

Otterbein University

Digital Commons @ Otterbein

Capstone Projects

Student Research & Creative Work

4-2016

Building Expert Consensus on Including Indicators of Moisture Associated Skin Damage in the National Database of Nursing Quality Indicators (NDNQI)

Mary Caroleen Arnold Long
Otterbein University

Follow this and additional works at: https://digitalcommons.otterbein.edu/stu_cap



Part of the [Other Nursing Commons](#)

Recommended Citation

Arnold Long, Mary Caroleen, "Building Expert Consensus on Including Indicators of Moisture Associated Skin Damage in the National Database of Nursing Quality Indicators (NDNQI)" (2016). *Capstone Projects*. 3.

https://digitalcommons.otterbein.edu/stu_cap/3

This Paper is brought to you for free and open access by the Student Research & Creative Work at Digital Commons @ Otterbein. It has been accepted for inclusion in Capstone Projects by an authorized administrator of Digital Commons @ Otterbein. For more information, please contact digitalcommons07@otterbein.edu.

Running Head: MOISTURE-ASSOCIATED SKIN DAMAGE

Building Expert Consensus
on Including Indicators of Moisture-Associated Skin Damage
in The National Database of Nursing Quality Indicators

Submitted in Partial Fulfillment
of the Requirements for the Degree
Doctor of Nursing Practice

By

Mary Arnold Long, MSN
The Graduate School
Otterbein University
2016

Final Scholarly Project Committee:

Dr. John D. Chovan, PhD, DNP (Adviser)

Date

Dr. Karen Hughes, PhD

Date

Dr. Kevin R. Emmons, DrNP

Date

Table of Contents

Table of Contents	2
List of Illustrations	3
Executive Summary	4
Clinical Needs Analysis and Population Identification	5
Problem Statement	7
Purpose.....	7
Significance.....	7
Review of the Literature	9
Moisture-Associated Skin Damage (MASD)	9
Identifying and Classifying MASD	10
Theoretical Framework	11
Project Implementation and Measures.....	12
Methodology	12
Subjects	13
The Team	13
Stakeholders	15
Protection of Human Subjects	16
Informed Consent.....	16
Risk Management/Assessment	17
Instrumentation	17
Data Collection	18
Analysis and Outcome Evaluation.....	19
Questionnaire One	19
Questionnaire Two.....	20
Questionnaire Three.....	21
Conclusions and Recommendations	22
Conclusion	22
Recommendations.....	23
Strengths	23
Limitations	24
Summary	25
References	26
Appendices.....	34
Appendix A. Questionnaire 1	34
Appendix B. Questionnaire 2.....	43
Appendix C. Questionnaire 3.....	65
Appendix D. Expert Participants by Round.....	83
Appendix E. Incontinence-Associated Dermatitis Consensus Statements	85
Appendix F. Intertriginous Dermatitis Consensus Statements	87

List of Illustrations

Table 1. Demographics of Expert Participants	89
--	----

Executive Summary

Pressure ulcer (PU) data are collected by hospitals and reported quarterly as a nursing sensitive quality indicator via the National Database of Nursing Quality Indicators (NDNQI). Incontinence-associated dermatitis (IAD) and gluteal intertriginous dermatitis (ITD), both forms of moisture associated skin damage (MASD), are caused by moisture, not pressure or shear. These two forms of skin damage may be mistaken for PUs and may be reported in error as PUs. If the assessment of the skin damage is incorrect, the reporting is incorrect and the NDNQI database is incorrect. If the NDNQI database is incorrect then practice and policy regarding identification, treatment, patient outcomes, and associated health care costs are incorrect. The question becomes how to correct this. The purpose of this clinical project was to build expert consensus on whether or not IAD and/or ITD should be reported as nursing sensitive outcomes and whether or not they should be included in the NDNQI.

A modified Delphi Survey of nursing experts published on IAD and/or ITD was used to build consensus regarding whether IAD and/or ITD should be included as NDNQI quality outcomes. An electronic instrumentation, distribution, and data collection tool was sent via email to a purposeful sample of fifty nursing experts nominated by the editor of the *Journal of Wound Ostomy Continence Nursing* (JWOCN) and director of the Wound, Ostomy, and Continence Nurses Society Center for Clinical Investigation (CCI).

Following three rounds of questionnaires, consensus was reached that data should be collected on both IAD incidence and prevalence and ITD incidence and prevalence. The international experts agreed, however, that including them in the NDNQI is premature and that the data collection should begin with the aim of facility-specific quality improvement first.

**Building Expert Consensus
on Including Indicators of Moisture-Associated Skin Damage
in The National Database of Nursing Quality Indicators**

The skin is the human body's first line of defense against pathogens (Wysocki, 2012). The nurse's ability to identify the etiology of skin damage threatening the skin is vital so patients have the best opportunity to maintain intact skin. Florence Nightingale first described the role of the nurse in pressure ulcer prevention (Nightingale, 1992), but the nurse must also prevent skin disruption from moisture-associated skin damage, as well.

Clinical Needs Analysis and Population Identification

In the early 1990s, the American Nurses Association (ANA) funded pilot studies to evaluate links between registered nurse staffing and patient outcomes (Montalvo, 2007). One such outcome is pressure ulcers. Promotion of skin integrity is a fundamental nursing intervention and a patient outcome often associated with nursing quality (Beeckman, Woodward & Gray, 2011; Lockhart, 2002), hospital costs (Lyder & Ayello, 2009) and liability (Fife, et al., 2010; Voss, et al., 2005). In 1998, the American Nurses Association (ANA) developed a nationally-populated database for collecting nursing sensitive quality indicators (American Nurses Association, 2011), also known as nursing sensitive outcomes (NSO). This database, the National Database for Nursing Quality Indicators (NDNQI), included pressure ulcer (PU) data. PU incidence and prevalence data are reported quarterly and are used for policy and decision-making (Montalvo, 2007). NDNQI data are used by facilities striving for Magnet designation, and by hospitals as part of nursing recruitment and retention, to improve the work environment, and to meet state and regulatory requirements. Nursing leaders at participating facilities have used NDNQI data to advocate for more staff or for a different staff mix. Staff have used NDNQI

data to share best practices and to determine if performance improves following implementation of revised policies or new protocols (Montalvo, 2007). Decisions based on these data, however, rely on the integrity of the data in the database (O'Mathuna & Fineout-Overholt, 2015; Sylvia & Terhaar, 2014).

The data for PUs in the NDNQI, however, are corrupt. Not every record of a PU is actually that of a true PU (Mahoney M., Rozenboom, Doughty, & Smith, 2011). Impaired skin integrity in the adult gluteal region is frequently misclassified as a PU (Voegeli, 2011). Three types of damaged skin may present in the gluteal area. These are PUs, incontinence-associated dermatitis (IAD), and intertriginous dermatitis (ITD; Mahoney, Rozenboom, & Doughty, 2013). Pressure ulcers are caused by pressure alone or by pressure in combination with shear (National Pressure Ulcer Advisory Panel, 2014). IAD and ITD, conversely, are forms of moisture-associated skin damage (MASD; Gray, Black, & Baharestani, 2011). The mechanisms of damage, and therefore nursing interventions and practice policies, are different.

Experts have difficulty properly classifying impaired gluteal skin (Mahoney, et al., 2013; Mahoney, Rozenboom, Doughty, & Smith, 2011). If damaged skin is incorrectly identified as a PU, the patient is at risk for incorrect treatment and thus a negative outcome. For example, if the true underlying cause of the damaged skin is moisture, and the nurse implements an intervention targeted to reduce pressure, the moisture can continue to damage the patient's skin. The data guiding the development of evidence on which appropriate nursing policies, interventions, and outcomes are promulgated also will be corrupt. Data collected by certified wound experts have the greatest reliability when evaluating impaired skin integrity, recommending the appropriate plan of care, and determining what is added to the database (Hart, Berquist, Byron, & Dunton,

2006). Efforts in local hospitals to appropriately assess, recommend interventions, and track these data improve the quality of care.

In 2013, the wound, ostomy, and continence (WOC) nurses at Roper Hospital in Charleston, SC, began collecting IAD and ITD data. This database was created and kept separate from PU data. Although many Roper Hospital nurses referred acute care inpatients for consultation and treatment for stage II PUs in the gluteal area, the skin condition once assessed by the expert WOC nurse was actually either IAD or ITD. Treatment required moisture management for those skin conditions, not pressure management or pressure and shear management (Black, et al., 2011).

The Problem Statement

Appropriate nursing care for gluteal moisture-associated skin damage and its impact on patient outcomes and health care delivery cannot be established because the National Database of Nursing Quality Indicators (NDNQI) does not specifically collect these data.

Purpose

The purpose of this clinical project was to build expert consensus on whether or not IAD and ITD should be reported as nursing sensitive outcomes in the NDNQI.

Significance

With multiple acute care institutions reporting data to the NDNQI, PU prevalence and incidence data have improved as reported in the Agency for Health Care Policy & Research (AHCPR, now the Agency for Healthcare Research & Quality or AHRQ) Guidelines on Pressure Ulcer Prevention and Treatment in 1992 and 1994 (U.S. Department of Health and Human Services Public Health Service, 1992, 1994). Although the national data are suspect, the impact of breaches of gluteal skin integrity (PUs, IAD, and ITD) account for more than \$12 billion

dollars annually in the United States (National Pressure Ulcer Advisory Panel, 2014; Whitehead, et al., 2009; Wilson, Brown, Shin, Luc, & Subak, 2001; Xu, Menees, Zochowski, & Fenner, 2012). The cost of PU care alone is over \$11 billion (National Pressure Ulcer Advisory Panel, 2014). The average cost of treatment for a facility-acquired stage IV PU was reported as \$129,248 for one hospital stay whereas the average cost of treatment for a community-acquired stage IV PU for four hospitalizations was reported as \$124,327 (Brem, et al., 2010). Direct costs of care for institutionalized women experiencing urinary incontinence was \$3.8 billion in 1995 (Wilson, et al., 2001), with \$136.3 million of that cost attributed to skin conditions (Wagner & Hu, 1998). Costs for skin breakdown associated with fecal incontinence, with an estimated 8.3% prevalence in noninstitutionalized adults (Whitehead, et al., 2009), are more difficult to ascertain. Breaches in gluteal skin integrity related to urinary and fecal incontinence increase the risk for infection, bacteremia (Bissett, 2010), and death (Redelings, Lee, & Sorvillo, 2005). More recent data have not been identified.

Many of these breaches in skin integrity are avoidable (Black, et al., 2011; Doughty, et al., 2012; Edsberg, et al., 2014; and Beeckman, 2015), and if the underlying cause is appropriately identified, can be ameliorated before serious damage is done. Accurate identification of skin injury leads to appropriate evidence-based treatments to minimize harm by preventing progression of the injury. Ongoing development of evidence-based treatments, and policies to undergird them, requires accurate data reporting (O'Mathuna & Fineout-Overholt, 2015).

Review of the Literature

Moisture-Associated Skin Damage

The primary types of skin damage seen in the gluteal area in acute care facilities are pressure ulcers (PUs), and moisture-associated skin damage (MASD) (Mahoney, Rozenboom, & Doughty, 2013; McDonagh, 2008). MASD includes incontinence-associated dermatitis (IAD) and intertriginous dermatitis (ITD). MASD is “inflammation of the skin, occurring with or without erosion or secondary cutaneous infection” (Black, et al., 2011, p.359). Due to its insidious onset, MASD can frequently be missed until complicated symptoms emerge, such as inflammation, softening and breakdown of the skin (maceration), or loss of the epidermis (skin erosion).

IAD is a “form of irritant dermatitis that develops from chronic exposure to urine or stool” (Gray, et al., 2007, p. 46). Common locations for IAD are perineum, labia, groin, buttocks, perianal, and gluteal cleft areas (Gray, Black, & Baharestani, 2011). Depending on the setting, IAD prevalence is reported from 5.6% to 52% (Beeckman, Woodward, & Gray, 2011; Bliss, Zahrer, Savik, Smith, & Hedblom, 2007; Gray, et al., 2007; Gray, et al., 2012; Junkin & Selekof, 2007; Long, Reed, Dunning, & Ying, 2012). IAD incidence, also setting dependent, is reported from 3.4% to 36% (Gray, et al., 2007; Gray, et al., 2012; Long, Reed, Dunning, & Ying, 2012), with critical care settings having the highest incidence of fecal-associated IAD.

ITD is “an inflammatory dermatosis of opposing skin surfaces caused by moisture” (Black, et al., 2011, p. 365). Common locations where ITD lesions may occur include beneath the breasts, in the groin folds, beneath the pannus and the gluteal cleft (Mahoney, Rozenboom, Doughty, & Smith, 2011). “ITD is hypothesized to arise from skin-on-skin friction that initially leads to mild erythema and may progress to more intense inflammation with erosion, oozing,

exudation, maceration, and crusting” (Black, et al., 2011, p.365). Also called intertrigo, ITD prevalence has been reported to range from 6% in hospitalized patients to 17% in nursing home residents to 20% in home care clients (Mistiaen & van Halm-Walters, 2010). Reported incidence of infra-mammary ITD is 11.2% (McMahon, 1991) and skin breakdown is reported in obese patients (Brown, Wimpenny, & Maughan, 2004), although not reported as site-specific ITD.

Identifying & Classifying MASD

Identifying and classifying MASD is complex in part due to the similar appearances of IAD and ITD and also in part due to their co-contributory nature. For example, a linear skin excoriation in the gluteal cleft (which is ITD) is often mistaken for IAD or pressure ulceration (Mahoney, Rozenboom, & Doughty, 2013; Mahoney, Rozenboom, Doughty, & Smith, 2011). Also, IAD can contribute to ITD (Mahoney, Rozenboom, & Doughty, 2013). IAD and ITD can contribute to pressure ulceration (Mahoney, Rozenboom, & Doughty, 2013).

One of the difficulties in obtaining data specific to ITD and IAD has been the lack of unifying nomenclature. Reporting of ITD is limited because the ICD-9 code used for classification was a general code 695.89 “erythematous conditions” (2012 ICD-9-CM Diagnosis Code 695.89 , n.d.). With the arrival of ICD-10, there is now a specific code, L30.4 “erythema intertrigo” (2016 ICD-10-CM Diagnosis Code L30.4 , n.d.) for ITD. There is, however, no specific ICD-10 code for IAD. The generic code L30.9, “dermatitis, unspecified” (2016 ICD-10-CM Diagnosis Code L30.9, n.d.) is the appropriate ICD-10 code for IAD.

Incorrectly identifying and classifying MASD has micro- and macro-system implications. If the etiology of skin breakdown is not correctly assessed, appropriate nursing interventions cannot ensue and the quality of the patient experience is not optimal. Furthermore, if IAD or ITD is identified as pressure ulceration and reported this can negatively affect a hospital’s quality

outcomes which can result in less reimbursement (Burke, 2011). It can also create inaccurate statistics for the development of clinical guidelines and policies at the local, state, national, and international levels.

Theoretical Framework

Florence Nightingale's model of nursing (Nightingale, 1992) was the framework underpinning this project and was selected for two reasons: Nightingale is considered by many to be the mother of nursing statistics (Anderson, 2011; Dossey, 2000). She was the first to use statistical tools to measure the quality of patient care (Anderson, 2011) and to create change (Dossey, 2000). Nightingale's model, although not a theory, describes and delineates "general rules for nursing practice, thereby making her model both descriptive and practical" (Masters, 2011, p. 386). Nightingale's model includes thirteen canons. The three canons germane to this clinical project are: bed and bedding (keep the bed dry); personal cleanliness (keep the patient dry); observation of the sick (make and document observations) (Masters, 2011). These three canons are described by Nightingale's writings in *Notes on Nursing* (Nightingale, 1992):

1. Bed/bedding: It may be worthwhile to remark, that where there is any danger of bed-sores a blanket should never be placed under the patient. It retains damp and acts like a poultice (p. 47).
2. Personal cleanliness: The amount of relief and comfort experienced by the sick after the skin has been carefully washed and dried is one of the commonest observations made at a sick bed.... The nurse, therefore, must never put off attending to the personal cleanliness of her patient..." (p.53). In several forms of diarrhoea, dysentery, &c, where the skin is hard and harsh,

the relief offered by washing with a great deal of soft soap is incalculable (p. 53).

