

## ABSTRACT

Incontinence is associated with increased use of healthcare dollars for caregiver time, containment, cleansing and skin protection products, and skin injuries. The injuries associated with incontinence, such as pressure ulcers, dermatitis and secondary infections, are considered preventable and viewed as quality indicators by regulators and consumers. Although well-defined in long term care, there is a gap in reporting for acute care. Three medical centers conducted a pilot prevalence survey of incontinence and perineal skin injury in March of 2005.

Total patient census was 1,004 with complete data present for 976 with an equal mix of male and female. Foley catheters were present in 341 (34.9%) patients (considered continent). 198 (20.3%) were incontinent of urine (2.6%), stool (13%) or both (4.7%) in the preceding 24 hours. Of the patients with incontinence, 54% (106/198) had a skin injury of the perineal area. 33% had a pressure ulcer, 27% perineal dermatitis, and 18% fungal infection. Of those patients, 21% (42/198) had more than one type of injury. Skin injury was more prevalent (93%, 99/106) for incontinent patients with containment products than those without (7%, 8/106).

This pilot survey is among the first to define the prevalence of incontinence and perineal skin injury in acute care. Clearly, incontinence with fecal involvement is prevalent. Issues identified as a result of this survey include: the need for operational definitions for perineal dermatitis as differentiated from pressure ulcers,<sup>1</sup> identification of risk factors, and exploration of the role that containment and protective products play.

### Behavioral Objectives:

1. Participant will be able to identify the extent of incontinence in the acute care setting.
2. Participant will be able to list three types of perineal skin injury related to incontinence.
3. Participant will be able to discuss trends for incontinence and perineal skin injury in acute care.

## INTRODUCTION

Increased emphasis from regulating agencies on the prevention of nosocomial pressure ulcers in healthcare institutions today requires us to better understand our hospital patient population and the etiology of their skin injuries. Incontinence has long been associated as a risk factor for pressure ulcer development; however, other skin injuries associated with incontinence remain in the background.

The objective of this pilot survey was to identify the prevalence of incontinence in acute care, the frequency of skin injury in the incontinent patient, and current care practices in the management of incontinent patients.

Three medical centers agreed to participate in a pilot prevalence survey of incontinence and perineal skin injury.

The coordination of the data collection occurred through the Wound, Ostomy and Continence nurses at each facility. One nurse served as lead coordinator at each site and collaborated on the data tool development and variable definitions. Coordinators were responsible for:

- Scheduling a 24-hour period to conduct the survey
- Orienting data collectors to the data collection tool and definitions
- Conducting any necessary education

## SETTINGS & PATIENT POPULATIONS

The pilot survey was conducted at three geographically diverse acute care hospitals in the spring of 2005. Adult acute care inpatients including critical care, medical, and surgical diagnosis were the intended target population of this survey with the universal exclusion of Labor & Delivery and Neonatal patients.

- **University of Maryland Medical Center (UMMC)** is a 650-bed academic medical center that is part of a six-hospital system. Three pediatric patients (4-19 yrs) were included on surveyed units at UMMC. Units excluded were Psychiatric and Rehabilitation.

- **University Hospitals of Cleveland (UHHS)** is a 947-bed tertiary medical center specializing in adult/pediatric medical and surgical specialties. Units excluded were Psychiatric, Long Term Rehabilitation and Skilled Nursing.

- **BryanLGH consists of two acute care facilities in Lincoln, Nebraska** with 500 beds that serve the midwest region. Geriatric Psych and Rehabilitation units were included in data collection.

UHHS and BryanLGH coordinated the pilot survey to coincide with a routine site pressure ulcer prevalence survey.

