

# What is the Effective Nursing Care that Can Improve Bedridden Patients' Health Condition in General Hospitals?

Hiba Abdulaziz Zabidi<sup>1</sup>, Khulood Shawqi Banjar<sup>2</sup>

Ministry of Health

King Fahd General Hospital, Jeddah, KSA

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**Abstract:** Among the various age groups, elderly patients are the most category at risk of being bedridden. Each bedridden patient will differ in their recovery times, depending on the health issues or the severity of chronic diseases that they are experiencing. **Aim:** This study aimed to systematically review evidence on the effects of nursing care that can improve bedridden patients' health conditions in general hospitals, provide high-quality nursing care based on evidence-based practices, and enhance the effectiveness of nursing care in improving bedridden patients' health conditions in general hospitals. **Methods:** Research articles included in this project were selected based on a hierarchical system of classifying evidence, different databases were used for collecting data like Ebscohost, Medline, Google Scholar, SCI Hub, and CINAHL. The search was limited to the English language. The Cochrane Collaboration tool was used to assess the risk of bias. Eligibility criteria included published experimental and quasi-experimental studies reporting on the outcomes of critically ill patients. **Result:** Health researchers have reported associations between effective nursing care and patient outcomes and there was a high level of evidence of significant relation between caregiver role and bedridden patients' high quality of life, as well as studies showed the five complications have significant associations with the proportion of reported problems. **Recommendation:** Several procedures are contributing to high-quality nursing care for bedridden patients these include: effective communication during nursing shift-to-shift bedside handover, daily CHG-bathing to reduce infections among adults admitted to the ICU should be undertaken, Immediate oral care post-intubation has an effect on improving oral cavity by reducing hospital-acquired infection.

**Keywords:** Bedridden patients, Effective Communication, Ventilator-Associated Pneumonia, Oral Care, Pressure Ulcer Prevention, Nursing Handover.

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## 1. INTRODUCTION

Bedridden patients are unable to ambulate or move independently or with the assistance of an auxiliary aid, they need assistance in turning and repositioning in bed, and they need special care to prevent various complications, factors that lead to the elderly being bedridden are usually preceded by disabilities due to chronic diseases (stroke, diabetes, cancer or heart disease (Handicap International, 1996; Ishikawa, et al., 2006; Yoshino et al., 2011; Wani & Malik, 2013; Orun, Roesler & Martin, 2015).

The researchers selected the given problem from the clinical observation of bedridden complaining of several problems, those include a significant rise in ventilator-associated pneumonia rates in intensive care unit and poor compliance in applying the VAP maintenance care bundle, also it was noticed the elevation of pressure ulcers in bedridden patients at ICU, ineffective communication and improper hand over between health care workers as well as studies shows the advantages of chlorhexidine gluconate bathing on the patient's health condition. The implications of this study will provide advantages for patients and healthcare workers, as well as support policymakers who need evidence-based information for making decisions about patient care ( Annegret, Albert, et al,2021).

In this study, the researchers will focus on the following factors:

- Oral hygiene care
- Chlorhexidine bathing
- Effective communication with each intubated patient
- Develop pressure ulcers
- Hand over

The oral biofilm (plaque) of older patients often has a substantial bacterial load that places hospitalized older people at risk for respiratory infections, many older patients rely on nurses for oral hygiene care to control dental plaque biofilm, if proper mouth hygiene is implemented this will reduce the risk of RTI. This can impact patients' health and quality of life (Scannapieco&Shay, 2014).

On the other hand, Oral care is considered a standard practice to prevent hospital-associated infections in intubated patients at the intensive care unit as it has a positive impact on recently extubated acutely ill patients.