3. Observation of the sick: The most important practical lesson that can be given nurses is to teach them what to observe – how to observe... (p. 59).

With MASD (IAD and ITD) and PUs, observation and differential assessment are key to determining which skin condition the patient has in the gluteal area, so appropriate intervention can occur. Manipulation of the environment must happen for the best outcomes for the patient. If the environment is not manipulated, or manipulated incorrectly, further deterioration of the skin may ensue. This model is elegantly simple to apply to clinical practice as it describes fundamental nursing (Nightingale, 1992). The patients can achieve improved clinical outcomes if the canons are applied. Reporting IAD, ITD and PUs as separate indicators in a nursing quality database is consistent with these principles.

Finally, gathering and reporting data reflect the essence of Nightingale's legacy to nursing to make evidence-based decisions (Dossey, 2000). Nightingale used statistics to demonstrate outcomes throughout her career to advocate for necessary change (Dossey, 2000). This clinical project engaged nursing experts in MASD in an effort to reach consensus regarding addition of IAD and/or ITD as NSOs to the NDNQI database. Incorporating these conditions as discrete indicators may initiate improved classification of IAD, ITD and PU as unique conditions, promoting the integrity of the NDNQI PU database.

Project Implementation and Measures

Methodology

This clinical project used a modified Delphi technique (European Commission, 2006; Hsu & Sandford, 2007; State of Victoria, 2013) to build consensus between experts in IAD

and/or ITD. The Delphi technique is an iterative process of question and responses from experts used to obtain consensus (Hsu & Sandford, 2007). The anticipated outcome was consensus on including IAD and/or ITD as NSOs in the NDNQI database.

Subjects

A list of nursing experts in MASD was gleaned from the literature by identifying individuals who published in peer-reviewed English language nursing literature within the past ten years. Although NDNQI is a database limited to the United States of America, the pool of potential experts was not limited to the US. The list of experts was reviewed with the clinical editor of the *Journal of Wound, Ostomy and Continence Nursing* (JWOCN) and the chair of the WOCN Center for Clinical Investigation (CCI) for nomination of a final sample of fifty experts. Email contact information for these individuals was obtained from the Wound, Ostomy, Continence Nurses Society (WOCN), *JWOCN*, and online searches.

The Team

The team for this project has a broad scope (Wilson, Idzik, & Conrad, 2014) and encompasses expertise in nursing education and clinical nursing. Leading the team is Ms. Mary Arnold Long. Ms. Long, a clinical nurse specialist, has been certified in WOC nursing since 1994 and as an advanced practice nurse in adult health nursing since 1995. She is also a certified rehabilitation registered nurse. Ms. Long has practiced the full scope of WOC nursing in various settings and currently practices as a WOC clinical specialist at Roper Hospital in Charleston, SC.

The chair of the project committee is Dr. John Chovan. Dr. Chovan is an Assistant Professor of Nursing and Director of the Doctor of Nursing Practice Program at Otterbein University, teaching at the BSN, MSN, and doctoral levels. He holds the Doctor of Philosophy degree with cognate areas in research methods and instructional design and the Doctor of

Nursing Practice degree. He is an advanced practice registered nurse with national board certification as a nurse practitioner and clinical nurse specialist in psychiatric & mental health nursing, hospice and palliative nursing, and holistic nursing. He is multiply published in palliative care nursing, and his areas of interest include: “psychiatric & mental health nursing, palliative care, nursing models, gerontology, holistic nursing, health care systems, leadership, quantitative/qualitative research, thinking and learning, and technology” (Otterbein University, 2014).

Dr. Karen Hughes, committee member, is an Assistant Professor of Nursing and Director of the Clinical Nurse Leader Program at Otterbein University, teaching at the BSN and MSN levels. She has expertise in nursing education, having been a nurse educator for nine years, being nationally board certified as a clinical nurse leader (CNL) and certified nurse educator (CNE), and holds the Doctor of Philosophy degree in nursing education.

The community member of this project team also has an understanding of the clinical component of this scholarly project. Dr. Kevin Emmons is a Clinical Assistant Professor at Rutgers University School of Nursing-Camden. He holds degrees in nursing education, adult/gerontologic nurse practitioner, and a clinical research doctorate with a focus in palliative wound care. He has clinical experience across the adult health continuum of care and has baccalaureate and graduate teaching expertise. He is nationally board certified in wound care. Dr. Emmons’ clinical expertise includes “wound care, palliative wound care, advanced wound therapies, pressure ulcers, nonhealing wounds, ultrasound guided PICC line/midline placement” (Rutgers School of Nursing – Camden, 2014).

Stakeholders

According to Moran (2014), “key stakeholders are those individuals or groups who touch the project in some way or have an interest in the project outcome” (p.121). For this scholarly project involving MASD, Roper Hospital is an important stakeholder. Three wound, ostomy and continence (WOC) registered nurses, including the project leader, began collecting IAD and ITD incidence and prevalence data at Roper Hospital in 2013. The team created separate databases for the IAD/ITD data and PU data that were collected concurrently. The team also collects and reports NDNQI PU data quarterly. In a recent report to the Product Value Analysis Team (VAT) at Roper, chaired by the Director of Nursing (the team leader’s direct reporting line manager), tracking IAD/ITD data that led to a practice change (from using reusable incontinence underpads to disposable underpads) resulted in a 22% decrease in facility-acquired IAD and gluteal ITD. Tracking IAD and ITD has garnered the administration’s attention at this hospital. Taking this finding to the national level is a next appropriate step.

The WOCN and, by extension, the *JWOCN* and the Center for Clinical Investigation (CCI), are stakeholders in this clinical project. In discussions with individuals at WOCN board meetings, national conference meetings, and personal communications to float discussion regarding the need for this project, support was copious. For example, as a result of these discussions, Dr. Mikel Gray, clinical editor of *JWOCN* (*JWOCNOnline*, 2015) and a clinical expert on IAD (University of Virginia School of Nursing, 2013), agreed to assist with nominating names to participate in the consensus building project. He also expressed interest in publishing the outcome of the clinical project.

Other facilities collecting NDNQI data are also stakeholders. These institutions rely on the data in the NDNQI database to be a valid representation of the current state of nursing quality

indicators. Because IAD/ITD data are missing, they cannot make practice changes to impact MASD care and outcomes, or PU care and outcomes. Press Ganey Associates, Inc. (2015), as owners of the NDNQI database (Vaidya, 2014), is also a stakeholder. Known for measuring the patient experience since 1985, Press Ganey acquired the NDNQI database from the American Nurses Association in 2014 (Vaidya, 2014). The quality outcome measures the database claims to measure, however, are only as sound as the data entered and manipulated from the resulting database.

With the time constraints for this project, however, not all stakeholders could be engaged with this project. Only those stakeholders directly influencing the initiation and completion of the project, therefore were engaged during this project. These stakeholders were Roper Hospital and the WOCN.

Protection of Human Subjects

The purpose of Institutional Review Board (IRB) review is to assure human subjects are not exposed to more than minimally acceptable levels of risk. All scholarly projects require IRB review (Burson & Moran, 2014). Because this project incorporated a questionnaire (Appendix A) and did not directly manipulate the subjects, the response of the Otterbein IRB (IRB and OUACUC Information, 2014) was an expedited review and approval.

Informed Consent

Informed consent from the subjects was assumed by their participation. This scholarly project incorporated a purposive sampling technique (Terry, 2012). The instruments were completed via Qualtrics, LLC, an electronic questionnaire distribution tool. The recruitment and introduction email messages stated that completion of each questionnaire would indicate consent to participate in the study. Participants were instructed they were able to withdraw their consent

at any time by not answering a questionnaire. Neither written nor verbal informed consent was requested or obtained.

Risk Assessment and Management

The risks to subjects in this project, as assessed in discussion with thought leaders Joyce Pittman, PhD, Mikel Gray, PhD, and Janice Beitz, PhD, during the WOCN National Conference in San Antonio (personal conversations June 5, 2015, and June 6, 2015), were low. Because the Delphi technique aims to develop consensus among experts, the credibility of the selected experts is revealed to boost project representativeness. The data are reported as the final consensus and individual opinions are not linked with names or otherwise attributable to individual participants. Lists of expert participants are identified by questionnaire round (Appendix D) to support the readers' decisions on credibility of the project findings.

Instrumentation

The first questionnaire (Appendix A) was developed with demographic items and content items in both closed-ended and open-ended formats, appropriate for a Delphi study (European Commission, 2006; State of Victoria, 2013). The purpose of many of the closed-end questions was to determine demographics or the participant's thoughts about IAD and ITD classification. For purposes of this and subsequent questionnaires, consensus was defined as agreement by 80% or more of the participants to a specific question. 80% consensus is the level historically chosen for previous consensus projects initiated by the WOCN (Gray, et al., 2007; Mahoney, Rozenboom, & Doughty, 2013) The project leader and many participants were therefore familiar with this level of consensus as previous participants in WOCN consensus projects. The purpose of many of the open-ended questions was to discover why the participants thought what they thought. Face validity was determined by the project team and content validity (Terry, 2012) was

determined by the community member wound expert on the project team. The initial questionnaire was developed and distributed via Qualtrics, LLC (2015), for ease of distribution, response, return, and analysis. The participants were requested to respond within two weeks of the distribution.

Because a Delphi study has more than one round (European Commission, 2006; Hsu & Sandford, 2007; State of Victoria, 2013), subsequent instruments were derived from the participants' responses to the previous instrument. The second questionnaire (Appendix B) of the study asked for clarification and elaboration of themes based on participant responses from the first round of the survey. Because the second questionnaire explored those themes and was considerably longer than the first questionnaire (due to now incorporating issues that arose in the analysis of the first questionnaire), the participants were given three weeks to respond, rather than two weeks. Additional clarification to select statements in attempt to reach consensus was provided on the third questionnaire (Appendix C) and the participants were asked to respond within two weeks.

There was no incentive provided to complete the questionnaires other than to learn the results after each round.

Data Collection

Following IRB approval, the first-round questionnaire was sent to the identified expert pool on September 13, 2016. Participants were asked to complete and return the first questionnaire within two weeks. A weekly reminder email was sent to encourage completion. One participant experienced technical difficulties completing the questionnaire and requested the questionnaire be re-sent. Another participant missed the deadline and emailed the investigator,

requesting the questionnaire be re-sent. Fifty participants received the first questionnaire, nineteen participants began the questionnaire, and seventeen completed it.

The second questionnaire (Appendix B) was developed and sent to the seventeen participants who completed the first questionnaire. They were given three weeks to respond and also received a weekly email reminder. This questionnaire was much more extensive because it explored themes of consensus and non-consensus that were revealed upon analysis of the first questionnaire data. Fourteen participants began the questionnaire and thirteen participants returned completed or partially-completed questionnaires.

The third questionnaire (Appendix C) was developed based on responses to the second questionnaire. Second questionnaire results were revealed to participants in the third round. The questionnaire link was emailed to fourteen participants. Participants were given two weeks to respond to the questionnaire and were sent two email reminders. Eleven participants returned completed questionnaires. The findings from the three questionnaires were used to answer the initial project question as well as to attempt to rank order consensus recommendations to add details uncovered during the Delphi process from the previous questionnaires.

Analysis and Outcome Evaluation

Data analysis in the Delphi technique begins with receipt of the first questionnaire data and was ongoing with each round (European Commission, 2006; Hsu & Sandford, 2007; State of Victoria, 2013). The response rate to the first questionnaire was 34%. Quantitative results were derived from numerical variables such as demographics and numbers of subjects who clinically treat patients with PUs, IAD or ITD (Table 1). Frequencies and ranges for the quantitative data were calculated. The text of participants' opinions on the various questions comprised the

qualitative data. Qualitative data were analyzed question by question by the project leader using content analysis (Powers, 2015).

Questionnaire One

On the first questionnaire, the only question on which consensus was achieved was “Do you think IAD incidence/prevalence should be collected as quality data?” Consensus was 89%. There was not consensus that these data should be reported to NDNQI. The question whether ITD incidence/prevalence should be collected as quality data was inadvertently omitted from this first questionnaire, but there was no consensus that ITD quality data should be reported to NDNQI.

Of the experts responding, only 35% currently collect IAD prevalence or incidence data. Of those, 33% collect their data quarterly, 17% collect their data monthly and 17% collect their data concurrently. Only one participant (6%) currently collects ITD prevalence or incidence data and it is collected monthly.

Questionnaire Two

The second questionnaire was returned by fourteen participants. This is an attrition rate of 18%. The second questionnaire explored the themes presented by the subjects’ comments in response to why they responded the way they did to the questions on the first questionnaire. Consensus was reached on many statements reflecting the themes presented by participant responses to open-ended questions during questionnaire one. Consensus was still not achieved on whether IAD incidence or prevalence should be reported as NDNQI NSOs.

Although the original intent of the project leader was to rank order the statements to demonstrate strongest consensus, this was not possible due to the small sample size completing

the second questionnaire. The questions for which consensus was achieved are reported separately by IAD and ITD (Appendices E & F).

Statements reaching 100% consensus on this questionnaire in this round included:

- “The presence of IAD contributes to PU risk.”
- “IAD can be misidentified as PU when assessed.”
- “There would be benefits to knowing the prevalence of IAD within an institution and nationally.”
- “Collecting data on IAD incidence/prevalence may provide the basis for future research.”
- “There may be a knowledge deficit associated with how to collect IAD incidence/prevalence data in some institutions.”
- “If you collect IAD incidence/prevalence data, you should then do something with it.”
- “Reporting IAD incidence/prevalence data provides additional epidemiological data.”
- “Reporting IAD incidence/prevalence data may aid in developing standards of care for risk assessment, prevention and treatment.”
- “For IAD incidence/prevalence data to be reported, a standardized tool needs to be adopted.”
- “Collecting ITD incidence/prevalence data would help enhance awareness and knowledge of ITD.”

Third Questionnaire

The third questionnaire was returned by eleven participants. This was a 35% attrition rate from the first Delphi round and a 17% attrition rate from the second round. For a Delphi survey, a smaller sample size is acceptable for consensus building (Hsu & Sandford, 2007). After

exploring and sharing why the experts thought the way they thought in the second questionnaire, the focus of the third questionnaire was to reframe specific statements that may have been keeping them from reaching consensus, based on their qualitative responses.

The participants came to consensus (89%) during the first questionnaire that IAD incidence/prevalence should be collected as quality data. By the third questionnaire, the participants were in 100% agreement. What they could not come to consensus on was that IAD incidence/prevalence should be collected and reported to the NDNQI.

Although the participants in the third questionnaire came to consensus that:

- “Collecting and reporting IAD prevalence to NDNQI would allow benchmarking and outcome measurement” and
- “Reporting IAD incidence and/or prevalence as a nursing sensitive outcome via NDNQI could provide data for future research”

they could not reach consensus that either IAD prevalence nor IAD incidence should be reported to the NDNQI. The participants did reach consensus that both IAD prevalence data and incidence data and ITD prevalence data and incidence data should be collected as facility-specific quality data.

Conclusion and Recommendations

Conclusions

This project demonstrated the application of a modified Delphi technique to build consensus on an important nursing issue. Based on the consensus of an international panel of experts, IAD and ITD data should be collected at the individual acute care facility level, but not at the national level, yet. This would enable the profession to establish baseline data before pursuing a nation-wide effort to include them as NDNQI indicators. Because only 35% of the

experts currently report collecting IAD data and only one (6%) reports collecting ITD data, identifying a mechanism for collection of this data will need to be determined within each facility. The inclusion of photographs in this project reinforced assessment of skin breakdown in the gluteal region is challenging, even for expert clinicians.

