

# Selected abstracts from the 23rd Biennial WCET® Congress in Fort Worth, Texas

Delegates at the WCET® Congress, in Fort Worth, Texas in June, were treated to a very successful scientific programme with diverse, stimulating and high-quality content.

For the benefit of the many members who were unable to attend, here is a sample of what was presented by speakers from around the world.

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### **“IT’S DIFFERENT WHEN YOUR PROSTHESIS IS A BAG” EXPERIENCES OF PERSONS LIVING WITH AN OSTOMY: A PHOTO ELICITATION STUDY**

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**Aim:** To explore the experiences of persons living with an intestinal ostomy using the adjunct of photo-elicitation with interviews.

**Background:** The creation of an intestinal ostomy results in the revision of an essential bodily function and an alteration of the body image and causes physical, psychological, and social changes in the lifestyle through the adjustment and management of the new condition (Knowles et al., 2014). There are currently no ostomy studies that use photo-elicitation.

**Methods:** In this qualitative descriptive design, content analysis was used. Ten people living with intestinal ostomies each took part in two semi-structured interviews that utilized the strategy of photo-elicitation to collect the data. The first interview utilized pre-existing photos, and the second interview utilized photos that the participants took specifically for the study. Meleis’ transition theory was utilized as a sensitizing theory.

**Results:** Seven categories emerged from the data analysis. The categories were body, feelings, healthcare, coping, finances, life impact, and relationships. Thirty percent of the interview content was related directly to the photos shared, with each photo eliciting an average of 150 words. All phases and patterns of Meleis’ transition theory were represented in the data. (Meleis, 2010).

**Conclusions:** This study highlights the impact of an intestinal ostomy has on people’s lives. As participants transitioned to their new reality, it became apparent that they had to adjust to

their sense of self, physical being, lifestyle, social and intimate relationships, and the financial implications related to their illness and ostomy supplies. Participants in the study did experience a transition as coding results confirmed the phases and patterns of Meleis’ transition theory. Photo-elicitation is a beneficial adjunct for data collection with persons living with an intestinal ostomy.

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Meleis, A. I. (2010). *Transitions theory: Middle-range and situation-specific theories in nursing research and practice*. Springer Publishing Company.

### **NEONATAL INTENSIVE CARE NURSING PRESSURE INJURY PREVENTION PRACTICES: A DESCRIPTIVE SURVEY**

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#### **ABSTRACT**

**TOPIC/INTRODUCTION:** Pressure injury prevention practices in the neonatal intensive care population are not well understood especially for pressure injury risk assessment, pressure redistribution uses or moisture management. **PURPOSE:** The purpose of this study was to explore neonatal nursing practices for neonatal pressure injury (PI) risk assessment, pressure redistribution surface use, and moisture management. **METHODOLOGY:** A descriptive survey of a sample of 252 neonatal nurses from the United States responded to a survey distributed electronically through the National Association of Neonatal Nurses, the Academy of Neonatal Nurses, and on the Wound Source Web site. Nurses responded to questions that

explored what neonatal nurses used to assess PI risk, types of pressure redistribution surfaces used for neonates, and what moisture management strategies were used to prevent PIs (Pressure injuries). Descriptive statistics were used to describe nurses' practices. RESULTS: When assessing risk, 78% (n = 197/252) reported using a risk assessment scale: the 2 most common scales were the Neonatal Skin Risk Assessment Scale and the Braden Q Scale. Sixty-nine percent (n = 174/252) reported using a rolled blanket or small soft object as pressure redistribution surfaces. In addition, 15% (n = 39) reported the use of several types of positioners such as a fluidized positioner as a pressure redistribution surface; however, they are marketed as a positioning device. It appears that these interventions were considered redistribution surfaces by the nurses. For moisture management, petrolatum-based products (6.7%; n = 17/252) and ostomy powders (6%; n = 16/252) were most frequently used. CONCLUSIONS: Practices for PI prevention are different for neonatal patients due to their gestational age, size, and level of illness. Findings from this study create a beginning knowledge of and an opportunity for further research to determine how these practices affect outcomes such as PI incidence and prevalence.

