TITLE: A Prospective Window into Medical Device-Related Pressure Ulcers in Intensive Care.

AUTHORS:

Fiona M. Coyer, RN, PhD

Associate Professor

Queensland University of Technology

School of Nursing

Victoria Park Rd

Kelvin Grove, 4059, Queensland

Phone (+61 7 3138 3895)

FAX (+61 7 3138 3814)

Email: f.coyer@qut.edu.au

Nancy A. Stotts, RN, EdD, FAAN

Professor Emeritus

University of California San Francisco

2 Koret Way #631

San Francisco, CA 94143-0610

Phone (415) 476-4412

FAX (415) 476-8899

e-mail: nancy.stotts@nursing.ucsf.edu

Virginia Schmied Blackman, RN, MS, CNS

Doctoral student

University of California San Francisco

2 Koret Way #631

San Francisco, CA 94143-0610

Phone (415) 476-4412

FAX (415) 476-8899

e-mail: virginia.blackman@nursing.ucsf.edu

Corresponding author:

Fiona M. Coyer, RN, PhD

Associate Professor

Queensland University of Technology

School of Nursing

Victoria Park Rd

Kelvin Grove, 4059, Queensland

Phone (+61 7 3138 3895)

FAX (+61 7 3138 3814)

Email: f.coyer@qut.edu.au

Key words

Medical device-related pressure ulcer

Pressure ulcer

Prevalence

Intensive care

Critical care

Prospective repeated measures

Cross-sectional study

ABSTRACT

Objective: To determine the prevalence, severity, location, etiology, treatment, and healing of medical device-related pressure ulcers in intensive care patients for up to 7 days.

Design: Prospective repeated measures study.

Setting and participants: Patients in 6 intensive care units of 2 major medical centers, one each in Australia and the United States, were screened 1 day per month for 6 months. Those with device-related ulcers were followed daily up to 7 days.

Outcome measures: Device-related ulcer prevalence, pain, infection, treatment, healing.

Results: 15/483 patients had device-related ulcers and 9/15 with 11 ulcers were followed beyond screening. Their mean age was 60.5 years, most were men, over-weight, and at increased pressure ulcer risk. Endotracheal and nasogastric tubes were the cause of most device-related ulcers. Repositioning was the most frequent treatment. 4/11 ulcers healed within the 7 day observation period.

Conclusion: Device-related ulcer prevalence was 3.1%, similar to that reported in the limited literature available, indicating an ongoing problem. Systematic assessment and repositioning of devices are the mainstays of care. We recommend continued prevalence determination and that nurses remain vigilant to prevent device-related ulcers, especially in patients with nasogastric and endotracheal tubes.