Recommendations

Findings of this project should be shared with nursing leadership, quality leaders, and leaders in skin/wound care nationally. Nursing leadership will be responsible for supporting the administrative infrastructure necessary for data collection within each facility. Quality leaders will be responsible to integrate this information about MASD as a quality outcome with discussions about PUs as a NSO. Skin/wound care leaders must reinforce the current unreliability of PU data and educate their colleagues regarding the importance of assessment for MASD and initiating data collection within their settings to support effective clinical care.

The database used at Roper Hospital at this time could be used as a model for other institutions to collect these important data points in support of a future national effort.

Strengths

The primary strength of this project is that it accomplished its objective. Consensus was reached using a Delphi technique. The project was completed with only a 35% attrition rate and demonstrated the translation of consensus-building methodology within the context of a critical patient safety and care issue.

Another strength of this project is the passion the project leader has for the topic and that many of the participants (and nonparticipants) have for the topic. The qualitative comments reveal the importance of specified knowledge about ITD and IAT, as well as PUs, so that reporting is accurate.

This project has garnered a great deal of international support, even though some of the initial identified experts did not participate in consensus building. Since the project began, the project leader has been contacted by experts who received the invitation to respond to the first questionnaire, but missed the deadline, and who have apologized. They are encouraging the project leader to continue the work and to report the outcome of the project.

Limitations

The primary limitation to this project was time. The project needed to be completed within the time frame established for requirements for graduation from the Doctor of Nursing Practice at Otterbein University. Although the project stayed within the timeline, if the project had the luxury of a longer timeline, differences in questionnaire development, testing and distribution may have improved the response rate.

A second limitation to this project was the project leader's rudimentary knowledge of the Qualtrics tool. This was her first exposure to the program and database. Although the Qualtrics tool did provide ease of questionnaire distribution and return, there was a significant learning curve for the project leader. The community member provided hours of assistance for the project leader for this endeavor.

A third limitation is the lack of pilot testing of the questionnaire instruments. Largely due to time limitations, project committee members reviewed the instruments for content and face validity. The reliability and true validity of the instruments are, however, unknown. This is of less importance in a Delphi technique because the specific instruments are unique to every project. Thus reproducibility is not an aim.

Summary

The imprimatur to collect IAT and IDT data at the institutional level with an eye toward developing a national presence was a significant achievement. Based on criteria described by Brown and Crabtree (2013), this was a successful DNP project. A clinical issue was identified. The need for practice change was identified. A national quality issue with multiple policy implications was identified. International experts were engaged to obtain consensus. The findings of the project also have multiple implications requiring future work by the team leader.

References

- 2016 ICD-10-CM Diagnosis Code L30.4. (n.d.). Retrieved March 13, 2016, from ICD10Data.Com: <http://www.icd10data.com/ICD10CM/Codes/L00-L99/L20-L30/L30-/L30.4>.
- 2012 ICD-9-CM Diagnosis Code 695.89. (n.d.). Retrieved March 13, 2016, from ICD9Data.com: <http://www.icd9data.com/2012/Volume1/680-709/690-698/695/695.89.htm>.
- 2016 ICD-10-CM Diagnosis Code L30.9. (n.d.). Retrieved March 13, 2016, from ICD10Data.com: <http://www.icd10data.com/ICD10CM/Codes/L00-L99/L20-L30/L30-/L30.9>.
- American Nurses Association. (2011, January 3). *National Database of Nursing Quality Indicators (NDNQI)*. Retrieved from June 24, 2015 from NDNQI: <http://nursingandndnqi.weebly.com/what-is-ndnqi.html>.
- Anderson, P. (2011). Theoretical approaches for quality improvement. In J. B. Butts (Ed.), *Philosophies and Theories for Advanced Nursing Practice* (pp. 363-380). Sudbury, MA: Jones & Bartlett Learning.
- Beeckman, D. E. (2015). *Proceedings of the Global IAD Expert Panel. Incontinence-associated dermatitis: moving prevention forward*. Retrieved June 28, 2015 from Wound International: http://www.woundsinternational.com/media/other-resources/_/1154/files/iad_web.pdf.
- Beeckman, D., Woodward, S., & Gray, M. (2011). Incontinence-associated dermatitis: step-by-step prevention and treatment. *British Journal of Community Nursing*, 16(8), 382-389.

- Bissett, L. (2010). Skin care as a tool in the prevention of health-care associated infection. *British Journal of Community Nursing*, 15(5), 226-231.
- Black, J., Gray, M., Bliss, D. Z., Kennedy-Evans, K. L., Logan, S., Baharestani, M., . . . Ratliff, C. R. (2011). MASD Part 2. *Journal of Wound, Ostomy and Continence Nursing*, 38(4), 359-370.
- Bliss, D., Zahrer, C., Savik, K., Smith, G., & Hedblom, E. (2007). An economic evaluation of four skin damage prevention regimens in nursing home residents with incontinence: economics of skin damage prevention. *Journal of Wound, Ostomy and Continence Nursing*, 34(2), 143-152.
- Brem, H., Maggi, J., Nierman, D., Rolnitzky, L., Bell, D., Rennert, R., . . . Vladeck, B. (2010). High cost of stage IV pressure ulcers. *The American Journal of Surgery*, 200(4), 473- 477.
- Brown, J., Wimpenny, P., & Maughn, H., (2004). Skin problems in people with obesity. *Nursing Standard*, 18(35), 38-42.
- Brown, M., & Crabtree, K. (2013). The development of practice scholarship in DNP programs: a paradigm shift. *Journal of Professional Nursing*, 29(6), 330-337.
- Burke, T. (2011). Accountable Care Organizations. *Public Health Reports*, 126(6), 875-878.
- Burson, R. &. (2014). Creating and developing the project plan. In K. B. Moran (Ed.), *The Doctor of Nursing Practice Scholarly Project* (pp. 181-213). Burlington, MA.
- Dossey, B. M. (2000). *Florence Nightingale: Mystic, Visionary, Healer*. Sudbury, MA: Springhouse.

Doughty, D., Junkin, J., Kurz, P., Selekof, J., Gray, M., Fader, M., . . . Logan, S. (2012).

Incontinence-associated dermatitis: consensus statements, evidence-based guidelines for prevention and treatment, and current challenges. *Journal of Wound, Ostomy and Continence Nursing*, 39(3), 303-315.

Edsberg, L. E., Langemo, D., Baharestani, M. M., Posthauer, M. E., Goldberg, M., & E.

(2014). Unavoidable pressure injury: state of the science and consensus outcomes. *Journal of Wound, Ostomy and Continence Nursing*, 41(4), 313-334.

European Commission. (2006). *Delphi Survey*. Retrieved June 25, 2015, from JRC:

http://forlearn.jrc.ec.europa.eu/guide/2_scoping/meth_delphi.htm.

Fife, C. E., Yankowsky, K. W., Ayello, E., Capitulo, K.L., Fowler, E., Krasner, D.

L...Sibbald, R. G. (2010). Legal issues in the care of pressure ulcer patients: key concepts for healthcare providers – a consensus paper from the International Expert Wound Care Advisory Panel®. *Advances in Skin and Wound Care*, 23(11), 493-507.

Gray, M., Beeckman, D., Bliss, D. Z., Fader, M., Logan, S., Junkin, J., . . . Kurz, P. (2012).

Incontinence-associated dermatitis: a comprehensive review and update. *Journal of Wound, Ostomy and Continence Nursing*, 39(1), 61-74.

Gray, M., Black, J., & Baharestani, M. E. (2011). Moisture associated skin damage: overview and pathophysiology. *Journal of Wound, Ostomy and Continence Nursing*, 39(1), 1-14.

Gray, M., Bliss, D. Z., Doughty, D. B., Ermer-Seltun, J., Kennedy-Evans, K. L., & Palmer,

M. L. (2007). Incontinence-associated dermatitis: a consensus. *Journal of Wound, Ostomy and Continence Nursing*, 34(1), 45-54.

- Hart, S., Berquist, S., Byron, G., & Dunton, N. (2006). Reliability testing of the National Database of Nursing Quality Indicators pressure ulcer indicator. *Journal of Nursing Care Quality, 21*(3), 256-265.
- Hsu, C.-C., & Sandford, B. A. (2007). The Delphi technique: making sense of consensus. *Practical Assessment, Research & Evaluation, 12*(10). Retrieved July 4, 2015, from <http://pareonline.net/getvn.asp?v=12&n=10>.
- IRB and OUACUC Information. (2014). Retrieved July 4, 2015, from <http://www.otterbein.edu/intranet/academic-affairs/irb-and-ouacuc-information.aspx>.
- Junkin, J., & Selekof, J. L. (2007). Prevalence of incontinence and associated skin injury in the acute care inpatient. *Journal of Wound, Ostomy and Continence Nursing, 34*(3), 260-269.
- JWOCNOnline. (n.d.). Retrieved June 28, 2015, from Journals Lippincott Williams and Wilkins. <http://journals.lww.com/jwocnonline/pages/default.aspx>.
- Lockhart, D. G. (2002). The legal implications of pressure ulcers in acute care. *Critical Care Nursing Quarterly, 25*(1), 63-68.
- Long, M. A., Reed, L., Dunning, K., & Ying, J. (2012). Incontinence-associated dermatitis in a long-term acute care facility. *Journal of Wound, Ostomy and Continence Nursing, 39*(3), 318-327.
- Lyder, C., & Ayello, E. (2009). Annual checklist: the CMS pressure ulcer present-on-admission indicator. *Advances in Skin and Wound Care, 22*(10), 476-484.
- Mahoney, M., Rozenboom, B., & Doughty, D. (2013). Challenges in classification of gluteal cleft and buttocks wounds: consensus session reports. *Journal of Wound, Ostomy and Continence Nursing, 40*(3), 239-245.

- Mahoney, M., Rozenboom, B., Doughty, D., & Smith, H. (2011). Issues related to accurate classification of buttocks wounds. *Journal of Wound, Ostomy and Continence Nursing*, 38(6), 635-642.
- Masters, K. (2011). Models and Theories Focused on Nursing Goals and Functions. In J. B. Rich, *Philosophies and Theories for Advanced Nursing Practice* (pp. 383 - 412). Sudbury, MA: Jones & Bartlett Learning.
- McDonagh, D. (2008). Moisture lesion or pressure ulcer? A review of the literature. *Journal of Wound Care*, 17(11), 461-466.
- McMahon, R. (1991). The prevalence of skin problems beneath the skin of in-patients. *Nursing Times*, 87(39), 48-51.
- Mistiaen, P., & van Halm-Walters, M. (2010). Prevention and treatment of intertrigo in large skin folds of adults: a systematic review. *BioMed Central Nursing*, 9(12), 1-9.
- Montalvo, I. (2007). The national database of nursing quality indicators (NDNQI). *The Online Journal of Issues in Nursing*, 12(3 Manuscript 2), <http://www.nursingworld.org/mainmenucategories/anamarketplace/anaperiodicals/ojin/tableofcontents/volume122007/no3sept07/nursingqualityindicators.aspx>. Retrieved June 27, 2015.
- National Pressure Ulcer Advisory Panel. (2014, October 15). *2014 World Pressure Ulcer Prevention Day*. <http://www.npuap.org/2014-world-wide-pressure-ulcer-prevention-day-press-release/>. Retrieved January 15, 2016.
- Nightingale, F. (1992). *Notes on Nursing: What it Is and What it is Not*. Philadelphia, PA: J. B. Lippincott Company.

- O'Mathuna, D., & Fineout-Overholt, E. (2015). Critically appraising quantitative evidence for clinical decision making. In B. M. Melnyck, & E. Fineout-Overholt (Eds.), *Evidence-based Practice in Nursing and Healthcare* (pp. 87-138). Philadelphia: Wolters Kluwer.
- Otterbein University. (2014). *Nursing Faculty*. Retrieved June 26, 2015, from Otterbein University Graduate School. <http://www.otterbein.edu/public/TheGraduateSchool/GraduateNursingPrograms/Faculty.aspx>.
- Powers, B. A. (2015). Critically appraising qualitative evidence for clinical decision making. In B. Melnyk, & E. Fineout-Overholt (Eds.), *Evidence-Based Practice in Nursing and Healthcare: A Guide to Best Practice* (pp. 139-168). Philadelphia: Wolters Kluwer.
- Press Ganey Associates, Inc. (2015). *About Us: Our History*. <http://www.pressganey.com/about/history-mission>. Retrieved July 4, 2015.
- Qualtrics, LLC (2015). <http://www.qualtrics.com/>. Retrieved November 27, 2015.
- Redelings, M., Lee, N. E., & Sorvillo, F. (2005). Pressure ulcers: more lethal than we thought? *Advances in Skin and Wound Care*, 18(7), 367-372.
- Rutgers School of Nursing - Camden. (2014). *Faculty and Staff Directory*. Retrieved June 28, 2015, from Rutgers School of Nursing - Camden. <http://nursing.camden.rutgers.edu/profile/kremmons>.
- State of Victoria. (2013, April 26). *Effective engagement toolkit: Delphi study*. <http://www.dse.vic.gov.au/effective-engagement/toolkit/tool-delphi-study>. Retrieved June 24, 2015.

- Sylvia, M. L., & Terhaar, M. F. (2014). *Clinical Analytics and Data Management for the DNP*. New York, NY: Springer Publishing Company.
- Terry, A. J. (2012). *Clinical Research for the Doctor of Nursing Practice*. Sudbury, MA: Jones & Bartlett Learning.
- U.S. Department of Health and Human Services. (1992). *Pressure Ulcers in Adults: Prediction and Prevention Clinical Practice Guideline Number 3*. Rockville, MD: U.S. Department of Health and Human Services Agency for Health Care Policy and Research.
- U.S. Department of Health and Human Services. (1994). *Treatment of Pressure Ulcers Clinical Practice Guideline Number 15*. Rockville, MD: U. S. Department of Health and Human Services Public Health Services Agency for Health Care Policy and Research.
- University of Virginia School of Nursing. (2013). *Faculty and Staff*. Retrieved June 28, 2015, from University of Virginia School of Nursing. <https://www.nursing.virginia.edu/people/mg5k/>.
- Vaidya, A. (2014, June 11). *Press Ganey Acquires National Database of Nursing Quality Indicators*. Retrieved June 28, 2015, from <http://www.beckershospitalreview.com/>
- Voegeli, D. (2011). Pressure ulcer or moisture lesion - what's the difference? *Nursing and Residential Care*, 13(5), 222-227.
- Voss, A. C., Bender, S. A., Ferguson, M. L., Sauer, A. C., Bennett, R. G., & Hahn, P. W. (2005). Long-term care liability for pressure ulcers. *Journal of the American Geriatric Society*, 53(9), 1587-1592.
- Wagner, T., & Hu, T. W. (1998). Economic costs of urinary incontinence in 1995. *Urology*, 51(3), 355-361.

- Whitehead, W., Borrud, L., Goode, B. S., Meikle, S., Mueller, E. R., Tuteja, A., . . . Pelvic Floor Disorders Network. (2009). Fecal incontinence in US adults: epidemiology and risk factors. *Gastroenterology*, 137(2), 152-517.
- Wilson, L., Brown, J. S., Shin, G. P., Luc, K. O., & Subak, L. L. (2001). Annual direct cost of urinary incontinence. *Obstetrics and Gynecology*, 98(3), 398-406.
- Wilson, M. I., Idzik, S. R., & Conrad, D. (2014). Committee dynamics. In K. B. Moran (Ed.), *The Doctor of Nursing Practice Scholarly Project* (pp. 163-180). Burlington, MA: Jones and Bartlett Learning.
- Wysocki, A. B. (2012). Anatomy and physiology of skin and soft tissue. In R. A. Bryant (Ed.), *Acute and Chronic Wounds: Current Management Concepts* (pp. 40-62). St. Louis, MO: Elsevier.
- Xu, X., Menees, S. B., Zochowski, M. K., & Fenner, D. E. (2012). Economic cost of fecal incontinence. *Diseases of Colon and Rectum*, 55(5), 586-598.