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5. Visscher, M, Taylor, T. Pressure ulcers in the hospitalized neonate rates and risk factors, *Sci Rep*. 2014;4(7429). Doi:10.1038/srep07429)

## BENEFITS OF PROVIDING A SINGLE-SESSION, IN-HOSPITAL PREOPERATIVE EDUCATION PROGRAM IN PATIENTS UNDERGOING OSTOMY: A RANDOMIZED CONTROLLED TRIAL

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### 1. Topic/Introduction

Patients who undergo ostomy have a reduced quality of life due to ostomy care. In order to quickly and properly adjust to their changed bodies after ostomy, patients must acquire sufficient ostomy self-care skills through dedicated stoma education. While the changes in many healthcare systems compel healthcare professionals to shorten the duration of hospital stay, stoma education cannot be spared for the sake of patients' safety and quality of life.

### 2. Purpose

This study investigated the effects of preoperative stoma education on self-care knowledge, self-care proficiency, anxiety, depression, length of hospital stay, and stoma-related complications.

### 3. Methodology

Patients were randomized into the intervention group (n=21) or the control group (n=20). The control group underwent stoma site marking and three postoperative education sessions, and the intervention group received a single 45-minute session of video-based preoperative stoma education along with stoma site marking and postoperative education. Self-care knowledge, anxiety, and depression were assessed with a questionnaire, and self-care proficiency was assessed via direct observation using a checklist. Stoma-related complications were evaluated by a stoma nurse. Length of hospital stay and disease-related characteristics were analyzed from medical records.

### 4. Result

Compared with the control group, the intervention group showed significantly superior improvements in self-care knowledge ( $Z = -5.599, P < .001$ ) and self-care proficiency scores ( $Z = -5.543, P < .001$ ) Furthermore, the intervention group showed decreases in anxiety ( $Z = -2.247, P < .025$ ) and depression scores ( $Z = -2.463, P < .014$ ) as well as shorter hospital stay ( $Z = -2.661, P = .008$ ) and less stoma-related complications ( $T = -4.980, P < .001$ ).

### 5. Conclusion

In patients undergoing ostomy, a single 45-minute session of preoperative video-based stoma education was effective in significantly improving the self-reported outcomes and reducing stoma-related complications.

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## AN EXTERNAL FEMALE URINARY MANAGEMENT DEVICE: A QUASI-EXPERIMENTAL STUDY

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**Topic:** Historically, indwelling urinary catheters have managed urine in critically ill females however, catheter associated urinary tract infections (CAUTI) is a complication of these devices accounting for nearly 70% to 80% of healthcare acquired infections. This risk increases 3% to 7% each day the device is in place. Therefore, it is beneficial to manage urine in critically ill females with an external urinary device, obtain urine output measurements, and avoid skin injury including incontinence associated dermatitis (IAD).

**Purpose/Aims/Research Question:** To examine the use of an external female urinary management device in critically ill women unable to self-toilet.

**Aim 1.** Examine the proportion of urine loss compared to total urine output when using the external female urinary management device.

**Aim 2.** Explore unit indwelling management device utilization and CAUTI rates from 2016 as compared to 2018 and 2019.

**Aim 3.** Examine unit and overall prevalence of urinary incontinence (UI) and IAD 2016 as compared to 2018 and 2019.

**Study Design/Method:** This quasi-experimental study will examine the use of an external female urinary collection device in critically ill women unable to self-toilet. For aim 1 data was collected prospectively; aim 2 and 3 compared historical pre/post external female collection device implementation data.

**Results:** The external urine management system successfully collected 83% of urine. Indwelling urinary catheter use was significantly lower in 2018 (40.6%) and 2019 (36.6%) compared to 2016 (43.9%,  $p < 0.01$ ). CAUTIs were lower in 2019 than in 2016 (1.34 per 1,000 catheter days versus 0.50,  $p = 0.57$ ). The percent of incontinent patients with IAD was 69.2% in 2016 and 39.5% in 2018-2019 ( $p = 0.06$ ).

