



## The Current State of the Clinical Utility of Evidence-Based Practice for Ulcer Prevention in Long-Term Care Facilities

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### ABSTRACT

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**Background:** Pressure ulcers (PUs) are localized skin injuries that mostly occur over bony prominences. PU prevalence in long-term care (LTC) facilities is currently extremely high despite the availability of evidence-based practice (EBP) guidelines at national and international levels. This narrative review aimed to investigate the current state of the clinical utility of EBP in the prevention of PUs in LTC facilities.

**Methods:** A narrative review approach was used to synthesize studies that offer insights into the current state of clinical utility of EBP guidelines in LTC facilities. Studies were searched on PubMed, Web of Science, ScienceDirect, and Google Scholar.

**Findings:** The findings revealed suboptimal implementation of EBP guidelines in LTC facilities in various countries. Nurses use clinically validated risk assessment tools less often to decide patients who are at risk of developing PUs for tailored interventions. Although scheduled positioning and the use of pressure relieving devices are commonly implemented, they are less documented in care plans. Nutritional assessments and interventions are the least often used. Nurses and other healthcare professionals often involve patients, family, and carers in planning and decision-making processes, but further improvements are still needed.

**Conclusion:** There is a need to integrate into routine care clinically validated instruments for risk assessment for PU prevention in LTC facilities. Also, prioritizing nutritional assessments and interventions should be encouraged in LTC facilities, but there is a need to first understand barriers and facilitators.

### KEYWORDS:

Clinical Utility, Evidence-Based Practice, Pressure Ulcer Prevention, Long-Term Care

### BACKGROUND

Pressure ulcers (PUs) are localized tissue injuries that predominantly occur over bony protuberances (Edsberg et al., 2016). PUs are a prevalent issue in long-term care (LTC), with reported prevalence in various countries ranging between 3.4-32.4% (Anthony et al., 2019). Evidence-based strategies for PU prevention in LTC, such as the use of advanced mattresses and nutritional assessments and interventions, are extensively reported in the literature (Mäki-Turja-Rostedt et al., 2019). Evidence-based practice (EBP)

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guidelines for PU prevention have also been developed in various countries (Antony et al., 2022; Edsberg et al., 2016; National Wound Care Strategy Programme, 2024; Norton et al., 2018; Qaseem et al., 2015). The utilization of EBP guidelines for PU prevention can improve patient outcomes (Horn et al., 2010; Kottner et al., 2019; Raine, 2021; Timmerman et al., 2007). However, the extent to which nurses and other healthcare professionals implement EBP guidelines in contemporary times is unclear. A study conducted more than a decade ago revealed suboptimal implementation of such guidelines due to various challenges, such as lack of wound care professionals, multidisciplinary teams for wound care, and approaches to systematically document prevention strategies and wound data (Milne et al., 2009). Understanding the current state of the clinical utility of EBP in LTC facilities can inform recommendations for further improvement and policy.

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This narrative review aims to explore the current state of the clinical utility of EBP recommendations for PU prevention in LTC facilities. Country differences were examined and recommendations for practice, policy, and future research are offered. Sources of information were searched on PubMed, Web of Science Core Collection, ScienceDirect, and Google Scholar. Keywords like “clinical utility,” “adherence,” “clinical practice guidelines,” “implementation,” “long-term care,” and “older people” were used to search for the relevant literature on the sources. Studies providing insightful information and data into the current state of the clinical utility of EBP in LTC facilities were eligible for review.

### **Clinical Utility of EBP for PU Prevention in LTC**

#### **Identification and Management of Patients At Risk of PUs in LTC**

One of the EBP recommendations in the prevention of PUs in LTC include identifying at-risk patients for tailored interventions (Antony et al., 2022; National Wound Care Strategy Programme, 2024). However, a close look into the literature reveals that most nurses do not use validated instruments and scales to identify patients at risk of PU development, but rather rely on clinical judgment (Dellefield & Magnabosco, 2014). The authors conducted a qualitative study utilizing a sample of 16 nursing staff involved in the care of veterans in nursing homes in the United States (Dellefield & Magnabosco, 2014). The findings are consistent with a previous Dutch qualitative study that found nurses in LTC facilities had attitudes regarding PU prevention inconsistent of what is expected from them (Buss et al., 2004). However, the fact that these studies were conducted more than a decade ago means we currently do not know whether nurses use validated instruments to find patients who are at elevated risk of PU development. A survey study conducted in Korea found that most nurses (>80%) evaluated patients at risk upon admission to a LTC facility, but the study did not reveal whether they used structured and validated scales to do so (Kim & Lee, 2019). The study further revealed that most nurses did not reevaluate the risk once the PUs occurred (Kim & Lee, 2019). Additionally, although most clinical practice guidelines advocate for the use of risk assessment tools like the Braden scale and the Waterlow tool, the certainty of evidence on whether using them will make a difference compared to clinical judgment regarding pressure ulcer incidence is low (Z. E. Moore & Patton, 2019). Regardless of the assessment approach used, the studies conducted in the United States and Korea revealed that nurses and other professionals provided more rigorous care for PU prevention among the patients identified as being at risk for developing PUs (Dellefield & Magnabosco, 2014; Kim & Lee, 2019). A cross-sectional study conducted in Finland using a sample of 84 nurses working in LTC facilities revealed that almost half of the nurses reported that risk

assessment was never performed upon admission or routinely repeated after admission (Haavisto et al., 2022). The authors concluded that risk assessment as an EBP strategy for PU prevention was moderately implemented in the units (Haavisto et al., 2022).