Appendix A

Questionnaire One

Building Expert Consensus on Including Indicators of Moisture-Associated Skin Damage in the National Database of Nursing Quality Indicators (NDNQI)

Introduction: Thank you for choosing to participate. This is the first of an anticipated three surveys. The purpose of the surveys is to build consensus on including indicators of moisture-associated skin damage in the National Database of Nursing Quality Indicators.

This survey should take about 15 minutes to complete. Please answer all questions to the best of your knowledge. There are no right or wrong answers. Standard definitions have been provided below for your information.

Completion of the survey is voluntary. Completion of the survey will indicate your consent. If you have a question or concern regarding the study or questionnaire, contact the investigator at mary.arnoldlong@otterbein.edu.

Although some terms can be used differently in different settings, the following definitions are used for the following terms in this instrument:

Pressure Ulcer: "localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear. A number of contributing or confounding factors are also associated with pressure ulcers; the significance of these factors is yet to be elucidated." (National Pressure Ulcer Advisory Panel, 2014).

Moisture Associated Dermatitis (MASD): encompasses a range of conditions, including IAD and ITD. "MASD presents as inflammation of the skin, occurring with or without erosion or secondary cutaneous infection. It is often undetected until significant inflammation, maceration, or skin erosion occurs." (Black, et al., 2011, p. 359).

Incontinence Associated Dermatitis (IAD): "is a form of irritant dermatitis that develops from chronic exposure to urine or stool." (Gray, et al., 2007, p. 46).

Intertriginous Dermatitis (ITD): "is an inflammatory dermatosis of opposing skin surfaces caused by moisture." (Black, et al., 2011, p. 365) (Also known as intertrigo).

In the United States, acute care hospital pressure ulcer (PU) incidence and prevalence data is collected in a database called the National Database of Nursing Quality Indicators (NDNQI). This database provides information for benchmarking as well as for policy determination. (Press Ganey, 2015).

However, moisture associated dermatitis conditions are not collected in NDNQI. Many nurses, including certified wound nurses, cannot differentiate moisture associated conditions from stage II pressure ulcers (M. Mahoney, et al, 2011); (Mahoney, Rozenboom & Dougherty, 2013). Can this lead to errors in NDNQI pressure ulcer data?

Are you a nurse?

Yes

No

If NO: Thank you for your participation. This questionnaire is intended for nurses only. → EXIT

If YES: How long have you been a specialist (such as a continence, research, WOC, etc.) nurse?

less than 5 years

5-9 years

10-14 years

15-19 years

20-24 years

25-29 years

30-34 years

35-39 years

40 or more years

How long have you been practicing nursing?

Less than 10 years

10-19 years

20-29 years

30-39 years

40-49 years

50 or more years

What is your primary area of specialty?

Continence Care Urinary

Continence Care Fecal

Continence Care Urinary and Fecal

Wound Care

Ostomy Care

Wound and Ostomy Care

Wound and Continence Care

Wound, Ostomy, and Continence Care

Research

Education

Not applicable

Other (please note)

What is your secondary area of specialty?

Continence Care Urinary

Continence Care Fecal

Continence Care Urinary and Fecal

Wound Care

Ostomy Care

Wound and Ostomy Care Wound and Continence Care

Wound, Ostomy and Continence Care Research

Education
Not applicable
Other (please note)

In what country do you practice?

United States
United Arab Emirates United Kingdom Australia
Belgium
Brazil
Chile
China
France
Germany
Japan
Taiwan
Turkey
Other (please comment)

What is your current primary practice setting?

Hospital (acute care)
LTAC (long term acute care hospital) Hospital clinic
Freestanding clinic Home care
Extended care, Long Term Care, Nursing Home, Retirement Home, Skilled Nursing Office
Research Lab School of Nursing
Other (Please note)

What is your current secondary practice setting?

Hospital (acute care)
LTAC (long term acute care hospital)
Hospital clinic Freestanding clinic Home care
Extended care, Long term care, Nursing Home, Retirement Home, Skilled Nursing Office
Research Lab School of Nursing n/a
Other (Please note)

Do you see patients with pressure ulcers (PUs)?

Yes
No

If NO: skip to next question.

If YES: How many hours per week do you typically see patients with pressure ulcers (PUs)?

less than 5 hours
5 - 14 hours
15-24 hours
25-40 hours

Do you see patients with incontinence associated dermatitis (IAD)?

Yes

No

If NO: skip to next question.

If YES: How many hours per week do you typically see patients with incontinence associated dermatitis (IAD)?

Less than 5 hours

5 - 14 hours

15 - 24 hours

25 - 40 hours

If NO: skip to next question.

If YES: Do you see patients with intertriginous dermatitis (ITD) or intertrigo?

Yes

No

If NO: skip to next question.

If YES: How many hours per week do you typically see patients with intertriginous dermatitis (ITD) or intertrigo?

Less than 5 hours

5 - 14 hours

15 - 24 hours

25 - 40 hours

Do you think IAD (incontinence associated dermatitis) incidence/prevalence should be collected as quality data?

Yes

No

Why or why not?

Do you think IAD (incontinence associated dermatitis) incidence should be reported as a NATIONAL nursing sensitive outcome?

Yes

No

Why or why not?

Do you think IAD (incontinence associated dermatitis) prevalence should be reported as a NATIONAL nursing sensitive outcome?

Yes

No

Why or why not?

Do you think ITD (intertriginous dermatitis) or intertrigo incidence should be reported as a NATIONAL nursing sensitive outcome?

Yes

No

Why or why not?

Do you think ITD (intertriginous dermatitis) or intertrigo prevalence should be reported as a NATIONAL nursing sensitive outcome?

Yes

No

Why or why not?

Do you collect IAD incidence/prevalence data currently?

Yes

No

If NO: skip to next question.

If YES: How often?

Concurrently

Weekly

Monthly

Quarterly

Other (please note)

Why not?

I do not work in an inpatient facility

It never occurred to me to collect IAD data

I do not have the resources to collect the data

Other (please note)

Do you collect ITD (intertriginous dermatitis) or intertrigo incidence/prevalence data currently?

Yes

No

If NO: skip to next question.

If YES: How often?

Concurrently

Weekly

Monthly

Quarterly

Other (Please note)

Why not?

- I do not work in an inpatient facility
- It never occurred to me to collect ITD data
- I do not have the resources to collect the data
- Other (please note)

Does your setting use an electronic medical record (EMR)?

- Yes
- No

If NO: skip to next question.

If YES: Which one?

- Epic
- Cerner
- McKesson
- MediTech
- Centricity
- EClinical Works
- AllScripts
- Other (please note)

Is your setting planning to convert to an EMR in the next 6-12 months?

- Yes
- No
- N/A - my setting is not a patient care setting

If your facility has an electronic EMR, does bedside nursing have a documentation field for IAD (incontinence associated dermatitis)?

- Yes
- No
- My facility does not have an electronic EMR I do not know
- My primary care setting is not a patient care setting

If your facility has an electronic EMR, does bedside nursing have a documentation field for ITD (intertriginous dermatitis)?

- Yes
- No
- My facility does not have an electronic EMR I do not know
- My primary care setting is not a patient care setting

If your primary care setting is a patient care setting, who does pressure ulcer staging for assessment (not for diagnosis). Select all that apply.

- My primary care setting is not a patient care setting
- All RNs for all stages
- All RNs for partial thickness
- Some RNs for partial thickness
- Some RNs for all stages
- Wound certified RNs Physicians
- APRNs
- PAs PTs OTs
- Other (please note)

What would be the benefit(s) of collecting IAD (incontinence associated dermatitis) incidence/prevalence data? (If you choose not to answer, type "no opinion").

What would be risk(s) of collecting IAD (incontinence associated dermatitis) incidence/prevalence data? (If you choose not to answer, type "no opinion").

What would be the benefit(s) of reporting IAD (incontinence associated dermatitis) incidence/prevalence data? (If you choose not to answer, type "no opinion").

What would be the risk(s) of reporting IAD (incontinence associated dermatitis) incidence/prevalence data? (If you choose not to answer, type "no opinion").

What would be the benefit(s) of collecting ITD (intertriginous dermatitis) incidence/prevalence data? (if you choose not to answer, type "no opinion").

What would be the risk(s) of collecting ITD (intertriginous dermatitis) incidence/prevalence data? (if you choose not to answer, type "no opinion").

What would be the benefit(s) of reporting ITD (intertriginous dermatitis) incidence/prevalence data? (if you choose not to answer, type "no opinion").

What would be the risk(s) of reporting ITD (intertriginous dermatitis) incidence/prevalence data? (If you choose not to answer, type "no opinion").

To the best of your ability, how would you classify the skin damage in this photo?



- Incontinence associated dermatitis (IAD)
- Intertriginous dermatitis (ITD)
- Mixed - incontinence associated dermatitis and pressure ulcer
- Pressure ulcer

Why did you select the option you selected?

To the best of your ability, how would you classify the skin damage in this photo?



- Incontinence associated dermatitis (IAD)
- Intertriginous dermatitis (ITD)
- Mixed incontinence associated dermatitis and pressure ulcer
- Pressure ulcer

Why did you select the option you selected?

To the best of your ability, how would you classify the skin damage in this photo?



- Incontinence associated dermatitis (IAD)
- Intertriginous dermatitis (ITD)
- Mixed - incontinence associated dermatitis and pressure ulcer
- Pressure ulcer

Why did you select the option you selected?

To the best of your ability, how would you classify the skin damage in this photo?



Incontinence associated dermatitis (IAD)

Intertriginous dermatitis (ITD)

Mixed - incontinence associated dermatitis and pressure ulcer

Pressure ulcer

Why did you select the option you selected?

APPENDIX B

Questionnaire Two**Building Expert Consensus on Including Indicators of Moisture-Associated Skin Damage in the National Database of Nursing Quality Indicators (NDNQI)**

Thank you for completing questionnaire #1. 19 subjects began the questionnaire and 17 participants completed it. The purpose of the surveys is to build consensus on including indicators of moisture-associated skin damage in the National Database of Nursing Quality Indicators (NDNQI).

During this second questionnaire, information from the first questionnaire will be shared, and further questions will be asked to try to achieve consensus on the items where consensus was not reached during the first survey.

Completion of the survey is voluntary. Completion of the survey will indicate your consent. If you have a question or concern regarding the study or questionnaire, contact the investigator at mary.arnoldlong@otterbein.edu.

This questionnaire is longer – it may take an hour to complete if you have several comments to make. Many of the responses, however, are "agree/disagree." Making comments is your choice, especially if you feel strongly about an answer or think your comment will provide clarity to your response. There are no right or wrong answers. You may stop and start the questionnaire as many times as you like until the deadline, Friday December 4, 2015 at 12:00 noon EST.

Be aware that some of the questions or comments may seem redundant. However, there are comments about the benefits of collecting and reporting data for IAD; risks of collecting and reporting data for IAD; benefits of collecting and reporting data for ITD; and risks of collecting and reporting data for ITD.

Although some terms can be used differently in different settings, the following definitions are used for the following terms in this instrument:

Pressure Ulcer: "localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear. A number of contributing or confounding factors are also associated with pressure ulcers; the significance of these factors is yet to be elucidated." (National Pressure Ulcer Advisory Panel, 2014).

Moisture Associated Dermatitis (MASD): encompasses a range of conditions, including IAD and ITD. "MASD presents as inflammation of the skin, occurring with or without erosion or secondary cutaneous infection. It is often undetected until significant inflammation, maceration, or skin erosion occurs." (Black, et al., 2011, p. 359).

Incontinence Associated Dermatitis (IAD): "is a form of irritant dermatitis that develops from chronic exposure to urine or stool." (Gray, et al., 2007, p. 46).

Intertriginous Dermatitis (ITD): "is an inflammatory dermatosis of opposing skin surfaces caused by moisture." (Black, et al., 2011, p. 365) (Also known as intertrigo).

In the United States, acute care hospital pressure ulcer (PU) incidence and prevalence data is collected in a database called the National Database of Nursing Quality Indicators (NDNQI). This database provides information for benchmarking as well as for policy determination. (Press Ganey, 2015).

However, moisture associated dermatitis conditions are not collected in NDNQI. Many nurses, including certified wound nurses, cannot differentiate moisture associated conditions from stage II pressure ulcers (M. Mahoney, et al, 2011); (Mahoney, Rozenboom & Doughty, 2013). Can this lead to errors in NDNQI pressure ulcer data?

Thank you for your continued participation on building consensus regarding including indicators of moisture-associated skin damage in the National Database of Nursing Quality Indicators (NDNQI).

There was consensus (89%) that IAD incidence/prevalence data should be collected as quality data.

The following are the themes identified from the comments to the question: Do you think incontinence associated dermatitis (IAD) incidence/prevalence should be collected as quality data? Once you read the comments from that theme, please note whether you agree or disagree.

Comments: "IAD is largely preventable." "IAD can be iatrogenic." "IAD can be prevented." "IAD is very preventable." "IAD is avoidable and directly related to nursing care received." "IAD prevention strategies should be taken more seriously."

THEME: IAD can be prevented.

Agree

Disagree

Why do you agree or disagree?

Comments: "IAD problem needs to be better identified." "Highlight extent of the problem." "It would identify the scope of the problem."

THEME: Collecting IAD quality data would help identify the scope of the problem.

Agree

Disagree

Why do you agree or disagree?

Comments: "IAD is related to pressure ulcer development." "IAD contributes to PU." "IAD places patient at greater risk for pressure ulcer(s)."

THEME: The presence of IAD contributes to pressure ulcer risk.

Agree

Disagree

Why do you agree or disagree?

Comments: "IAD is misidentified as pressure ulcer." "IAD is a significant skin condition often misdiagnosed as pressure ulcer."

THEME: IAD can be misidentified as pressure ulcer when assessed.

Agree

Disagree

Why do you agree or disagree?

Comments: "If we have IAD, some aspect of quality is wrong." "IAD is as much an indicator of quality as pressure ulcer because it causes pain & suffering & is preventable." "IAD is painful."

THEME: IAD is a nursing quality indicator because it reflects patient outcomes.

Agree

Disagree

Why do you agree or disagree?

Comments: "IAD collection can be used to measure effectiveness of protocols." "IAD collection can establish evidence-based treatment options."

THEME: IAD data collection can assist in developing and validating evidence-based treatments.

Agree

Disagree

Why do you agree or disagree?

Comments: "I would not want IAD to be used as a measure of nursing care." "IAD is not an indicator in and of itself...may not be related to quality care." "IAD may dilute the importance of the more important, more serious ones [indicators]."

THEME: IAD should not be a quality indicator.

Agree

Disagree

Why do you agree or disagree?

There was not consensus on whether IAD incidence data should be reported as a national nursing quality indicator (to the NDNQI database) (65%/35%).

The following are the themes identified from the comments to the question: Do you think incontinence associated dermatitis (IAD) incidence should be reported as a NATIONAL nursing sensitive outcome? Once you read the comments from that theme, please note whether you agree or disagree.

Comments: "Attention to MASD/IAD could lead to a decreased complication rate." "Moves the issue [IAD] up in priority ranking." "Do not have external benchmark to compare with (I collect data). Reporting to NDNQI would provide benchmark." "Provide data for measurement of outcomes."

THEME: Reporting to IAD incidence to NDNQI would allow benchmarking and outcome measurement.

Agree

Disagree

Why do you agree or disagree?

Comments: "IAD is preventable and probably more easy to address than pressure ulcers." "Yes, [IAD should be an indicator] since IAD is preventable."

THEME: Since IAD is preventable, IAD incidence should be an NDNQI indicator.