**Conclusion:** This study validates the effectiveness of the external female urinary management device as an alternative to an indwelling urinary collection device to divert urine, manage incontinence, decrease the risk of a CAUTI and IAD.

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## ELDERLY PARTNERS' EXPERIENCE OF BLADDER/ COLORECTAL CANCER DIAGNOSIS, SURGERY, AND OSTOMY

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**Topic/Introduction:** Bladder and colorectal cancer (CRC) are aggressive types of cancer with treatment creating physical and psychosocial comorbidities affecting the quality of life of patients. Numerous studies were conducted on experiences and needs of these patients, but studies on the elderly partners (65-84 y/o) was negligible, thus, they may have distinct experiences, needs, and challenges that are unknown and warrant attention.

**Purposes:** The purpose of this study was to illuminate the experiences of elderly partners of ostomates, 65 to 84 years old, with bladder and/or CRC.

**Methodology:** Giorgi's descriptive phenomenological method and narrative descriptions were used to address the knowledge gap. Partners of ostomates with bladder or CRC, 65-84 years of age, English reading and speaking, cognitively intact (Mini-Cog™ with Clock Drawing Test score of 3-5), literate at better than the 6<sup>th</sup> grade reading level (Rapid Estimate of Adult Literacy in Medicine—Short Form, score  $>4$ ), and agreed in one-on-one audiotaped interview constituted the sample. The interviews were taped, transcribed, and analyzed to identify themes.

**Results:** Eleven participants recruited from ostomy support groups from three counties in a western state were partners of ostomates with bladder and/or CRC. Three Caucasian males and eight females met the inclusion criteria, completed the interview, and constituted the sample. Five themes emerged that illuminated the partners' experience: (a) feeling supported, (b) providing support to the ostomates with cancer, (c) expressed needs, (d) accepting/adjusting to diagnosis/treatment/ostomy, and (e) advocating for the ostomate.

**Conclusion:** The findings suggested that the young- to middle-old adult partners' experiences mirror those of younger partners of ostomates with bladder and/or CRC, but their experiences differed in their expressed needs and the lack of importance of sexuality. The findings may serve as the foundation for future studies to improve the care of the elderly partners of ostomates with a bladder and/or CRC.

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## SURGICAL NURSES' PERCEPTION OF THEIR KNOWLEDGE, SKILLS AND CONFIDENCE IN PROVIDING OSTOMY EDUCATION TO ADULT POST-OP OSTOMY PATIENTS.

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Topic: Surgical Nurses' perception of their knowledge, skills, and confidence in providing ostomy education to adult post-op ostomy patients.

Purpose/objective: To improve the knowledge and skills of bedside nurses' delivery of ostomy care through an ostomy educational program. In addition, the nurses' self-perception of their confidence level in the knowledge of ostomy care and patient teaching were evaluated.

Process: The acute care WOC nurses developed an ostomy care educational program. This educational program was used as the intervention to provide knowledge and skills to three surgical unit RNs (N=117). A demographic survey tool along with *The Survey on Ostomy Care Questionnaire*, a validated tool, was sent to the RNs prior to the educational intervention to assess the general knowledge and "self-perceived" confidence level and skill-set when providing ostomy care. The WOC nurses provided the in-class teaching. Upon completion of the educational intervention, a post intervention survey was sent to all participants. The post-post intervention survey scheduled to send 6 months after the intervention was sent 17 months later due to Covid-19 pandemic.

Outcomes: Out of 117 RNs participated in the educational intervention, 59 responded to the immediate post survey. There was a 19% increase in knowledge and skills scores. There was an increase of 24% in knowledge and skills score between the pre and post-post educational intervention in ostomy care (N=42). The self-perceived competence and patient-teaching score was increased from pre educational intervention to post-post intervention by 17%. Qualitative data collected from the participants indicated an increase in self-confidence in providing ostomy care and related teaching to post-op ostomy inpatients. These findings suggest that the increase in knowledge and confidence were retained by the participants and became a culture of practice.

