

DOCTOR OF NURSING RESEARCH PORTFOLIO



Pressure Ulcer Prevention in the Perioperative Environment

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Submitted in fulfilment of the requirements
for the Degree of Doctor of Nursing

Department of Clinical Nursing
University of Adelaide

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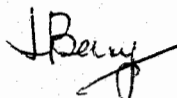
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Department of Clinical Nursing

I certify that this doctoral portfolio entitled:

Pressure Ulcer Prevention in the Perioperative Environment

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Date: 17th March 2005

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There have been many people who have provided encouragement, support and advice during the completion of my studies, and I wish to acknowledge them, for without them the 'road' would have been just that bit more difficult.

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Photograph of Operating Room, Royal Adelaide Hospital reproduced with kind permission by the History & Heritage Office, RAH.

Portfolio Overview

There are many terms used to describe pressure ulcers: pressure sores, decubitus ulcers, bedsores, and pressure necrosis or ischaemic ulcers. Essentially they all describe damage to the patient's skin and underlying tissue.

The nursing literature abounds with information about the risk, grading, prevention and treatment of pressure ulcers. These ulcers are a problem in hospital and long term care facilities, and are a major cause of morbidity. In the hospital setting they contribute to an extended length of stay and by doing so 'block' the bed for use by another patient. The ulcers are difficult to treat, are an ongoing cause for pain and discomfort for the patient and can be a strain on hospital finances.

Pressure ulcers are not unique to modern times, as they have been discovered on the remains of an Egyptian mummified body (Armstrong & Bortz 2001). This would suggest that the problem dates back to the Pharaohs, and has continued to be a challenging problem throughout the centuries (Bridel 1992). The escalating costs of treating these ulcers today, has brought about an emphasis on the risk factors, prevention and the appropriate interventions, rather than an acceptance of these ulcers as a tolerable condition (Bridel 1992).

In the operating room, nurses are faced with unique challenges when caring for their patients. This is due to difficulty in caring for patients under the influence of the anaesthesia required for surgery, long periods of forced immobility and the inability of the patient to perceive pain and discomfort from the pressure of the hard surface of the operating room table. These problems are increased by nurses' inability to gain access to the patient because of the sterile drapes required to cover the patient for surgery. Armstrong and Bortz (2001) present information from one study in which it is stated that surgical patients have 90% greater chance of developing pressure ulcers than medical patients. One reason for this may be due to the limited information available in regard to the most

effective support surface to place on top of the operating room table. This gap in information is problematic for operating room nurses as it limits their ability to select the most effective item of equipment, and determine if the chosen equipment reduces pressure on tissue intra-operatively.

The most effective operating room table mattress used and the skills and knowledge of the operating room nurse about the aetiology and prevention of pressure ulcer prevention, are important aspects of nursing care and can influence patient outcomes. The potential for complications to occur may be dependent on single or combined factors such as the patient's age, disease processes, nutritional status and mobility. Preparatory and supportive nursing interventions for surgical procedures based on best available evidence, nursing experience and patient preference, can reduce the incidence of pressure ulcer development in the perioperative environment.

This doctoral portfolio contains four separate sections related and linked together by a common theme – pressure ulcer prevention in the perioperative environment. This first section of the portfolio situates the topic and provides a brief overview of the portfolio.

The second section is a critical review of the literature pertaining to the most commonly used operating room table mattresses, and the effectiveness of these mattresses in the prevention of pressure ulcer development. This review highlighted a lack of quality research in this area, and while many evaluations have been undertaken to determine the effectiveness of operating room table mattresses, the results are contradictory concerning the patients, exposures and interventions. Because of issues related to the methodological quality of published research in this area a systematic review using meta-analysis was not possible rather a critical review of the research literature is used.

The third section of the portfolio reports on a hermeneutic ethnography of the perceived skills and knowledge of nurses in the prevention of pressure ulcer development in the perioperative environment. This study was designed to determine if pressure ulcer prevention forms an aspect of the everyday practice of perioperative nurses. This review has highlighted the need for operating room nurses to review practices when caring for patients in the perioperative environment particularly in respect of pressure ulcer prevention.

The fourth and final section of the portfolio summarises the research and provides recommendations for nursing practice and further research in the area of pressure ulcer prevention in the perioperative environment.

References

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