Agree

Disagree

Why do you agree or disagree?

Comments: "Prevention & management are 100% in nursing domain." "IAD means deficient care." "So completely in the nursing realm." "To hold nursing accountable for providing good care."

THEME: Because IAD is associated with quality of nursing care, IAD incidence should be reported as a nursing sensitive outcome.

Agree

Disagree

Why do you agree or disagree?

Comments: "IAD prevention requires multidisciplinary approach. Nursing has significant impact, but other professions, as well."

THEME: Nursing is not solely accountable for the potential development (incidence) of IAD.

Agree

Disagree

Why do you agree or disagree?

Comments: "In patients referred to my clinic, IAD & PU are often confused. I believe data is skewed."

THEME: NDNQI pressure ulcer incidence data is currently skewed due to confusion over pressure ulcer staging.

Agree

Disagree

Why do you agree or disagree?

Comments: "Incidence are difficult to measure. Not convinced IAD or pressure ulcers should be routinely measured."

THEME: Neither IAD nor pressure ulcers should be NDNQI indicators.

Agree

Disagree

Why do you agree or disagree?

Comments: "[Reporting IAD incidence as NDNQI data] provides data for research."

THEME: Reporting IAD incidence as nursing sensitive outcomes via NDNQI provides data for further research.

Agree

Disagree

Why do you agree or disagree?

Comments: "Too many national indicators." "Good for QI." "Would be a useful QI."

THEME: IAD incidence should not be a NDNQI nursing sensitive indicator, but rather facility-specific quality data.

Agree

Disagree

Why do you agree or disagree?

There was not consensus whether IAD prevalence data should be reported as a national nursing quality indicator (to the NDNQI database) (71%/29%). There was higher agreement that IAD prevalence should be reported as a national nursing quality indicator than that IAD incidence should be reported as an indicator.

These are the themes identified from the comments to the question: Do you think incontinence associated dermatitis (IAD) prevalence should be reported as a NATIONAL nursing sensitive outcome? Once you read the comments from that theme, please note whether you agree or disagree.

Comments: ""IAD prevalence should be reported as a nursing sensitive outcome to NDNQI] because IAD is a preventable condition." "We can prevent IAD." "IAD should be less prevalent in a controlled care setting with 24hour staffing than in community care where patients don't have assistance 24/7."

THEME: In a setting with nursing care readily available, IAD is preventable.

Agree

Disagree

Why do you agree or disagree?

Comments: "IAD Prevalence is not an indicator of nursing quality."

THEME: The prevalence of the condition doesn't reflect the nursing care provided to the patients within the institution.

Agree

Disagree

Why do you agree or disagree?

Comments: "IAD is primarily a nursing concern." "IAD is directly related to nursing care." "IAD reflects quality of care." "IAD means deficient care." "[Reporting prevalence] would hold nurses accountable for providing good patient care." "As a nursing quality indicator there would be a

drive to address the issue & ensure the development of IAD is viewed as an unacceptable consequence of poor continence care."

THEME: IAD is an unacceptable patient outcome associated with poor continence care and strongly linked to nursing quality.

Agree

Disagree

Why do you agree or disagree?

Comments: "Provide data for measurement of outcomes." "Provide data for research." "Easy data to collect if done during pressure ulcer incidence and prevalence."

THEME: Reporting IAD prevalence via NDNQI would provide data for outcome measurement and research.

Agree

Disagree

Why do you agree or disagree?

Comments: "IAD is closely related to pressure ulcer epidemiology." "IAD is commonly confused with stage II pressure ulcer." "Having a specific data point for IAD would help alleviate erroneous differential diagnosis issues."

THEME: Reporting IAD prevalence via NDNQI may help individuals discriminate between IAD and stage II pressure ulcers.

Agree

Disagree

Why do you agree or disagree?

Comments: "Important to have an idea of the actual prevalence of the condition." "Prevalence helpful for staffing purposes."

THEME: There would be benefits to knowing the prevalence of IAD within an institution and nationally.

Agree

Disagree

Why do you agree or disagree?

The questions about whether ITD (intertriginous dermatitis) incidence/prevalence data should be collected as a quality indicator was unintentionally omitted from the first survey, so there was no opportunity to come to consensus. They will now be asked.

Do you think ITD prevalence data should be collected?

Yes

No

Why or why not?

Do you think ITD incidence data should be collected?

Yes

No

Why or why not?

There was no consensus about reporting ITD incidence as a national nursing sensitive indicator via NDNQI (41%/59%).

The following are the themes identified from the comments to the question: Do you think intertriginous dermatitis (ITD) /intertrigo incidence should be reported as a NATIONAL nursing sensitive outcome? Once you read the comments from that theme, please note whether you agree or disagree.

Comments: "Preventable." "Easily treatable." "Lesser impact on complications." "Not sure this is an important prevalent issue." "Rather focus on IAD for now."

THEME: ITD is not so important a skin issue as IAD.

Agree

Disagree

Why do you agree or disagree?

Comments: "Intertrigo in the perineum is complicated by incontinence." "Many patients with immobility issues develop ITD while in the acute care setting." "Certain patient populations are more prone to ITD – such as those who are immunosuppressed, on certain medication, morbidly obese, etc. which are out of control of the nurse." "We don't have control over people's weight or body habitus." "There can be causative factors which are out of control of the nurse & not an indicator of the quality of care the patient is receiving." "Too many factors other than nursing care."

THEME: ITD has multiple contributing factors and multiple complicating factors and the development of ITD may not be due to the quality of nursing care.

Agree

Disagree

Why do you agree or disagree?

Comments: ITD has not been linked to pressure ulcers.

THEME: There is no evidence that ITD is associated with pressure ulcers.

Agree

Disagree

Why do you agree or disagree?

Comments: "When [ITD] is misdiagnosed or interventions are not put in place specific to ITD, you have a worsening of the skin impairment which may put the patient at a higher risk of pressure ulcer." "There is a misnomer that ITD = pressure ulcer."

THEME: Although ITD may be associated with pressure ulcers and may contribute to pressure ulcer risk, ITD itself is not a pressure ulcer.

Agree

Disagree

Why do you agree or disagree?

Comments: "Not enough resources to measure everything. Hospitals need to target problem areas first."

THEME: ITD is not a problem.

Agree

Disagree

Why do you agree or disagree?

Comments: "Collection of data helps to quantify the problem & lead to research to provide evidence for better care." "Further research needs to be done." "Making this a NDNQI indicator would elevate the attention given to this skin impairment & promote improved patient outcomes."

THEME: Making ITD incidence a national nursing sensitive indicator would identify the scope of the issue and promote research for evidence-based care.

Agree

Disagree

Why do you agree or disagree?

There was no consensus about reporting ITD prevalence as a national nursing sensitive indicator via NDNQI.

The following are the themes identified from the comments to the question: Do you think intertriginous dermatitis (ITD) or intertrigo prevalence should be reported as a NATIONAL nursing sensitive outcome?

Once you read the comments from that theme, please note whether you agree or disagree.

Comments: "More research is needed before we can determine how preventable ITD truly is."

THEME: Need more research to determine whether ITD can be prevented.

Agree

Disagree

Why do you agree or disagree?

Comments: "Many patients are admitted with it [ITD] (which doesn't reflect nursing quality)."

THEME: Patients who already have ITD on admission would be counted in ITD prevalence & this doesn't reflect nursing care quality after admission.

Agree

Disagree

Why do you agree or disagree?

Comments: "Should focus on IAD. See ITD as a second step."

THEME: IAD data is of primary importance. ITD is a secondary concern.

Agree

Disagree

Why do you agree or disagree?

Comments: "Important to understand seriousness of a skin problem often misdiagnosed as other serious skin problems e.g. pressure ulcer."

THEME: Collecting ITD prevalence as NDNQI indicator would identify the scope of the problem.

Agree

Disagree

Why do you agree or disagree?

Comments: "Would increase awareness of problem & hopefully result in the improvement of care with the introduction of guidelines."

THEME: Collecting ITD prevalence as NDNQI indicator would increase awareness of ITD, may result in care improvement & may lead to the development of ITD prevention & treatment guidelines.

Agree

Disagree

Why do you agree or disagree?

35% of the expert panel currently collect IAD incidence/prevalence data. Of those, 33% collect the data annually, 33% collect the data quarterly, 17% collect the data monthly, and 17% collect the data concurrently.

Of those who do not collect IAD incidence/prevalence data, 36% do not work in an inpatient facility. 27% do not have the resources to collect the data. 18% reported "not a NDNQI indicator" with one additional comment "they confound with stage 2 pressure ulcer." Other comments were, "Not an important part of my role" and "we collect prevalence and barrier use with pressure ulcer prevalence & incidence data to monitor best practice and trends."

6% (one respondent) of the expert panel currently collect ITD incidence/prevalence data. It is collected monthly.

Of those who do not collect ITD incidence/prevalence data, 38% do not work in an inpatient facility, 31% do not have the resources to collect the data, 13% reported it never occurred to them to collect the data, and 19% reported other, including "not an important part of my role," "not a priority."

For the question, "What would be the benefit(s) of collecting incontinence associated dermatitis (IAD) incidence/prevalence data?" several themes emerged. After reading the comments and themes, please note agreement, disagreement and any comments:

Comments: "Clinical snapshot would be helpful." "Increases awareness of the size of the problem to reduce incidence/prevalence by improving standards." "To understand the significance (or lack of) this condition." "Increased awareness of IAD which may lead to earlier prevention, interventions & treatment." "A database to base PI efforts which may improve patient outcomes."

THEME: Documentation of the scope of IAD to help increase awareness to help improve patient outcomes.

Agree

Disagree

Why do you agree or disagree?

Comments: "If we collect IAD incidence/prevalence we should use as quality of care indicator."

"Actual prevalence of IAD in NDNQI reporting facilities."

THEME: If IAD incidence/prevalence data is going to be collected, it should be used as a NDNQI nursing sensitive outcome indicator.

Agree

Disagree

Why do you agree or disagree?

Comments: "IAD are (sic) not a quality of care indicator."

THEME: IAD doesn't reflect the quality of nursing care rendered to the patient and should not be a nursing sensitive outcome indicator.

Agree

Disagree

Why do you agree or disagree?

Comments: "May help reduce pressure ulcers as moisture damaged skin is more prone to damage." "Comes under the category of preventing patient harm – ultimately, improving patient outcomes." "It provides information for other outcome data (such as c. diff, HAPU, CAUTI)."

THEME: Collecting data on IAD incidence/prevalence may have impact on other NDNQI indicators.

Agree

Disagree

Why do you agree or disagree?

Comments: "It would help educate staff who cannot distinguish between IAD & pressure ulcers." "Might see pressure ulcer prevalence/incidence decrease if there was a problem with people mis-identifying IAD as PU so data collection might be more accurate."

THEME: Collecting data on IAD incidence/prevalence may lead to more accurate classification of skin breakdown & less errors on NDNQI pressure ulcer data reporting.

Agree

Disagree

Why do you agree or disagree?

Comments: "It indicates whether your program is working to improve the problem." "Comparing QI strategies." "It provides information to ensure & develop appropriate interventions."

"Valuable for continence quality initiatives." "Provide validation of need for better incontinence management materials & programs (better underpads, barrier products, elimination of diapers, improved skin care)."

THEME: Collecting data on IAD incidence/prevalence may aid in suggesting or validating quality initiatives or programs.

Agree

Disagree

Why do you agree or disagree?

Comments: "Early recognition of the at-risk individual." "Establish standards."

THEME: Collecting data on IAD incidence/prevalence may assist in development of a risk assessment & prevention/management standards.

Agree

Disagree

Why do you agree or disagree?

Comments: "Comparing data, epidemiological research." "Quantify data to provide basics for evidence-based research."

THEME: Collecting data on IAD incidence/prevalence may provide the basis for future research.

Agree

Disagree

Why do you agree or disagree?

For the question, "What would be the risks(s) of collecting incontinence associated dermatitis (IAD) incidence/prevalence data?" several themes emerged. After reading the comments and themes, please note agreement, disagreement and any comments:

Comments: Collecting data will expose deficits in some care settings.

THEME: Deficits associated with incontinence care in some care settings will be exposed if IAD incidence/prevalence data is collected.

Agree

Disagree

Why do you agree or disagree?

Comments: "No risk." (This comment was repeated 5 times).

THEME: There is no risk to collecting IAD incidence/prevalence data.

Agree

Disagree

Why do you agree or disagree?

Comments: "Some facilities may not have staff with appropriate knowledge base to conduct data collection."

THEME: There may be a knowledge deficit associated with how to collect IAD incidence/prevalence data in some institutions.

Agree

Disagree

Why do you agree or disagree?

Comments: "If we cannot differentiate between IAD and pressure ulcer(s) we have wrong data & statistics." "Misdiagnosing." "Misidentification of IAD leading to incorrect treatments & inaccurate data." "Misclassification. Moisture lesions often misclassified as stage I or stage 2. IAD and pressure ulcers require different clinical interventions." "Incorrect data."

THEME: There is poor reliability when assessing for skin lesions. This would impact the validity of the IAD incidence/prevalence data.

Agree

Disagree

Why do you agree or disagree?

Comments: "It is better to identify this population so issues can be addressed." "Good data is not a bad thing if it helps to identify wound/skin etiology better & more accurately for the betterment of patient care."

THEME: Collecting IAD incidence/prevalence data will better identify the IAD patient so they can be appropriately treated.

Agree

Disagree

Why do you agree or disagree?

Comments: "May place financial burden on facility." "Laborious & time-consuming to collect since not a line item in the electronic medical record to extract the data."

THEME: Collecting IAD incidence/prevalence data may be too difficult.

Agree

Disagree

Why do you agree or disagree?

Comments: "Comparing data of facilities that can't be compared because of major differences in populations."

THEME: Once IAD incidence/prevalence data is collected, there may be a risk of trying to compare disparate samples.

Agree

Disagree

Why do you agree or disagree?

Comments: "Collecting data & then not doing anything with it adds to your accountability."

THEME: If you collect IAD incidence/prevalence data, you should then do something with it.

Agree

Disagree

Why do you agree or disagree?

Comments: "Stigma of poor quality of care if high rates of IAD are identified."

THEME: If IAD incidence/prevalence data reveals high IAD rates in facilities or on units, they may be labeled as providing poor quality nursing care.

Agree

Disagree

Why do you agree or disagree?

For the question, "What would be the benefit(s) of reporting incontinence associated dermatitis (IAD) incidence/prevalence data?" several themes emerged. After reading the comments and themes, please note agreement, disagreement and any comments:

Comments: "Greater understanding of scope & severity of IAD." "Quantifies the problem." "Quantifies the problem &, over time, shows improvement or not." "Standardized data collection."

THEME: Reporting IAD incidence/prevalence data would aid in defining the scope & severity of IAD.

Agree

Disagree

Why do you agree or disagree?

Comments: "Make improvements to the care provided." "Improving patient safety & data outcomes accuracy." "If we reported IAD incidence/prevalence we could also compare impact of interventions." "QI opportunity." "Identify the need for & implementation of continence identification & treatment programs & products throughout facility, leading to a decrease in IAD as well as perhaps a decrease in pressure ulcer development since IAD can increase risk of pressure ulcer development." "Quality nursing care – patient would benefit from early identification & treatment."

THEME: Reporting IAD incidence/prevalence data may identify the need for risk assessment, prevention & treatment programs & may also lead to a decrease in facility-acquired pressure ulcers.

Agree

Disagree

Why do you agree or disagree?

Comments: "Establishing benchmark for measuring local facility against national standards." "Create benchmarks & comparative data." "You can measure how well you are doing in comparison to the know prevalence & incidence." "Greater insights into facility-acquired IAD."

THEME: Reporting IAD incidence/prevalence data could allow for benchmarking and data comparison.

Agree

Disagree

Why do you agree or disagree?