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## A PRAGMATIC RANDOMIZED CONTROLLED CLINICAL STUDY TO EVALUATE THE USE OF SILICONE DRESSINGS FOR THE TREATMENT OF SKIN TEARS

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**Introduction:** One of the most common types of skin breakdown in aging populations is skin tears. The International Skin Tear Advisory Panel (ISTAP) advocates for special attention to be paid to dressing selection related to skin tear management. It is paramount that dressings protect the fragile nature of the skin associated with those who at heightened risk for skin tear development.

**Purpose:** To compare the effectiveness of soft silicone dressings (a contact layer and/or foam) for the healing of skin tears with local practices that do not include soft silicone dressings.

**Methodology:** The study was a pragmatic randomised controlled prospective study. One hundred and twenty-six individuals from two long-term care facilities in Ontario Canada who presented with skin tears were randomized into the treatment group using either soft silicone dressings (a contact layer and/or foam) or the control group using non-adhesive dressings.

**Results:** The current study demonstrated that 96.9% (n=63) of skin tears in the treatment group healed over a three-week period compared to 34.4% (n=21) in the control group. The proportion of wound healing experienced at week two was 89.2% (n=58) in the treatment group compared to 27.9% (n=17) in the control group. There was a significantly greater reduction in wound surface area relative to baseline in the treatment group (2.9 cm<sup>2</sup>) compared to the control group (0.6 cm<sup>2</sup>) ( $\chi^2=21.792$   $p<0.0001$ ) at week one. Survival analysis data supported that skin tears healed 50% faster in the treatment group (11 days) compared to the control group (22 days) ( $\chi^2=59.677$   $p<0.0001$ ).

**Conclusion:** Results of this study suggest the use of silicone dressings support wound healing and aid in wound closure

within the expected healing trajectory, with faster complete wound closure and mean healing times compared to non-silicone dressing for the treatment of STs.

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## **DIGITIZING WOUND CARE: HOW DATA-DRIVEN WOUND MANAGEMENT TRANSFORMED OUR PRACTICE FOREVER**

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### **Topic**

The lack of standardized and consistent wound data is a significant barrier to evidence-based decision making, impacting care plans and outcomes<sup>1</sup>. A UK-based healthcare provider responsible for treating thousands of patients with chronic wounds faced several challenges:

1. Inability to determine the efficacy of interventions and outcomes at both front-line clinical and strategic levels due to variability in recording methods within the EPR system, leading to a lack of robust data<sup>2</sup>
2. Inability to consistently track the progress of an individual wound due to the use of non-standardized techniques for wound measurement, giving way to high levels of inter/intra observer error<sup>3</sup>
3. Capacity and demand challenges, resulting in individual patients being seen by multiple clinicians, hindering continuity of care<sup>4</sup>

### **Purpose**

The provider opted to deploy a scalable, smartphone-based solution allowing clinicians to precisely measure, document and track wounds over time, and use that data to optimize care plans and enhance wound management processes.

### **Process**

Over 200 multidisciplinary staff were trained and designated clinicians acted as “champions” to help lead the solution’s implementation and aid with clinical buy-in.

### **Outcomes**

16000+ wound assessments have been recorded resulting in:

1. Adoption of data-driven wound care. Clinicians are alerted when wound variables indicate deterioration, prompting an earlier review of the care plan
  2. A compelling visual record displaying the wound’s progress allows clinicians to easily track progress, which increases patient engagement and adherence to care plans.
  3. Senior clinicians and managers use bespoke dashboards for a bird’s-eye view of wounds, providing the ability to identify organizational trends (e.g. by wound aetiology and healing rate)
  4. Optimized skill-mixing, with junior staff assessing wounds under the remote, real-time guidance of expert clinicians. This allows for enhanced collaboration among staff members and the upskilling of junior staff, while ensuring continuity of care
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## **DIAPER DERMATITIS ALGORITHM QUALITY IMPROVEMENT INITIATIVE TO DECREASE INCIDENCE OF AND SEVERITY OF DIAPER DERMATITIS USING A RELIABLE AND VALID SCORING TOOL IN THE NEONATAL INTENSIVE CARE UNIT (NICU)**