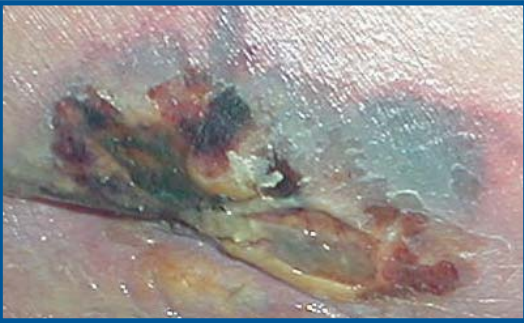





# WHAT WE DON'T KNOW CAN HURT US

## Pilot Prevalence Survey of Incontinence and Related Perineal Skin Injury in Acute Care

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## DEFINITIONS

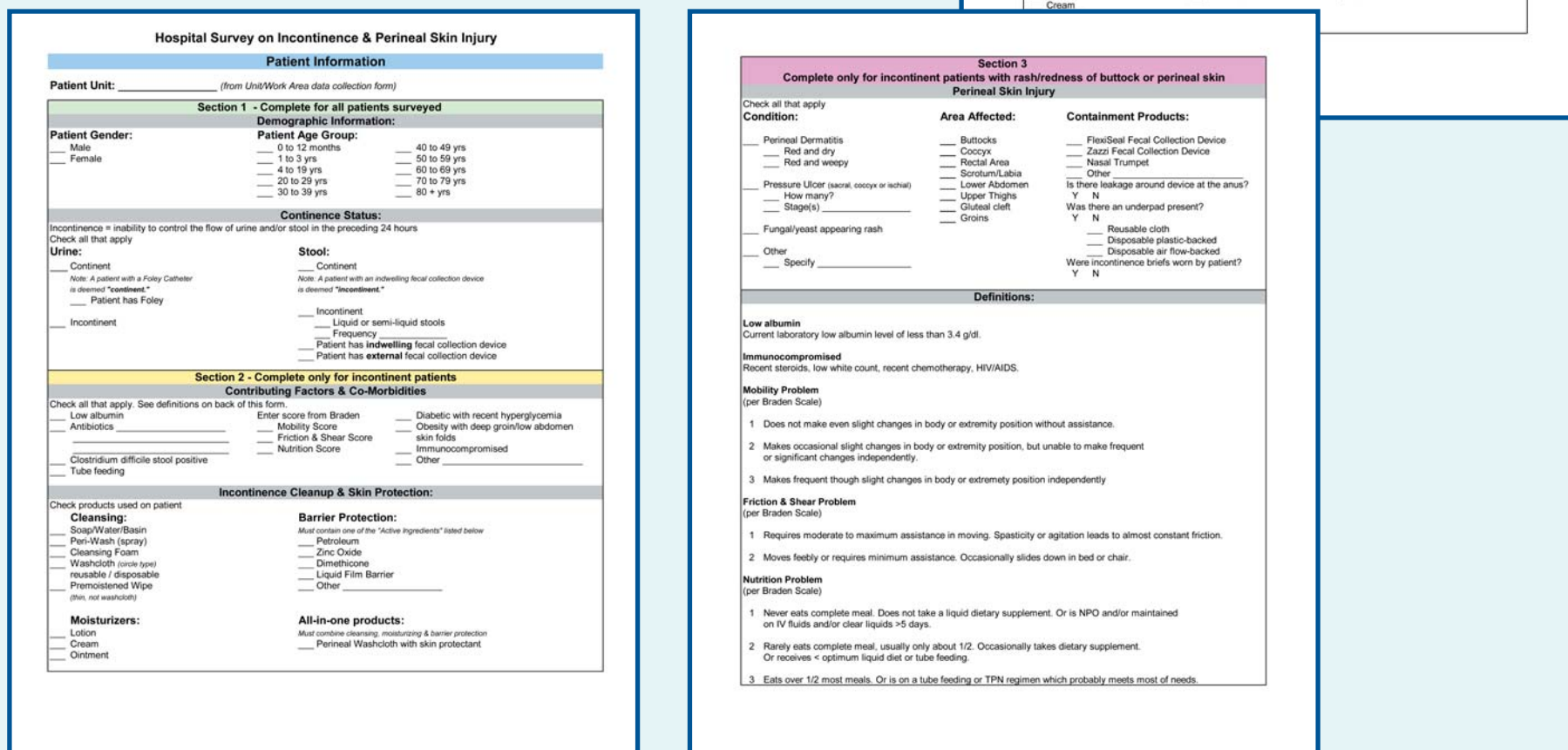
A requirement of the data collectors was the ability to differentiate perineal skin injury between pressure ulcers, perineal dermatitis, fungal infections, and other injuries.