Comments: "There are so many methodological issues with other data collection (HAPU) that adding another [indicator] without standard, clear, concise methodology is problematic."

THEME: The current NDNQI data collection methods are flawed.

Agree

Disagree

Why do you agree or disagree?

Comments: "Increased education to staff so they are able to identify & differentiate IAD from pressure ulcers."

THEME: Reporting IAD incidence/prevalence data provides an opportunity to educate staff to discriminate between IAD and pressure ulcers.

Agree

Disagree

Why do you agree or disagree?

Comments: "Greater knowledge of the epidemiology of IAD & its relation to PU occurrences."
"Epidemiological data are available." "Provide basis for research."

THEME: Reporting IAD incidence/prevalence data provides additional epidemiological data.

Agree

Disagree

Why do you agree or disagree?

Comments: "Knowing the size of the problem & the cost of the problem is very important if you want funding for prevention, etc."

THEME: Reporting IAD incidence/prevalence data is the first step in getting reimbursement for prevention.

Agree

Disagree

Why do you agree or disagree?

Comments: "Establish standards of care." "Prevention."

THEME: Reporting IAD incidence/prevalence data may aid in developing standards of care for risk assessment, prevention & treatment.

Agree

Disagree

Why do you agree or disagree?

For the question, "What would be the risk(s) of reporting incontinence associated dermatitis (IAD) incidence/prevalence data?" several themes emerged. After reading the comments and themes, please note agreement, disagreement and any comments:

Comments: "No risk." (repeated 5 times)

THEME: There is no risk to reporting IAD incidence/prevalence data.

Agree

Disagree

Why do you agree or disagree?

Comments: "Distorted due to correct identification between pressure ulcer and IAD." "Incorrect identification of IAD leading to incorrect treatment."

THEME: If IAD incidence/prevalence data is reported, but includes pressure ulcers in the data (or the pressure ulcer data contains IAD), then the data is erroneous. This has negative outcomes.

Agree

Disagree

Why do you agree or disagree?

Comments: "I suppose it would give lawyers another target but that should not stop us."

THEME: If IAD incidence/prevalence data is reported, attorneys may now target facilities for lawsuits where patients acquire IAD.

Agree

Disagree

Why do you agree or disagree?

Comments: "Reporting IAD might cause resentment by some units – stigma of poor quality of nursing care."

THEME: If IAD incidence/prevalence data is reported, staff on some units may feel the data represents they are providing poor quality nursing care to patients because the patients suffered IAD.

Agree

Disagree

Why do you agree or disagree?

Comments: "Increased time involved with identification, reporting & treating." "Time consuming, difficult to extract data."

THEME: If IAD incidence/prevalence data is reported, it will require additional time commitment from facility personnel.

Agree

Disagree

Why do you agree or disagree?

Comments: "Would require investment on part of administration to ensure data collection was performed by clinician with a minimal skill set to ensure data collection was clean."

THEME: If IAD incidence/prevalence data is reported, some facilities may have less skilled clinicians to collect the data & may need to invest more in educating/training them.

Agree

Disagree

Why do you agree or disagree?

Comments: "Patient dissatisfaction."

THEME: If IAD incidence/prevalence data is reported it could lead to patient dissatisfaction.

Agree

Disagree

Why do you agree or disagree?

Comments: "I guess government entities could withhold payment for this condition if it is warranted serious or avoidable."

THEME: If IAD incidence/prevalence data is reported, it could lead to another nonreimbursable condition [like hospital-acquired pressure ulcers, hospital-acquired CAUTI].

Agree

Disagree

Why do you agree or disagree?

Comments: "There needs to be accuracy in reporting. Standardized tool for all."

THEME: For IAD incidence/prevalence data to be reported, a standardized tool needs to be adopted.

Agree

Disagree

Why do you agree or disagree?

For the question, "What would be the benefits(s) of collecting intertriginous dermatitis (ITD) incidence/prevalence data?" several themes emerged. After reading the comments and themes, please note agreement, disagreement and any comments:

Comments: "Our knowledge of ITD is even less." "Improved awareness of maintaining skin integrity." "Raise awareness of the problem." "Early detection & treatment."

THEME: Collecting ITD incidence/prevalence data would help enhance awareness & knowledge of ITD.

Agree

Disagree

Why do you agree or disagree?

Comments: "Distinguishing ITD & pressure ulcers. Linear gluteal slits are often misdiagnosed as pressure ulcers as are mirror moisture-related lesions on the fleshy aspect of the linear buttocks." "Correct identification of ITD vs. pressure ulcers."

THEME: Collecting ITD incidence/prevalence data would help discriminate between gluteal/buttock ITD and pressure ulcers.

Agree

Disagree

Why do you agree or disagree?

Comments: "Patient comfort and satisfaction." "To determine effectiveness & compliance with protocols." "Internally – it is my direct intervention development." "Measure success or regress of current skin care regimes...improved patient outcomes (decreased harm, decreased length of stay, decreased overall healthcare costs)."

THEME: Collecting ITD incidence/prevalence data can aid in outcome measurement for development/revision of skin care protocols.

Agree

Disagree

Why do you agree or disagree?

Comments: "Epidemiological data." "Quantify the problem for research."

THEME: Collecting ITD incidence/prevalence data provides epidemiological data.

Agree

Disagree

Why do you agree or disagree?

Comments: "Establish standards." "Develop skin fold management." "We can compare, for example, what kind of patients are prone to develop ITD, obese patients, for example, & we can develop prevention care."

THEME: Collecting ITD incidence/prevalence data may aid in development of guidelines/standards of care

Agree

Disagree

Why do you agree or disagree?

For the question, "What would be the risk(s) of collecting intertriginous dermatitis (ITD) incidence/prevalence data?" several themes emerged. After reading the comments and themes, please note agreement, disagreement and any comments:

Comments: "No risk." (repeated 8 times)

THEME: There is no risk to collecting ITD incidence/prevalence data.

Agree

Disagree

Why do you agree or disagree?

Comments: "May be overlapping with IAD."

THEME: ITD and IAD may both occur in the same location in the same patient.

Agree

Disagree

Why do you agree or disagree?

Comments: "Time to educate."

THEME: It may be time-consuming to educate enough people on collecting ITD incidence/prevalence data.

Agree

Disagree

Why do you agree or disagree?

Comments: "Cost involved if it is not a priority."

THEME: Collecting ITD incidence/prevalence data may be cost-prohibitive.

Agree

Disagree

Why do you agree or disagree?

Comments: "Time to implement program." "Time for data collection." "Difficult to get accurate data."

THEME: It may take too much time to implement an ITD incidence/prevalence data collection program.

Agree

Disagree

Why do you agree or disagree?

Comments: "Incorrect identification leading to incorrect data and possible incorrect treatment."

THEME: The data collected during ITD incidence/prevalence data collection may not be correct. This leads to erroneous reporting and improper treatment.

Agree

Disagree

Why do you agree or disagree?

For the question, "What would be the benefits(s) of reporting intertriginous dermatitis (ITD) incidence/prevalence data?" several themes emerged. After reading the comments and themes, please note agreement, disagreement and any comments:

Comments: "Improved patient safety & outcomes." "Improve care." "Aim to reduce incidence & prevalence."

THEME: Reporting intertriginous dermatitis (ITD) incidence/prevalence data may help improve patient outcomes.

Agree

Disagree

Why do you agree or disagree?

Comments: "Data accuracy." "More accurate data distinguishing between ITD & pressure ulcers possibly leading to a decrease of pressure ulcer prevalence and incidence."

THEME: Reporting intertriginous dermatitis (ITD) incidence/prevalence data may improve the validity of NDNQI pressure ulcer data.

Agree

Disagree

Why do you agree or disagree?

Comments: "If we report ITD we can select preventive intervention, make a risk scale & develop algorithm plan for prevention & treatment." "Establish standards."

THEME: Reporting intertriginous dermatitis (ITD) incidence/prevalence data may promote development of standards & guidelines.

Agree

Disagree

Why do you agree or disagree?

Comments: "Staff awareness."

THEME: Reporting intertriginous dermatitis (ITD) incidence/prevalence data may increase staff awareness of the phenomenon of ITD.

Agree

Disagree

Why do you agree or disagree?

Comments: "Better products for prevention & treatment."

THEME: Reporting intertriginous dermatitis (ITD) incidence/prevalence data may lead to the development and/or utilization of better prevention/treatment products for ITD.

Agree

Disagree

Why do you agree or disagree?

Comments: "Reporting on a national or international level would help determine scope of problem in health care." "Epidemiological data." "Quantify the problem for research."

THEME: Reporting intertriginous dermatitis (ITD) incidence/prevalence data could help reveal the scope & severity of ITD.

Agree

Disagree

Why do you agree or disagree?

Comments: "I do not feel this is a priority."

THEME: Reporting intertriginous dermatitis (ITD) incidence/prevalence data is not a priority

Agree

Disagree

Why do you agree or disagree?

For the question, "What would be the risk(s) of reporting intertriginous dermatitis (ITD) incidence/prevalence data?" several themes emerged. After reading the comments and themes, please note agreement, disagreement and any comments:

Comments: "No risk" (repeated 4 times)

THEME: There is no risk to reporting (ITD) incidence/prevalence data.

Agree

Disagree

Why do you agree or disagree?

Comments: "Time needed for data collection."

THEME: A risk associated with reporting (ITD) incidence/prevalence data is the time required for the data collection.

Agree

Disagree

Why do you agree or disagree?

Comments: "Cost for treatment."

THEME: A risk associated with reporting (ITD) incidence/prevalence data is the expense required for any patient treatment.

Agree

Disagree

Why do you agree or disagree?

Comments: "Time needed for education."

THEME: A risk associated with reporting (ITD) incidence/prevalence data is the time required for education.

Agree

Disagree

Why do you agree or disagree?

Comments: "Time needed for treatment."

THEME: A risk associated with reporting (ITD) incidence/prevalence data is the time required for patient treatment.

Agree

Disagree

Why do you agree or disagree?

Comments: "Possible inaccurate data if misidentified leading to incorrect treatment, patient issues, increased cost, decreased patient satisfaction." "Data reported would only be as good as data collected. You would need to ensure data collection process was the same across all entities contributing to the data collection pool."

THEME: A risk associated with reporting (ITD) incidence/prevalence data is unreliable data leading to poor outcomes.

Agree

Disagree

Why do you agree or disagree?

On the first questionnaire, there was consensus (94%) on the first photograph. It was identified as Mixed IAD and Pressure Ulcer. There were several comments for why that choice was chosen. There was liquid feces present, there was a remnant of barrier ointment, there was a generalized erosion of epidermis outside of typical pressure-related areas AND there was a necrotic wound over the sacrum. However, as one participant noted, "need history and context for more definitive assessment."

Based on the above information, how would you classify the same photograph below?



Incontinence Associated Dermatitis

Intertriginous Dermatitis

Mixed Incontinence Associated Dermatitis and

Pressure Ulcer Pressure Ulcer

There was not consensus on the second photograph from the first questionnaire. There was a fairly even split between IAD & ITD with one participant selecting mixed IAD & pressure ulcer. Responses included:

- Not really clear what the anatomical location is.
- This type of lesion remains controversial.
- Superficial lesion in surface area between skin folds where humidity exists.
- Two surfaces which appear to rub together caused by friction, trapping moisture in the area.
- Location?
- Linear, shallow, pink, away from bony prominence. However, I would need to know if patient was incontinent prior to differential diagnosis.

In an attempt to promote consensus, additional information is now provided. The superior dressing is on the patient's abdomen. The examiner's two fingers are on the patient's left thigh. The patient is continent of urine.

To the best of your ability, would you classify this lesion as:



Incontinence Associated Dermatitis
 Intertriginous Dermatitis
 Mixed Incontinence Associated Dermatitis and
 Pressure Ulcer Pressure Ulcer
 Why did you select the option you selected?

Consensus (82%) was achieved on the third photo from the first questionnaire as incontinence-associated dermatitis (IAD) although 18% selected mixed IAD and pressure ulcer. As many of those who selected IAD noted, the superficial skin injury was not a pressure ulcer but, a friction injury associated with the macerated IAD – damaged epidermis. Once again, there were multiple descriptions, including comments that:

- Need patient history and context for more definitive evaluation.
- I would have to determine if the patient is bed bound or chair bound before confirming diagnosis.

Given the above information, how would you classify the same photograph below, provided the following choices?



Incontinence Associated Dermatitis
 Intertriginous Dermatitis
 Mixed Incontinence Associated Dermatitis and
 Pressure Ulcer
 Pressure Ulcer

There was no consensus on this picture and so many comments that the photo was so dark and so poor that the question will be excluded. Thus, the subsequent picture will be added



To the best of your ability, how would you classify the skin damage in this photo? The examiner's hand is separating the ambulatory, continent patient's buttocks.



Incontinence associated dermatitis (IAD)
 Intertriginous dermatitis (ITD)
 Mixed - incontinence associated dermatitis and
 pressure ulcer
 Pressure ulcer

Why did you select the option you selected?

Comments:

Thank you for completing this second questionnaire in "Building Expert Consensus on Including Moisture-Associated Skin Conditions as Nursing Sensitive Outcomes in the National Database of Nursing Quality Indicators." Your time and valuable input is appreciated.

The third and final questionnaire should be distributed in approximately 5 weeks. If you have questions or additional comments, please contact Mary Arnold Long at mary.arnoldlong@otterbein.edu.

Appendix C

Questionnaire Three**Building Expert Consensus on Including Moisture-Associated Skin Conditions as Nursing Sensitive Outcomes in the National Database of Nursing Quality Indicators**

This is the third and final questionnaire for Building Expert Consensus on Including Moisture-Associated Skin Conditions as Indicators of Nursing Sensitive Outcomes in the National Database of Nursing Quality Indicators (NDNQI).

During the first round of questioning, consensus (89%) was reached that IAD incidence/prevalence should be collected as quality data.

Consensus (85%) was also reached that IAD can be prevented, although comments included, "there are exceptions" and "vast majority can be prevented."

Consensus (92%) was reached collecting IAD quality data would help identify the scope of the problem.

There was 100% consensus the presence of IAD contributes to pressure ulcer risk and also 100% consensus IAD can be misidentified as a pressure ulcer when assessed.

There was not consensus (65%/35%) on whether IAD incidence data should be reported as an NDNQI indicator.

For this questionnaire, results from the second questionnaire will be shared, including extensive comments from subjects. During the second round of questioning, 14 experts completed some or all of the questions.

Within the body of this document, six (6) questions will be asked. At the conclusion of this document, twelve (12) final questions will be asked. The final questions will be the last attempt to come to consensus about including moisture-associated skin conditions (IAD and ITD) as nursing sensitive outcomes in the NDNQI.

It should take you about 25-30 minutes to complete this questionnaire. You may stop and start this questionnaire as many times as you like.

This initial section discusses findings from the second questionnaire related to Incontinence Associated Dermatitis (IAD).

There was 100% consensus there would be benefits to knowing the prevalence of IAD within an institution and nationally.

Consensus was not reached (77%/23%) that IAD should be a nursing quality indicator per National Database of Nursing Quality Indicators (NDNQI) because it reflects patient outcomes. Comments included:

- The idea it is not serious; is not supported by evidence.
- Pressure ulcer point prevalence studies in my facility include data collection metric on IAD.
- When we prevent skin damage we have better indicators.
- IAD is a key indicator for risk assessment & care.
- QI indicators should be positive & collecting data on adverse reactions is so negative. IAD cannot be prevented in many instances & collecting this as an indicator will head us down the same pathway as never events - a finger pointing exercise for who is at fault.
- Generally, people are afraid of quality data & worry it will be negatively reported & misrepresent care ending up in punitive actions. On the contrary it makes us better.
- IAD is a problem often unrecognized, undervalued & misdiagnosed.

One participant suggested rewording the statement as:

IAD is a nursing quality indicator because it reflects the quality of nursing care.

