Introduction

Clinical Practice Problem

- Incontinence-associated dermatitis (IAD) is a condition in which the skin becomes erythematous and inflamed following exposure to urine or stool (Gray et al., 2011).
- In acute care, incontinence has a reported prevalence rate of 19.7% to 20.3% with 42.5% to 54.0% of patients experiencing skin impairments including IAD, pressure ulcers (PU), and fungal rashes (Junkin & Selkoff, 2007).
- Incontinence has been linked to the formation of PUs (Junkin & Selkoff, 2007).
- Nurses have difficulty distinguishing PUs from IAD (Beekman et al., 2010; Deflohr & Schonhoen, 2004; Mahony et al., 2011).
- At the evidence-based practice (EBP) project site, data on the prevalence or incidence of IAD were absent, documentation to capture nursing interventions related to incontinence was not standardized, nurses’ level of knowledge related to differentiation of IAD from PUs was unknown, and evaluation of incontinence pads and cloth pads was lacking.

Purpose

The purpose of this practice improvement project was to implement and evaluate the impact of an IAD evidence-based intervention bundle for the identification, prevention, and management of IAD in hospitalized adults.

Clinical Practice Question

- For adults with urinary and/or fecal incontinence hospitalized in a large Midwestern academic medical center, how does implementation of a bundle of interventions from evidence-based IAD best practice guidelines including (a) use of a defined skin care program, (b) education of nurses (RNs) on IAD assessment, (c) evaluation of absorptive products, and (d) frequency of interventions within electronic nursing program, (b) education of registered nurses (RNs) on IAD assessment, best practice guidelines including (a) use of a defined skin care protocol/Documentation Enhancements: IAD Differentiation Education:

Current Evidence

- Database Search Description
  - Database searched included the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Ovid/MEDLINE, PubMed, Proquest, the Cochrane Library, and National Guideline Clearinghouse.
- Key Search Term Selection
  - Key search words included incontinence, dermatitis, perineal, incontinence pads, fecal incontinence, urinary incontinence, pressure ulcers, and intertriginous.

Key Literature Sources

- Intervention: A defined skin care bundle
  - Rodby effective Level I Evidence: Baines et al. (2003)
- Use of a pH balanced skin cleanser
  - Rodby effective Level I Evidence: WOCD (2010)
- For patients at risk for IAD include a skin assessment
  - Rodby effective Level I Evidence: Bowers et al. (2009)
- Provide education to different pressure ulcers from IAD
  - Rodby effective Level I Evidence: Bowers et al. (2009)
- Evaluate absorbent products
  - Rodby effective Level I Evidence: Brown (1999a)
- Interventions that cause moisture away from skin
  - Rodby effective Level I Evidence: JCIOS (2010); WOCD (2010)
- Every use of disposable underpads/pads
  - Rodby effective Level I Evidence: JCIOS (2010); WOCD (2010)
- Avoid use of cloth underpads/pads
  - Rodby effective Level I Evidence: Brown (1999a)
- Develop documentation software to track IAD and nursing interventions as a means to measure quality
  - Rodby effective Level I Evidence: Larmamet et al. (2001)

Synthesis of the Literature

- The clinical problem of IAD is multi-factorial requiring implementation of a bundle of nursing interventions.
- An educational program using photographs can improve nurses’ ability to identify IAD.
- Nursing documentation can be used to determine the frequency interventions are ordered and implemented (a measure of quality).
- Four national/international PU prevention guidelines identified the importance of managing incontinence/moisture in preventing PUs. The clinical problem of IAD is multi-factorial requiring implementation of a bundle of nursing interventions. An educational program using photographs can improve nurses’ ability to identify IAD. Nursing documentation can be used to determine the frequency interventions are ordered and implemented (a measure of quality). Four national/international PU prevention guidelines identified the importance of managing incontinence/moisture in preventing PUs.

Theoretical Framework

- Systems need to be designed that will sustain and monitor the impact of IAD interventions
- Prevalence and chart review data have to be trended over time to determine changes and IAD best practices was not required and not completed prior to the second audit. A more absorbent incontinence pad was selected and the use of cloth pads discouraged.

Evidence-based Practice Model

- Multisystem Model of Knowledge Integration and Translation (MKIT)
  - MKIT involves a circular process of reflective inquiry, knowledge seeking/generation, integration, implementation, evaluation, monitoring, and feedback.
  - Diffusion of best practices occurs through partnerships within the microsystem, mesosystem, and macrosystem (Palmer & Kramlich, 2011).

Study Design

- A prospective, comparative, and descriptive design
- Baseline data with comparison to post-intervention data

Measurement Tools

- Modified NANDA-I program for IAD differentiation education (Deflohr et al., n.d.)
- Modified Nursing Care Plan Data Collection Instrument (Larrabee et al., 2008)
- Use of LHI skin care protocol/Documentation Enhancements: IAD Differentiation Education:

Key Literature Sources

- Key Stakeholders
  - IAD - RNs, patient care assistants
  - Nursing Informatics: Informatics, quality specialists, CNIs, inpatient nursing practice subcommittee
- Macrosystem: Purchasing, nursing supply value analysis team, linen and central services.

Readiness for Change

- Facilitators
  - Goodness-of-fit with EBP project clinical site’s PU prevention priority
  - Incontinence with the Minnesota Hospital Association (MHA) skin safety program (2011)
  - Reputation as a provider of quality care
  - EBP and quality improvement commitment
- Barriers
  - Staff reluctance to change current behaviors
  - Multiple concurrent changes
  - Competing priorities for resources (informatics and data queries)
  - Functionally defined measures of the current electronic medical record system

Cost/Benefit Analysis

- Following RN education, IAD knowledge test scores were significantly higher (p < .0001). Similarity of pre- and post-chart audit results was likely influenced by the fact that staff education on documentation changes and IAD best practices was not required and not completed prior to the second audit. A more absorbent incontinence pad was selected and the use of cloth pads discouraged.

Discussion

- Clinical Practice Implications
  - Prevalence and chart review data have to be trended over time to determine changes and IAD best practices was not required and not completed prior to the second audit. A more absorbent incontinence pad was selected and the use of cloth pads discouraged.
- Systems need to be designed that will sustain and monitor the impact of the IAD intervention bundle.
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Table 1. Summary of Findings

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<th>Post-</th>
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<tbody>
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- Decrease variety of available skin care products
- Increase educational-based interventions for IAD
- Monitor IAD incidence relative to efforts to decrease catheter days
- Transferability of Project/Results – Lessons Learned
- Early identification and ongoing involvement of multidisciplinary stakeholders in the EBP process is critical to project success.
- When a project is aligned with institutional priorities, resources are more likely to be granted.
- Request agenda time for necessary approvals early to avoid delays.