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*Background:* Neonatal skin is highly fragile especially in the critically ill. Many factors affect the skin, specifically the diaper region, causing dermatitis skin breakdown that can lead to open, bleeding ulcers. Though direct diaper dermatitis etiology is unknown, many believe it can be prevented with optimal skin care. The prevention comes from evidence-based care standards using tools and algorithms that promote optimal skin care and positive patient outcomes.

*Local problem:* The Neonatal intensive care unit (NICU) has a high incidence of severe diaper dermatitis cases.

*Methods:* SQUIRE 2.0 Quality Improvement guidelines were used for the manuscript framework. Using a quality improvement method, a diaper dermatitis care algorithm was

created and embedded in a reliable and valid scoring tool to guide NICU staff. Pre and post data diaper dermatitis scores were collected prior to and three months after implementation. Using convenience samples during the National Database for Nurse Quality Indicators (NDNQI) prevalence days, baseline comparison of scores was evaluated using The Levene's Test for Equality of Variances.

**Interventions:** In a 98-bed, Level IV NICU, after staff education provided, the care algorithm was implemented with references available at the bedside and electronically.

**Results:** Pre-data reflected few severe diaper dermatitis scores. Post-data collected was analyzed using Levene's Test for Equality of Variances and compared to the collected pre-data. The end results indicated  $t(162) = .746, p = .368, d = .098$ ; Presenting no statistical significance with the algorithm. Extraneous variable with water-based baby wipes discovered.

**Conclusions:** A diaper dermatitis care algorithm did not reflect statistical significance; However, the algorithm did impact clinical practice through increased autonomy and empowerment of nursing staff to initiate treatment using a standardized and evidence-based approach. After the completion of the QI project, NICU leadership performed a quality chart audit; they reportedly found 100% compliance with instrument use.

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## PROSPECTIVE MEASUREMENT OF THE TRAJECTORY OF ADJUSTMENT OUTCOMES AMONG NEW STOMA PATIENTS UP TO NINE MONTHS AFTER SURGERY

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### Background:

There is insufficient prospectively collected evidence about adjustment to a stoma over time (Indrebø, Natvig, & Andersen, 2016; Näsval et al., 2017)

### Aim:

To describe a 9 month adjustment trajectory post stoma surgery, among a representative sample of new Australian ostomates and explore the trajectory against personal and clinical characteristics.

### Method:

A questionnaire was offered to consecutive new stoma patients at five points of measurement from at-discharge to nine months post-surgery. The instrument comprised:

1. the Ostomy Adjustment Inventory (OAI-23) (Simmons, Smith, & Maekawa, 2009), which reduces to four domains: Acceptance, Anxious Preoccupation, Social Engagement and Anger.
2. An inventory of clinical and personal demographics.

Repeated measures analyses were conducted to explore the adjustment trajectory. Cross sectional analyses by patient descriptor were conducted and multivariate analyses were conducted to refine predictive models of adjustment at 9 months.

### Results

N=735 participants received a stoma, and n=230 had remained in the study at 9 months follow up. At nine months, anger was on an improving trend ( $P<0.05$ ) and anxious preoccupation was worsening ( $P<0.001$ ). Acceptance and social engagement were flat. Multivariate analysis confirmed predictive importance for younger age as a predictor of better adjustment on all domains, and cultural/linguistic diversity status which predicted poorer adjustment on 3 domains. Female gender and self-report of engagement with other ostomates during the follow-up period positively predicted social engagement. Elective surgery was predictive of better anger and acceptance and incontinence at time of surgery predicted positive change on anger. Many participants did not return to intimate relationships following surgery. Only one third of participants had contact with other people with a stoma.

### Conclusion

An important prospective analysis which is largely missing from the literature is contributed. Service development ramifications with regards psychological supports for this group of patients appear evident.

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