Pressure ulcers	Dermatitis due to contact with urine or feces	Fungal infections (yeast, candida, "heat rash")
		
		
<ul style="list-style-type: none"><li>&gt; Located over a bony prominence</li><li>&gt; Over coccyx (tailbone) or ischia (butt bones); they are usually round or oval shaped</li><li>&gt; Over sacrum, may be butterfly shaped or oval if mostly on one side</li><li>&gt; Well defined edges—no satellite lesions</li></ul>	<ul style="list-style-type: none"><li>&gt; Location is where the skin lays in or on urine or feces; not over a bony prominence</li><li>&gt; Early injury is bright red, then bright red and weepy</li><li>&gt; Post-acute skin is purplish and very dry, peeling like a sunburn</li><li>&gt; No satellite lesions unless also has fungal</li></ul>	<ul style="list-style-type: none"><li>&gt; Located in any moist area; usually begins in a skin fold</li><li>&gt; Creates its own moisture if not treated early</li><li>&gt; Early injury is fiery red, sometimes with a thin white coating over the top</li><li>&gt; Main differentiation from simple contact dermatitis is satellite lesions—red spots or pimples scattered at the edges</li></ul>

## DATA COLLECTION

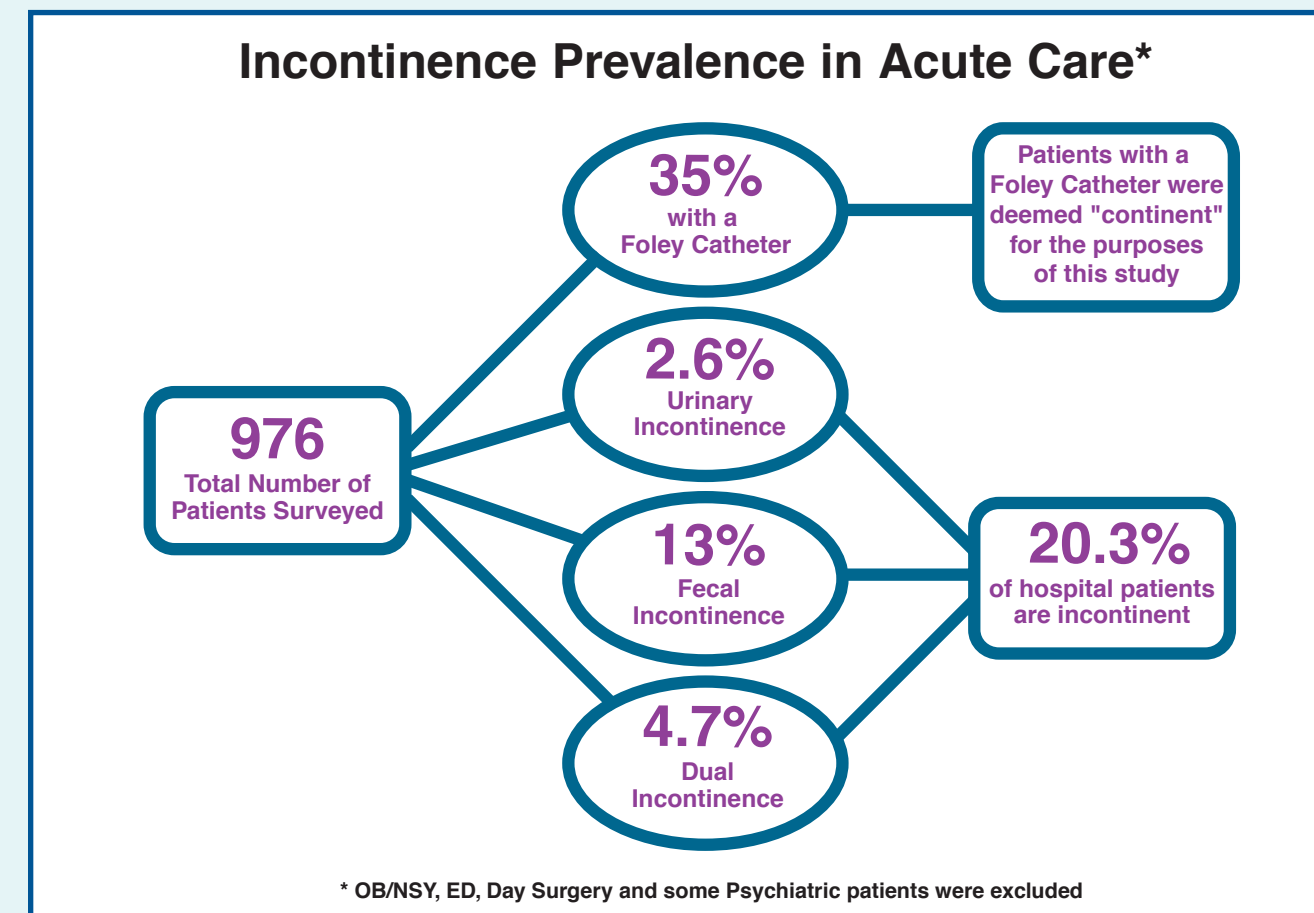
The tool consisted of two (2) forms:

- 1) **The Unit/Work Area Form** was used to record date, unit census, medical specialty and type of incontinence care products available on unit.
- 2) **The Patient Information Form** was used to record gender, age group, and incontinence status on all inpatients. If the patient was "incontinent" of urine and/or stool (inability to control the flow of urine and/or stool in the preceding 24 hours) then contributing factors, co-morbidities, products used on the patient, and information on any perineal skin injury was collected. Patients with a Foley catheter were deemed "continent" of urine.

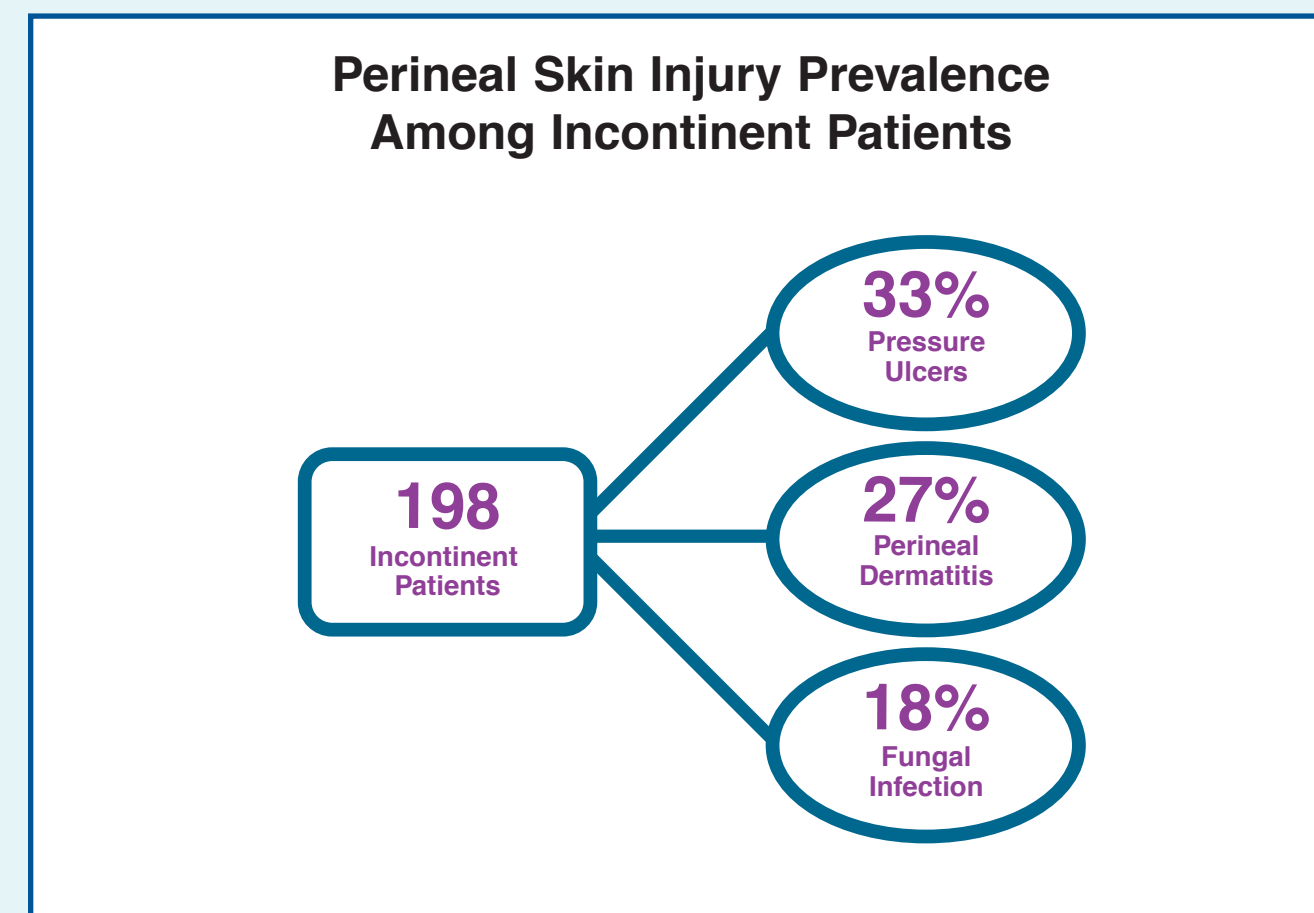


The image shows three forms used in the survey. Form 1 is the 'Unit/Work Area' form, which includes instructions, a checklist for incontinence collection products (like absorbent pads, briefs, etc.), and a checklist for containment products (like pressure ulcers, dermatitis, etc.). Form 2 is the 'Patient Information' form, which includes patient demographics (age, gender, race, etc.), incontinence status (urine, stool, or both), and a checklist for perineal skin injury (pressure ulcer, dermatitis, fungal infection, etc.). Form 3 is the 'Perineal Skin Injury' form, which includes a checklist for the condition (e.g., pressure ulcer, dermatitis, fungal infection), area affected, and containment products used.

