

Project Summary for EPUAP website

Project Title: Effects of Critical Patient-Centred Skin Care on Barrier Functions of Skin

Project Team:

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Project Focus: To investigate the effects of patient-centered skin care on skin barrier functions and skin integrity in intensive care unit.

Introduction: Many critical diseases can damage skin and tissue integrity due to immobility, hemodynamic instability, poor tissue perfusion, use of medical devices and many other internal and external factors. Skin damage frequently seen in intensive care units; it can be listed as skin tears and secondary cutaneous infections, especially pressure injuries (PI) and incontinence-associated dermatitis (IAD). In the DecubICU's study, which has the largest sample number ever, published in 2021, the prevalence of pressure ulcers and related factors in 1117 intensive care units from 90 different countries were evaluated; Pressure ulcers were detected in 6747 of 13,254 patients hospitalized in the ICU, and 57% of these wounds were reported to be associated with the intensive care unit. In addition to pressure injuries, another skin problem that has also been focused on in nursing science in last years; incontinence-associated dermatitis. IAD, which develops on the skin exposed to urine and faeces, is not only a skin damage that needs to be examined on its own, but also paves the way for the development of pressure injuries. Despite the limited literature, the high prevalence rates and the strong relationship between pressure injuries and incontinence associated dermatitis point to the necessity of evaluating these two skin injuries together.

It is highly important to integrate evidence-based practices into clinics to maintain skin integrity. Furthermore, the person-centered approach in skin care has been considered as a concept that should be focused on by the authors in recent years, and in a systematic review published in 2020, clinical applications of the person-centered care approach in wound care were suggested by considering the current evidence. However, the resources in which prevention strategies are focused on person-centered care are very limited.

The study, which was designed as a randomized controlled trial, has two phases. First, a critical patient-centered skin care protocol will be developed, and then this skin care protocol will be applied to the patients in the determined experimental group. In the control group, the routine skin care of the hospital where the study is carried out will be applied. To evaluate the effects of applications on the barrier function of the skin, transepidermal water loss, skin pH and skin temperature will be evaluated. As a secondary outcome, the incidence of pressure ulcer and incontinence-related dermatitis will be followed.

Project Aim: To develop a critical patient-centered skin care protocol and to examine the effects of this protocol on the barrier functions of the skin.

Key Milestones:

The following will be achieved during this scholarship:

- Develop the patient-centered skin care protocol and create a tool for critically ill patients.
- Develop a better understanding of detailed assessment techniques of barrier functions of skin.
- Identify pathophysiological precursors for early diagnosis of pressure ulcer and incontinence dermatitis.
- Investigate the effects of person-centred skin care on protecting of skin barrier functions.

As a schedule, key milestones were decided as follows.

- **May 2023:** Ethical approval and hospital approval must be obtained.
- **July to August 2023:** All equipments must be purchased.
- **September to December 2023:** Data collection must be started in September and must be completed in December.
- **December 2023 to February 2024:** Data analysis and preparation for publication
- **March 2024:** Defence of PhD dissertation.
- The Southampton visit will be scheduled with Dr. Peter Worsley between the months mentioned above.

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