptibility to infection, and lead to increase hospital costs and length of stay.

PROJECT GOAL

- To develop an EBP guideline for perineal care to prevent DD among neonates & pediatric patients wearing diapers.

PROJECT OUTCOMES

- An educational plan with a curriculum guide was developed to in- service the stakeholders.
- Consistency in the use of different diaper care products.
- The EBP guidelines prevented and reduced incidence of DD.
- Increased parental satisfaction survey score on quality care.

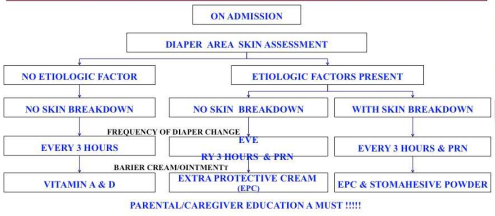
SIGNIFICANCE

- The use of the EBP guideline for perineal reduced the incidence of hospital-acquired DD to zero.
- Provided quality patient outcome, improve patient safety, and standardized practice in perineal care.
- EBP contributed to the epistemology of nursing practice throughout the knowledge from this project, shifting the traditional nursing based on intuition to scientific evidence-based practice change in perineal care to prevent DD.

ROSSWURM & LARRABEE'S CONCEPTUAL MODEL

1. Assess the need for change in practice.
2. Connect the problem, interventions, and outcomes.
3. Gather the best evidence.
4. Design a practice change.
5. Implement and evaluate the change in Practice.
6. Integrate and maintain the change in Practice.

EVIDENCE-BASED PRACTICE GUIDELINE FOR PERINEAL CARE



APPROACH

- A multi-disciplinary team was formed
- A comprehensive literature review was conducted and the findings of best practices were synthesized.
- An EBP guideline for perineal care to prevent DD among neonatal and pediatric patients wearing diapers was developed
- The team reviewed and revised the developed EBP guideline as needed then proceed to the approval process.
- Education through in-services was presented to pediatric stakeholders & nursing skin champions (PNSCs) identified by the team.
- The PNSCs shared information about the EBP guideline and their efforts were directed to reinforce , educate, and diffuse the knowledge they learned to the staff in their unit.

IMPLICATION FOR SOCIAL CHANGE

The positive social change impacted a change in nursing practice. The EBP guideline provided quality outcome of patient care, safety for the patients, and standardized practice in perineal care. The leadership opportunities in the QI project facilitated a team leader central role in maintaining the integrity of the team that worked in a highly collaborative and professional manner (AACN, 2006).

CONTACT

nanita.lim-sulit@mountsinai.org
Telephone : 1-646-734-4091