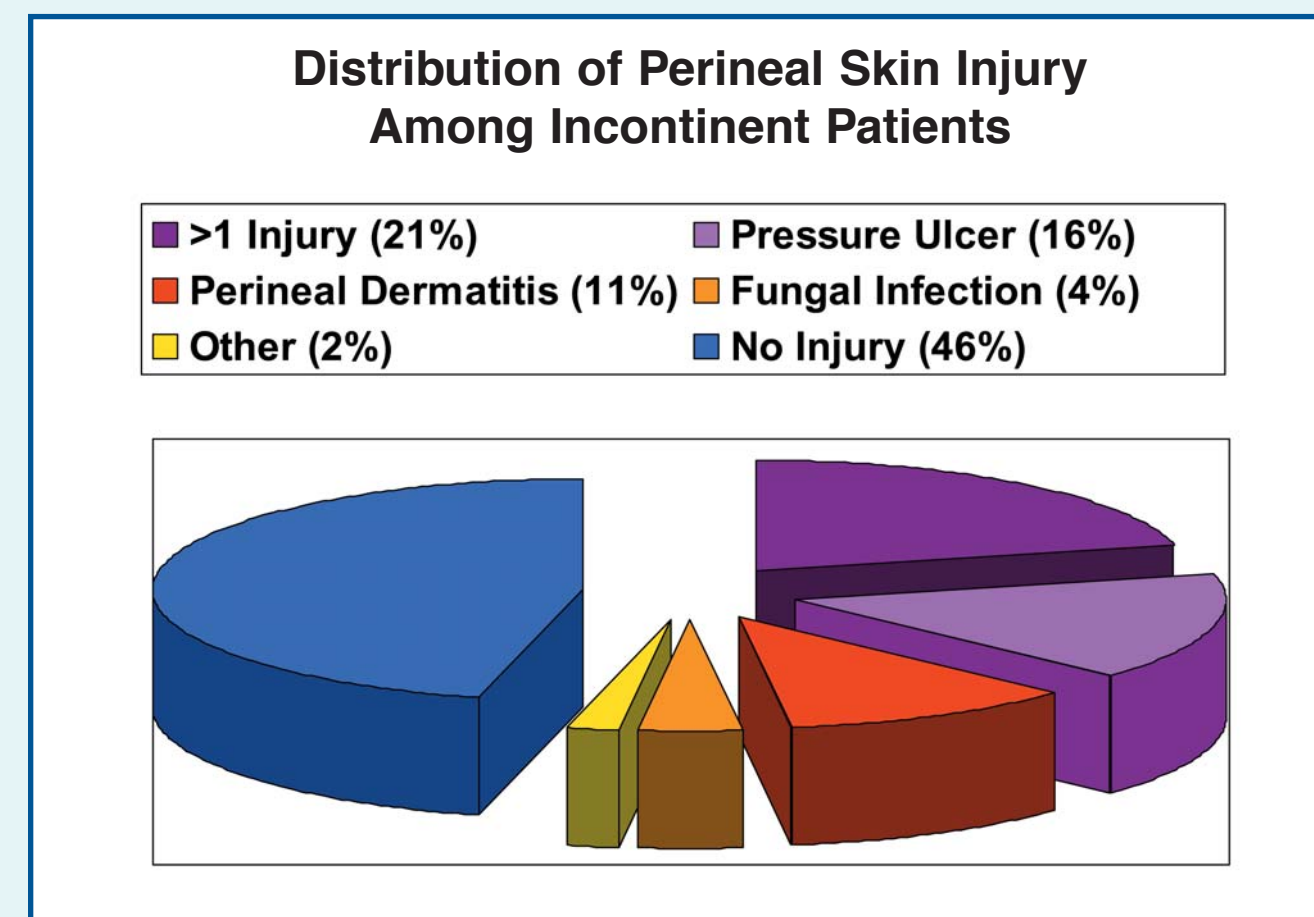
## RESULTS



Total patient census was 1,004 with complete data present for 976. There was an equal mix