If the statement is reworded as above, do you agree that IAD should be included as a nursing quality indicator in the National Database of Nursing Quality Indicators (NDNQI)?

Yes

No

There was consensus (92%) documentation of the scope of IAD would help increase awareness to help improve patient outcomes.

Consensus (92%) was reached that IAD data collection can assist in developing & validating evidence-based treatments.

Consensus was not reached (67%/33%) on "reporting IAD incidence to NDNQI would allow benchmarking & outcome measurement."

Comments included:

- Benchmarking data has to start somewhere. We need data collected to compare it.
- Attention paid to reporting on pressure ulcers (PUs) has led to decrease in HAC [hospital-acquired] PUs. I feel we would see the same reduction in IAD injury if reported & compared.
- We can't get HAPU methodology standardized so I don't think we could standardize methodology in measurement of the data.
- Allows scope of problem to be identified.
- Many see the data as punitive & providing direction for law suits & as an indicator of poor care.
- Still a lot of variability with how to measure it.
- We do not currently know where we are.
- Do you mean prevalence or incidence? PU data is prevalence data, so why would we choose the more difficult incidence data? Incidence data is a better indicator of quality but difficult & costly to gather.

If the statement were reworded to: "Collecting and reporting IAD prevalence to NDNQI would allow benchmarking and outcome measurement."

Do you:

Agree

Disagree

IAD prevalence data should be reported as an NDNQI indicator.

Agree

Disagree

IAD incidence data should be reported as an NDNQI indicator.

Agree

Disagree

Consensus (83%) was reached that NDNQI PU incidence data (hospital acquired PUs) is currently skewed due to confusion over pressure ulcer staging.

Consensus was not reached (67%/33%) that "reporting IAD incidence as nursing sensitive outcome via NDNQI provides data for further research".

Comments:

If I had a database to contribute my data & benchmark against other hospitals, there may be more improvements gained through sharing of best practices & identifying uniform standards of care.

Helpful to determine if regional issues or nationwide problem.

Should not be NDNQI indicator, but facility-specific quality data.

National data are needed for highly prevalent, preventable conditions if we are to make any real progress toward increasing our knowledge of the underlying problem & effective prevention.

If the statement were changed to: "Reporting IAD incidence and/or prevalence as a nursing sensitive outcome via NDNQI could provide data for further research."

Do you

Agree

Disagree

The following three statements reached 83% consensus:

"In a setting with nursing care readily available IAD is preventable" with the following

Comments:

Not 100% of the time, but with few exceptions.

Yes, with a nursing team well educated in preventable actions.

"IAD is an unacceptable patient outcome associated with poor continence care & strongly linked to nursing quality" with the following comment:

Too strongly worded - ignores contribution of interdisciplinary team.

"Reporting IAD prevalence in NDNQI would provide data for outcome measurement & research" with the following comments:

Prevalence is just a picture on any day with no good information on whether these conditions were acquired at the facility or no

Incidence would provide data for outcome measurement.

Although consensus was achieved, should the prior statement be reworded to "Reporting IAD incidence via NDNQI would provide data for outcome measurement & research?"

Yes

No

There was not consensus (58% agreement/42% disagreement) regarding the statement "If IAD incidence/prevalence data is going to be collected, it should be used as an NDNQI nursing sensitive outcome indicator."

Comments:

- We need further data before assigning such sweeping conclusions...
 - We need to differentiate between hospital-acquired and present on admission. We also need to utilize Bliss et al IADSI to rate and report severity.
 - If you remove prevalence I would agree with the statement.
 - We can interfere in the incidence or prevalence of this problem if we establish care interventions.
 - This is in the realm of nursing.
 - Maybe not at first until we have a better handle on the problem.
-

There was no consensus (67% disagree/33% agree) that collecting IAD incidence/prevalence data may be too difficult. There was also no consensus (75%/25%) that there is no risk to collecting IAD incidence/prevalence data.

Comments:

- Being transparent in reporting will identify deficits which may damage the reputation of institutions. However, transparency in reporting should be about improving safety of care. Therefore, I feel the benefits outweigh the risks.
 - Risk of inefficient actions if incorrect data is reported.
 - The risk of inaccurate data is very real. Until data and quality reporting can be more reliable across facilities/organizations, reporting findings is inaccurate and can cause unnecessary penalties, increased costs to facility & inaccurate interventions to address IAD & unreliable/invalid research.
 - Don't see risk, just benefits.
 - What risk, you just need to know your patient population.
 - I believe the benefits outweigh any risks.
 - The risk is inaccurate data. NDNQI methodology is flawed. Various definitions/subjective assessments by data collectors/time consuming if done in the same method as PU data collection.
 - The only risk is difficult to differentiate between IAD & PU.
 - Already collecting PU data, why not add a little more?
 - What would be the risk unless the collectors of the data were not skilled at assessment & collected faulty data?
-

There was no consensus (58%/42%) that the NDNQI data collection methods are flawed.

Comments:

- May need improved or simplified but I don't feel they are flawed.
 - I believe there should be designated teams who are trained to conduct prevalence studies.
 - There is not enough assurance of accuracy of the data for PU – still way too much confusion about PU vs. IAD vs. friction injury in the trunk area.
 - I don't know if the hospitals have the same standard, or prepared people to collect information.
 - The collection methods are not flawed. The people who assess & report might not understand the etiology differences – may have too much variability on what to call a certain lesion.
 - Just because they are flawed doesn't mean they shouldn't be corrected & expanded.
-

There was no consensus (25%/75%) that if IAD incidence/prevalence data is reported it could lead to patient dissatisfaction.

There was no consensus (67%/33%) that if IAD incidence/prevalence data is reported it could lead to another nonreimbursable condition.

There was consensus (83%) that IAD reflects the quality of nursing care rendered to the patient and should be a nursing sensitive outcome indicator.

There was consensus (83%) that collecting data on IAD incidence/prevalence may have impact on other NDNQI indicators.

Comments:

- May reduce pressure ulcer incidence if skin damage was correctly identified.
 - This is speculative at best but research about association between IAD & PU risk provides a reasonable basis for this proposition.
 - I think we may develop a better understanding of avoidable/unavoidable skin injury.
 - If you remove prevalence from the statement I would agree.
 - How do institutions know how they are doing unless the outcomes are measured?
 - Comes under the category of preventing patient harm.
-

There was consensus (92%) collecting data on IAD incidence/prevalence may aid in suggesting or validating quality initiatives or programs.

There was consensus (92%) collecting data on IAD incidence/prevalence may lead to more accurate classification of skin breakdown and less errors on NDNQI pressure ulcer reporting.

There was consensus (92%) that reporting IAD incidence/prevalence data would aid in the defining the scope and severity of IAD.

There was consensus (83%) that reporting IAD incidence/prevalence data may identify the need for risk assessment, prevention & treatment programs and may also lead to a decrease in facility-acquired pressure ulcers.

There was consensus (92%) collecting data on IAD incidence/prevalence may assist in development of risk assessment and prevention/management standards. There was 100% consensus that reporting IAD incidence/prevalence data may aid in developing standard of care for risk assessment, prevention and treatment.

There was consensus (92%) deficits with incontinence care in some settings will be exposed if IAD incidence/prevalence data is collected.

There was consensus (100%) that collecting IAD incidence/prevalence data will better identify the IAD patient so they can be appropriately treated.

There was 100% consensus there may be a knowledge deficit with how to collect IAD incidence/prevalence data in some institutions.

There was consensus (92%) that if IAD incidence prevalence data is reported, some facilities may have less skilled clinicians to collect the data & may need to invest more in educating/training them.

There was consensus (83%) that if IAD incidence/prevalence data is reported, it will require additional time commitment from facility personnel.

There was consensus (83%) there is poor reliability when assessing for skin lesions. This would impact the validity of the IAD incidence/prevalence data.

There was consensus (92%) that reporting IAD incidence/prevalence data provides an opportunity to educate staff to discriminate between IAD & PUs.

There was 100% consensus for IAD incidence/prevalence to be reported, a standardized tool needs to be adopted.

There was 100% consensus that if you collect IAD incidence/prevalence data, you should do something with it.

There was consensus (92%) reporting IAD incidence/prevalence could allow for benchmarking & data comparison.

There was 100% consensus that reporting IAD incidence/prevalence data provides additional epidemiological data.

There was consensus (100%) collecting data on IAD incidence/prevalence may provide data for future research.

There was consensus (83%) that reporting IAD incidence/prevalence data is the first step in getting reimbursement for prevention.

This next section discusses findings from the second questionnaire related to Intertriginous Dermatitis (ITD):

There was consensus (83%) that ITD has multiple contributing factors & multiple complicating factors and the development of ITD may not be due to the quality of nursing care. The following comments were made:

- Nurses do not have control over many variables in pressure ulcer risk or IAD risk. Nursing sensitive indicator does not mean it is a completely controllable or preventable event. I think it
 - relates to awareness.
 - Unless a person refuses skin care, there are ways to prevent ITD. The majority of ITD is preventable.
 - For example, depends on index mass (obesity).
 - It is within the realm of nursing to identify patients at risk & intervene. There is not much information out there yet.
-

There was not consensus (67%/33%) on whether ITD data should be collected as a quality indicator.

Comments:

- We know nothing of the epidemiology.
 - You would utilize different products & equipment for patients suffering from ITD vs. IAD.
 - We really have no idea of the extent of the problem since the majority of facilities do not report this.
 - Knowing the prevalence, we can compare.
 - It would be good to quantify the issues with ITD.
 - ITD incidence/prevalence should not be collected as quality indicator.
 - I think we should measure all skin issues (MASD/PU).
 - Helpful to identify magnitude of problem. Everything is anecdotal at this time.
 - Could be iatrogenic.
-

There was not consensus re: whether ITD incidence data should be collected or reported (41%/59%) as a national nursing sensitive indicator via NDNQI.

Comments:

- I feel that IAD is probably more common & should take precedence over ITD.
 - We know nothing of its epidemiology.
 - Identifying whether present on admission vs. hospital acquired would be much less labor intensive and also valuable.
 - If the problem were identified more quickly, it can be treated so easily. Every break in skin is a petri dish.
 - Too cumbersome & the ITD can come and go so quickly.
 - This area is so subjective that the reporting would not be useful.
 - Incidence data is problematic & expensive to collect.
 - Based on my clinical experience, IAD progresses towards PU damage more frequently than ITD. It may be too labor intensive to include ITD for those who are not collecting IAD data, however, leaving ITD out of the data collection will likely lead to it being inappropriately lumped into IAD data.
 - It stays superficial but still impacts pain levels & overall bioburden.
 - It is not as frequent as IAD & causes less damage.
 - ITD is important issue to address.
 - Focus on IAD due to relationship with PU.
 - As the bariatric population increases & the prevalence of diabetes climbs, I am seeing increasing severe complications from ITD.
-

There was consensus (92%) that although ITD may be associated with PU and may contribute to PU risk, ITD itself is not a PU. There was also consensus (92%) that more research is needed to determine whether ITD can be prevented.

There was not consensus (25%/75%) that "ITD is not a problem." Comments:

- Many uncontrollable factors.
 - I find ITD in an immobilized patient almost always leads to necrosis of impaired tissue, even with very aggressive offloading and treatment.
 - ITD results in pain and secondary infection – it is a problem.
 - Is painful to patients. Comfort should be a priority.
 - Not enough resources to measure everything.
 - Is a problem for the patient, but may not be a priority in terms of adding to NDNQI.
-

There was not consensus ITD is associated with PU. 58% agree there is no evidence ITD is associated with PU. 42% disagree & believe there is evidence to support ITD is associated with PU.

Comments:

- You can develop ITD when the fleshy aspect of the buttocks are moist & make skin to skin contact. This can be misidentified as pressure.
 - We have little to no evidence about ITD as a condition.
 - I have noted many incidents of patients entering the facility with ITD, specifically in the gluteal cleft, which go on to develop into a full thickness wound. Although the initial ITD does not have an IAD component, typically once hospitalized and treated with antibiotics, they go on to develop IAD, which combined with immobility,
 - progresses to pressure ulcer development.
 - Pressure ulcers in adipose tissue where heavy fat folds lie on another fat fold – these likely start from friction & moisture – then because adipose tissue doesn't have good circulation, the ulcers go full thickness due to pressure/ischemia.
 - ITD is often mistaken as stage II/III PUs on gluteal cleft. Certainly if there is moisture damage to skin, the patient is at higher risk of pressure breakdown.
-

There was no consensus (58%/42%) regarding the statement "Making ITD a national nursing sensitive indicator would identify the scope of the issue & promote research for evidence-based care."

Comments:

- Too many uncontrollable factors
 - Bringing ITD to forefront will promote attention to it as a precursor to PU development. This may lead to research & development in preventing ITD.
 - Let's start with facility data collection and see if nursing interventions can make a difference in incidence numbers. If so, we could go towards making it an indicator.
 - Maybe a company will develop a method to prevent ITD all together.
 - Maybe this is a problem in my institution and just not captured.
 - Prevalence would be more valuable.
 - Adding to NDNQI may just cause confusion. Focus on IAD & PUs.
-

No consensus (50%/50%) that IAD data is of primary importance & ITD is a secondary concern.
Comments:

- Equally important (4 comments)
 - Any break in skin is important in today's microbial environment
 - IAD causes more damage
 - Don't see enough ITD to believe it is a major risk
-

There was no consensus (58%/42%) collecting ITD prevalence as an NDNQI indicator could identify the scope of the problem.

There was also no consensus (75%/25%) "Collecting ITD prevalence as NDNQI indicator would increase awareness of ITD, may result in care improvement, and may lead to development of ITD prevention & treatment guidelines."

- Can't control some of the causative factors like with IAD & PU.
 - Collecting ITD prevalence would help increase awareness & result in improvements. I don't think that has to be done through NDNQI necessarily.
 - Need to set expectations high – ITD is a problem.
 - It would increase the awareness and maybe that is what at least I need.
-

There was 100% consensus that collecting ITD incidence/prevalence data would help enhance awareness and knowledge of ITD.

There was consensus (92%) reporting ITD incidence/prevalence data may increase staff awareness of the phenomenon of ITD.

There was consensus (92%) collecting ITD incidence/prevalence data would help discriminate between gluteal/buttock ITD and PUs.

Comments:

- Does not address differential diagnosis.
 - Practice makes perfect – as long as education and inter-rater reliability is done each time.
 - This is a very common mistake in PU identification.
 - Moisture does not cause lesions/ulcers. This would be FCI & needs to be identified as such (erosion does not = ulcer).
-

There was consensus (92%) collecting ITD incidence/prevalence data can aid in outcome measurement for development/revision of skin care protocols. (One person who did not agree with the statement noted they would agree if the word "prevalence" were removed from the statement").

There was consensus (92%) collecting ITD incidence/prevalence data may aid in development of guidelines/standards of care.

Comments:

Can still do this without data collection.

Would agree if "prevalence" were removed from the statement.

There was consensus (92%) reporting ITD incidence/prevalence data may promote development of guidelines/standards of care.

Comments:

- Increased knowledge of ITD prevalence, patterns & trends of populations of occurrence provides insight to prevention & treatment strategies which can be streamlined & shared as best practices.
 - Reporting raises awareness of the problem which may inspire persons/groups to develop standards/guidelines.
 - When people are more aware, there is a tendency to create standards of care.
 - Since we don't have guidelines, data collection would be the start. But don't use the word standards. This term should not be used.
-

There was consensus (92%) IAD and ITD may both occur in the same location in the same patient.

There was consensus (83%) reporting ITD incidence/prevalence data may help improve patient outcomes.

There was consensus (92%) it may be time consuming to educate enough people on reporting ITD incidence/prevalence data.