Further, other EBP strategies for PU prevention in LTC facilities recommended in national and international guidelines include the use of pressure-relieving support systems or devices, repositioning, and nutritional assessments and dietary interventions (Mäki-Turja-Rostedt et al., 2019). A cross-sectional study conducted in Finland revealed that the most frequently used PU prevention strategies included repositioning and the use of pressure relieving devices, and nutritional interventions were the least frequently used probably due to resource constraints (Haavisto et al., 2022). The findings are exactly consistent with another study conducted in Australian routine clinical practice, which found that the implementation of reposition schedules and pressure-relieving support surfaces were the most frequently used PU prevention strategies, whereas the use of nutritional care plans was the least implemented (Chaboyer et al., 2017). However, considering they focused on routine clinical practice, their findings are less generalizable to LTC settings. Indeed, an observational study conducted in Ireland found that documented repositioning care plans were frequently inadequate in LTC facilities, though it is hard to tell whether scheduled positioning was actually being conducted by healthcare professionals regardless of documentation (Z. Moore & Cowman, 2012).

#### **Patient, Family, and Caregiver Participation in PU Prevention**

According to the UK’s National Wound Care Strategy Programme (2024), after identifying patients who are at risk of PU development in LTC, nursing staff and other healthcare professionals should involve the patient, their family, and caregivers on what they should do and what they should not do to help manage the skin damage. The qualitative study conducted in the United States revealed that nurses valued patient, family, and carer participation, but some expressed that they felt their care was not valued if a family member or the patient complained about the care provided (Dellefield & Magnabosco, 2014). It is important to involve family members and the patient in the prevention of PUs because once they occur, they can cause significant psychological affliction to them (Edsberg et al., 2016; Kottner et al., 2019). Involving them can address this psychological affliction, as well as improve patient outcomes (García-Sánchez et al., 2019; Ledger et al., 2020). In general, there is succinct evidence on the current state of patient, family, and caregiver participation in PU prevention in various countries worldwide.

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## DISCUSSION

The findings of this narrative review revealed that there is suboptimal clinical utility of EBP guidelines in PU prevention in LTC facilities. This observation is consistent with studies pointing out high prevalence and incidence rates of PUs in LTC facilities (Anthony et al., 2019). This claim is further supported by the fact that whenever the EBP guidelines are strictly implemented, the incidence of PUs reduces significantly in LTC facilities (Mäki-Turja-Rostedt et al., 2019, 2021; Young et al., 2015). Risk assessment is often conducted by nurses, but the fact that they mostly rely on clinical judgment rather than validated risk assessment tools can result in inconsistencies that can compromise the quality of care (Dellefield & Magnabosco, 2014). Further, nutritional deficiencies are common in LTC facilities, posing a significant risk for skin damage (Borkent et al., 2023). The finding that nutritional assessments are underperformed in LTC facilities insinuates suboptimal implementation of EBP guidelines on PU prevention (Haavisto et al., 2022). Also, there are country differences noted about the current clinical utility of EBP guidelines of PU prevention. For instance, in Korea, most nurses conduct risk assessments for PU development on admission, but in countries like Finland, about half of nurses do not conduct such assessments (Haavisto et al., 2022; Kim & Lee, 2019). Finally, there is a need for greater patient, family, and carer involvement in the prevention of PUs as they can significantly improve the quality of life of family and patients, as well as advance patient outcomes. Recommendations for practice and future research are discussed below.

## RECOMMENDATIONS FOR PRACTICE

Based on the review's findings, it is essential to incorporate validated risk assessment tools, such as the Waterlow and Braden scales, into routine practice. This integration will ensure consistent risk evaluation and facilitate the implementation of personalized interventions for at-risk patients (Dellefield & Magnabosco, 2014; Haavisto et al., 2022). Secondly, there is a need to prioritize nutritional assessments and often implement nutritional strategies for PU prevention. In this way, it will be manageable to address malnutrition as a modifiable risk factor of PU in LTC (Haavisto et al., 2022; Borkent et al., 2023). Finally, there is a need to enhance patient, family, and carers in planning and decision-making processes and educating them about risk factors and prevention strategies to address their psychological needs and improve patient outcomes (García-Sánchez et al., 2019; Ledger et al., 2020).

## RECOMMENDATIONS FOR FUTURE RESEARCH

The current evidence base is insufficient about country differences in the current state of the clinical utility of EBP guidelines for PU prevention in LTC facilities. Therefore, future research should address this gap.

Particularly, studies from developing countries in Asia and Africa should be conducted. Secondly, it was noted that nutritional assessments and interventions are less often implemented in LTC facilities. Future research should identify barriers and facilitators to inform policy and practice. Finally, the impact of using validated risk assessment scales and that of patient, family, and carer engagement should also be investigated in future research.

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