of male and female patients surveyed.



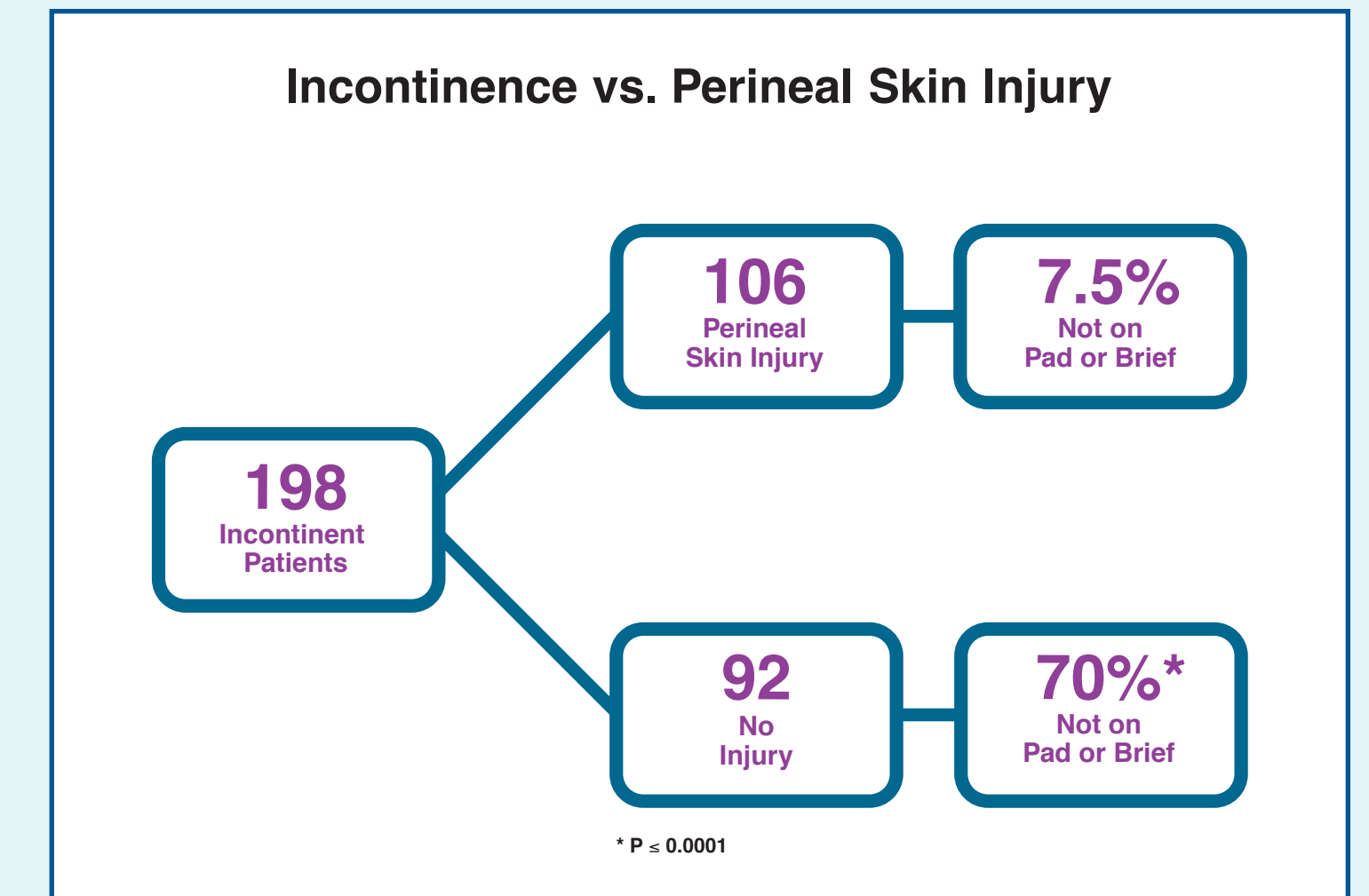
Incontinent patients could have >1 perineal skin injury.