Comments:

- Of course time is needed, just as time is needed to teach staff about proper technical care such as IV insertion, pain pump programming, safe patient handling equipment, POC glucose monitoring. Staff must be taught how to identify ITD in order to intervene appropriately with treatment. If ITD is
 - not treated, the patient will have continued pain, suffering and this will lead to
 - poor skin safety outcomes.
 - It would be well worth the time (which does cost money). If the bar can be raised for nurses accuracy of skin assessment.
 - But this is for better patient outcomes. Nurses need continuing education on how to care for patients.
 - Education is always worth the time and cost.
-

There was consensus (92%) that patients with ITD on admission would be counted in ITD prevalence & this does not reflect nursing care after admission.

There was consensus (92%) collecting ITD incidence/prevalence data provides epidemiological data.

There was consensus (92%) reporting ITD incidence/prevalence data could help reveal scope & severity of ITD.

Comments:

- Objective metrics will lead to insight in prevalence & severity.
 - Reporting will help reveal scope, but not severity unless severity levels are built into the data collection.
 - Quantify the data – helps put in perspective
 - Numbers would ID the issues.
-

There was consensus (92%) reporting ITD incidence/prevalence may lead to the development of better prevention/treatment products for ITD.

Comments:

Industry research & development is based on needs that clinicians bring to the forefront.

If requires awareness of the overall extent (prevalence) of the problem in order to precipitate action by manufacturers that can help solve the problem. If they don't know it is going to be lucrative for their bottom line, they won't spend the money to develop solutions.

There was also consensus (92%) that more research is needed to determine if ITD can be prevented.

There was no consensus (75%/25%) to the statement "There is no risk to collecting ITD incidence/prevalence data."

Comments:

- Identifying problem is the risk & it is also the benefit. Benefit outweighs the risk in my opinion.
 - Inaccurate data leads to increased costs, potential penalties, inaccurate interventions.
 - Already collecting other skin data.
-

There was no consensus (42%/58%) collecting ITD data may be cost-prohibitive. Comments:

- It will require an investment, however the return on investment will be decrease harm to patients. This alone substantiates the investment.
- Already collecting PU data, no extra cost for this.
- Will help to ultimately decrease costs.
- It's possible, but most facilities already collect PU data. It would probably require additional education for nurses collecting the data.

There was no consensus (33%/67%) it would take too much time to implement an ITD incidence/prevalence data collection program.

Comments:

- Higher priorities for controllable issues.
 - It will take time to implement data collection programs. The alternative is to not address a problem that we know is causing patient harm.
 - If data is collected alongside PU and IAD data, after the original education to differentiate (which would be time consuming but well worth the time it takes anyway for accurate PU data) it really doesn't add much time at all.
 - Put the patients first. This is a nursing outcome and needs to be addressed.
 - It takes time, but not too much time.
 - It may take too much time to implement an ITD data collection program.
 - Depends on facility's ability to complete other similar data collection processes.
-

There was no consensus (67%/33%) that data collected during ITD incidence/prevalence data collection may not be correct.

Comments:

- Education will be required. System and process development will be required. If hospitals are unwilling to update their standard of care, they are contributing to patient harm.
 - This is already true for PU and IAD (the few places where IAD is being collected).
 - It may, but should that stop from moving forward on this very important next step?
 - That is why standard methods to collect data must be established & education on these methods should also be done.
-

There was no consensus (67%/33%) that reporting ITD incidence/prevalence data may improve the validity of NDNQI PU data.

Comments:

- No basis on fact
 - When ITD is properly identified, this means it is not erroneously identified as a pressure ulcer. Proper identification leads to proper treatment which leads to improved skin safety outcomes.
 - Education & inter-rater reliability during data collection may improve validity – not reporting. Too late to improve quality of the data at the point of reporting.
 - Many nurses do not know the difference so the reporting will help them to distinguish better.
-

There was a 50%/50% split that ITD is not a priority. Comments:

- It is not a TOP priority.
 - ITD leads to full thickness wounds. It causes pain & suffering in patients. Decreasing pain and suffering should always be a priority.
 - It would build awareness which is always the first step toward improvement.
 - Can be collected with PU data.
 - How do we know this is a problem unless we study it?
 - While it would be useful to know the prevalence of ITD, it may not be a priority.
-

There was no consensus (55%/45%) that there is no risk to reporting ITD incidence/prevalence data.

There was no consensus (45%/55%) that time required for education should be considered a risk for ITD incidence/prevalence reporting.

There was no consensus (64%/36%) that a risk associated with reporting ITD incidence/prevalence data is unreliable data leading to poor outcomes.

Comments:

- You must invest in the staff development to ensure the data collection techniques are reliable.
 - Education & inter-rater reliability is a must with any data collection.
 - Until staff get better at identification, there might be hodge podge data issues.
 - Only if standardized collection is not developed.
 - Standardise [sic] data collection. Establish inter-rater reliability.
-

There was consensus (82%) a risk associated with reporting ITD incidence/prevalence data is the time required for the data collection.

However, there was also consensus (91%) that time required for patient treatment is not a risk associated with reporting ITD incidence/prevalence data.

There was also consensus (82%) that the expense required for patient treatment is not a risk associated with reporting ITD incidence/prevalence data.

There was consensus (83%) that reporting ITD incidence/prevalence data may help improve patient outcomes.

During the second round of questions, consensus was achieved on conditions for each of the four photos.

#1 - 100% consensus Mixed IAD and PU



#3 – 91% consensus IAD



#2 – 91% consensus ITD



#4 – 82% consensus ITD



This is the final questionnaire to attempt to reach expert consensus regarding including moisture-associated skin conditions as indicators of nursing sensitive outcomes in the NDNQI. Please note which of the following statements you support. This will be the final attempt for agreement to achieve consensus. Note agree or disagree after each statement.

IAD prevalence data should be collected as facility specific quality data.

- Agree
- Disagree

IAD incidence data should be collected as facility specific quality data.

- Agree
- Disagree

IAD prevalence data should be collected as NDNQI nursing sensitive outcome indicator (could be collected during quarterly NDNQI pressure ulcer data collection "audits").

- Agree
- Disagree

IAD incidence data should be collected as NDNQI nursing sensitive outcome indicator (could be collected during quarterly NDNQI pressure ulcer data collection "audits").

Agree
Disagree

ITD prevalence data should be collected as facility specific quality data.

Agree
Disagree

ITD incidence data should be collected as facility specific quality data.

Agree
Disagree

Only gluteal/buttock ITD (not other anatomical sites) prevalence data should be collected as facility specific quality data.

Agree
Disagree

Only gluteal/buttock ITD (not other anatomical sites) incidence data should be collected as facility specific quality data.

Agree
Disagree

ITD prevalence data should be collected as NDNQI nursing sensitive outcome indicator (could be collected during quarterly NDNQI pressure ulcer data collection "audits").

Agree
Disagree

ITD incidence data should be collected as NDNQI nursing sensitive outcome indicator (could be collected during quarterly NDNQI pressure ulcer data collection "audits").

Agree
Disagree

Only gluteal/buttock ITD (not other anatomical sites) prevalence data should be collected as NDNQI nursing sensitive outcome indicator (could be collected during quarterly NDNQI pressure ulcer data collection "audits").

Agree
Disagree

Only gluteal/buttock ITD (not other anatomical sites) incidence data should be collected as NDNQI nursing sensitive outcome indicator (could be collected during quarterly NDNQI pressure ulcer data collection "audits").

Agree
Disagree

If you would like to make any additional comments, please feel free to do so.

Thank you for participating in three questionnaires for this Delphi study.

Appendix D

Expert Participants by Questionnaire Round

Expert List Questionnaire One		
Name	Country	Affiliation
Dimitri Beeckman	Belgium	Ghent University
Laurie McNichol	USA	Cone Health
Mikel Gray	USA	University of Virginia Health System
Heidi Hevia	Chile	Universidad Andrés Bello
Jill Campbell	Australia	Queensland University of Technology
Joan Junkin	USA	Consultant
Karen Campbell	Canada	University of Western Ontario
Joy Pittman	USA	Indiana University Health
Linda Bohacek	USA	Triumph Hospital
Eileen McCann	USA	ConvaTec
Barbara Rozenboom	USA	UnityPoint at Home
Mary Mahoney	USA	UnityPoint at Home
Catherine Ratliff	USA	University of Virginia Health System
Denise Nix	USA	Consultant
Chenel Trevellini	USA	St. Francis Hospital Roslyn, NY
Chris Berke	USA	Nebraska Medicine
Janice Colwell	USA	University of Chicago Medical Center
Denise McDonagh	United Kingdom	Southern Health & Social Care Trust

Expert List Questionnaire Two		
Name	Country	Affiliation
Dimitri Beeckman	Belgium	Ghent University
Laurie McNichol	USA	Cone Health
Mikel Gray	USA	University of Virginia Health System
Heidi Hevia	Chile	Universidad Andrés Bello
Jill Campbell	Australia	Queensland University of Technology
Joan Junkin	USA	Consultant
Joy Pittman	USA	Indiana University Health
Barbara Rozenboom	USA	UnityPoint at Home
Mary Mahoney	USA	UnityPoint at Home
Catherine Ratliff	USA	University of Virginia Health System
Denise Nix	USA	Consultant
Chenel Trevellini	USA	St. Francis Hospital Roslyn, NY
Chris Berke	USA	Nebraska Medicine
Janice Colwell	USA	University of Chicago Medical Center

Expert List Questionnaire Three		
Name	Country	Affiliation
Heidi Hevia	Chile	Universidad Andrés Bello
Jill Campbell	Australia	Queensland University of Technology
Joan Junkin	USA	Consultant
Joy Pittman	USA	Indiana University Health
Barbara Rozenboom	USA	UnityPoint at Home
Mary Mahoney	USA	UnityPoint at Home
Catherine Ratliff	USA	University of Virginia Health System
Denise Nix	USA	Consultant
Chenel Trevellini	USA	St. Francis Hospital Roslyn, NY
Chris Berke	USA	Nebraska Medicine
Janice Colwell	USA	University of Chicago Medical Center

Appendix E

IAD Consensus Statements

In a setting with nursing care readily available IAD is preventable. (83%)

IAD is an unacceptable patient outcome associated with poor continence care & strongly linked to nursing quality. (83%)

Reporting IAD prevalence in NDNQI would provide data for outcome measurement & research. (83%)

IAD reflects the quality of nursing care rendered to the patient and should be a nursing sensitive outcome indicator. (83%)

Collecting data on IAD incidence/prevalence may have impact on other NDNQI indicators. (83%)

Reporting IAD incidence/prevalence data may identify the need for risk assessment, prevention & treatment programs and may also lead to a decrease in facility- acquired pressure ulcers. (83%)

If IAD incidence/prevalence data is reported, it will require additional time commitment from facility personnel. (83%)

There is poor reliability when assessing for skin lesions. This would impact the validity of the IAD incidence/prevalence data. (83%)

Reporting IAD incidence/prevalence data is the first step in getting reimbursement for prevention. (83%)

IAD incidence should be collected as facility specific quality data. (91%)

Collecting data on IAD incidence/prevalence may aid in suggesting or validating quality initiatives or programs. (92%)

Collecting data on IAD incidence/prevalence may lead to more accurate classification of skin breakdown and less errors on NDNQI pressure ulcer reporting. (92%)

Reporting IAD incidence/prevalence data would aid in the defining the scope and severity of IAD. (92%)

Collecting data on IAD incidence/prevalence may assist in development of risk assessment and prevention/management standards. (92%)

Deficits with incontinence care in some settings will be exposed if IAD incidence/prevalence data is collected. (92%)

If IAD incidence prevalence data is reported, some facilities may have less skilled clinicians to collect the data & may need to invest more in educating/training them. (92%)

Reporting IAD incidence/prevalence data provides an opportunity to educate staff to discriminate between IAD & PUs. (92%)

Reporting IAD incidence/prevalence could allow for benchmarking & data comparison. (92%)

Reporting IAD incidence/prevalence data may aid in developing standard of care for risk assessment, prevention and treatment. (100%).

Collecting IAD incidence/prevalence data will better identify the IAD patient so they can be appropriately treated (100%)

There may be a knowledge deficit with how to collect IAD incidence/prevalence data in some institutions. (100%)

For IAD incidence/prevalence to be reported, a standardized tool needs to be adopted. (100%)

If you collect IAD incidence/prevalence data, you should do something with it. (100%)

Reporting IAD incidence/prevalence data provides additional epidemiological data. (100%)

Collecting data on IAD incidence/prevalence may provide data for future research. (100%)

IAD prevalence data should be collected as facility-specific quality data. (100%)

Appendix F

ITD Consensus Statements

A risk associated with reporting ITD incidence/prevalence data is the time required for the data collection. (82%)

The expense required for patient treatment is not a risk associated with reporting ITD incidence/prevalence data. (82%)

ITD prevalence data should be collected as facility-specific quality data (82%).

ITD incidence data should be collected as facility-specific quality data (82%).

ITD has multiple contributing factors & multiple complicating factors and the development of ITD may not be due to the quality of nursing care (83%)

Reporting ITD incidence/prevalence data may help improve patient outcomes. (83%)

That time is required for patient treatment is not a risk associated with reporting ITD incidence/prevalence data. (91%)

Although ITD may be associated with PU and may contribute to PU risk, ITD itself is not a PU. (92%)

More research is needed to determine whether ITD can be prevented. (92%)

Reporting ITD incidence/prevalence data may increase staff awareness of the phenomenon of ITD. (92%)

Collecting ITD incidence/prevalence data would help discriminate between gluteal/buttock ITD and PUs. (92%)

Collecting ITD incidence/prevalence data can aid in outcome measurement for development/revision of skin care protocols. (92%)

Collecting ITD incidence/prevalence data may aid in development of guidelines/standards of care. (92%)

Reporting ITD incidence/prevalence data may promote development of guidelines/standards of care. (92%)

IAD and ITD may both occur in the same location in the same patient. (92%)

It may be time consuming to educate enough people on reporting ITD incidence/prevalence data. (92%)

Patients with ITD on admission would be counted in ITD prevalence & this does not reflect nursing care after admission. (92%)

Collecting ITD incidence/prevalence data provides epidemiological data. (92%)

Reporting ITD incidence/prevalence data could help reveal scope & severity of ITD. (92%)

Reporting ITD incidence/prevalence may lead to the development of better prevention/treatment products for ITD. (92%)

Collecting ITD incidence/prevalence data would help enhance awareness and knowledge of ITD. (100%)

Demographics of Expert Participants

Demographics of Experts												
Nurse = 18 = 100%												
Years in Nursing		<10 years 10 - 19 years 20 - 29 years 30 - 39 years 40 - 49 years 50 or more years										
		0.0%	2.11%	1.6%	13.72%	2.11%	0.0%					
		Continentence Care						Wound, Ostomy & Continence Care				
		Continence Care Urinary		Continence Care Fecal		Ostomy Wound Care	Ostomy Continence Care					
		Continence Care Urinary	Continence Care Fecal	Ostomy Wound Care	Ostomy Continence Care	Research Education	Other					
Primary Specialty		1.6%	0.0%	0.0%	3.17%	1.6%	2.11%	9.50%	1.6%	0.0%	0.0%	
Secondary Specialty		0.0%	0.0%	0.0%	1.6%	0.0%	2.13%	0.0%	5.31%	7.44%	1.6%	
United States		United Kingdom		Australia	Belgium	Chile	Canada					
Country of Practice		13.72%	1.6%	1.6%	1.6%	1.6%	1.6%					
		Hospital (Acute)		Hospital Clinic	Home Care	Office	Research Lab	School of Nursing		University Industry	Consultant Other	
Primary Practice Setting		4.22%	0.0%	4.22%	2.11%	1.6%	0.0%	2.11%	2.11%	1.6%	1.6%	
Secondary Practice Setting		4.22%	1.6%	0.0%	0.0%	0.0%	2.11%	4.22%	0.0%	0.0%	0.0%	
Yes		No										
See Patients with PU		17.94%	1.6%									
See Patients with IAD		17.94%	1.6%									
See Patients with ITD		18.100%	0.0%									