For those patients with >1 injury, perineal dermatitis and pressure ulcers were the most frequent combination.

## IMPLICATIONS FOR PRACTICE

- The identification of the number of incontinence patients, the type of incontinence, and where these patients are located have implications for resource allocation in personnel, education and products.
- It is important for bedside clinicians to be able to identify and differentiate skin injury related to incontinence for treatment to produce optimal patient outcomes.
- Multiple cleanup and skin protection products in the same category were often selected (checked off) on the patient data collection tool which could indicate a lack of standardization in care practices. It should be noted that this is a subjective measure that was reliant on data collectors observing products stored in the patient's room or staff recall of products used for last incontinence cleanup. The survey method was unable to reliably capture these variables.



- Skin injury was more prevalent (92%, 98/106) in patients placed on containment products than those who were not (8%, 8/106).
- Although research supports the efficacy of polymer core/air flow pads and briefs in better patient skin outcomes,<sup>2</sup> the most frequent containment devices for absorbency were cloth pads, plastic-backed pads and diaper/briefs. This survey prompted all three pilot sites to re-evaluate containment product choices in their facilities and implement changes as necessary.
- Revealingly, 40% of incontinent patients had multiple containment products used, the most frequent being a cloth pad, plastic-backed pad or both used in combination with a brief. This practice, however, was not necessarily tied to any specific type of incontinence. It also is reflective of the multiple choices available for cleanup and skin protection products that could lead to confusion and inconsistency in product selection.

## CONCLUSION

This pilot survey is among the first to define the prevalence of incontinence and perineal skin injury in acute care. Clearly, incontinence with fecal involvement is prevalent. Issues identified as a result of this survey include: the role frequency and severity play in skin injury, the need for operational definitions for incontinence-related skin injury, identification of risk factors, and exploration of the role products play in prevention and treatment.

## REFERENCES

1. The NPUAP dual mission conference: reaching consensus on staging and deep tissue injury. OWM. 2005;51(4):34.
2. Brown DS, Diapers and Underpads, Part 1: Skin Integrity Outcomes. OWM. Nov-Dec 1994;40(9):20-32.

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