Hospital-acquired pressure ulcers/injuries (HAPU/I) result in significant patient harm, including pain, expensive treatments, increased length of institutional stay, and, in some patients, premature mortality. Pressure ulcers significantly limit many aspects of an individual's well-being, including general health and physical, social, financial, and psychological quality of life. In the United States, nearly 1 million people develop pressure ulcers annually, while approximately 60,000 acute care patients die from related complications. The estimated cost of managing stage III/IV pressure injury per patient is \$70–150 thousand, and the total cost for treatment of pressure ulcers in the United States is estimated at \$9–11 billion per year. Many identified risks for the development of pressure ulcers/injuries included advanced age, immobility, incontinence, inadequate nutrition and hydration, neurosensory deficiency, device-related skin pressure, multiple comorbidities, and circulatory abnormalities. The evidence-based clinical guideline has a significant correlation with a positive feeling to pressure ulcer prevention [17]. Grimshaw et al. [18] stated that lack of knowledge, negative attitudes, or underdeveloped skills are the principal barriers to evidence-based practice at the level of the individual health care professional.

Intubation is a multidimensional experience for patients and affects their physiological, emotional, cognitive and sociocultural, and physical communication processes related to the weakness of the patient. Moreover, without the function of speech, patients are limited in their capacity to interact meaningfully with their environment. To improve the quality of care and patient satisfaction, nurses and healthcare professionals requires knowledge, skills, and creativity to find the most effective ways and augmentative alternative communication (AAC) method to maintain effective communication with each intubated patient.

Chlorhexidine bathing is effective in reducing levels of pathogens on the skin, many studies proved and suggested daily bathing with chlorhexidine gluconate (CHG) as an effective intervention to reduce hospital-acquired infections in the ICU, (Loveday et al., J Hosp Infect 86:S1-S70, 2014). Recent evidence showed that chlorhexidine bathing is often suboptimal in clinical practice, therefore the importance of education and monitoring, and feedback on compliance with bathing procedures to optimize chlorhexidine bathing is emphasized.

## 2. MATERIALS AND METHODS

### Study design:

An exploratory study design was used to provide high-quality nursing care based on evidence-based practices and to enhance the effectiveness of nursing care in improving bedridden patients' health conditions, the search was limited to the English language. Evidence only published within the last five years was included based on their full publication data, the search identified 411 articles, resulting in the assessment of 10 full-text articles, they were found to fulfill the inclusion criteria

### Study area:

General hospitals around the world.

### Study time:

2021

**Study population:**

Nurses and ICU patients.

**Method:**

At this review article, the search identified 411 articles: CINAHL (n = 122); Cochrane Library (n = 31), Google Scholar (n = 89), PubMed (n = 98), SCI Hub (n = 11), Scopus (n = 31), and Ebscohost, Medline (n = 29). In total, 310 duplicate articles were excluded by evaluation of the title and abstract, the full-text versions of the remaining 91 articles were read, resulting in the assessment of 10 full-text articles, they were found to fulfill the inclusion criteria, the mean age reported in the included studies ranged from 39.1 to 85.4 years old, and most patients represented were male. The studies took place in China (n = 3), Japan (n = 1), France (n = 2), Netherlands (n = 1), Germany (n = 2), Italy (n = 1).

### 3. RESULTS

Caregivers play an important role in ensuring that the bedridden elderly have a good quality of life. Nevertheless, it is not an easy task and caregivers need to be strong physically and mentally to avoid being negatively affected. Caregivers can help their bedridden loved ones by providing frequent social activities and arranging a time for friends and other family members to visit so that they will not feel lonely and forgotten. Caregivers should also encourage the bedridden elderly to not lose hope and surrender to their illness. The key findings of the article regarding the frequency of turning in bedridden patients to prevent hospital-acquired PUs have been discussed, the common measures of the studies to prevent this problem was frequent turning and use of support surfaces respectively.

In one of the studies, results show a negative attitude of nurses towards pressure ulcer prevention protocols as well as the major barriers in PUP practice such as over workload, staff shortness (83.3%), Shortage of resources (67.6%), Inadequate training of pressure ulcer prevention by (63%) and lack of universal guidelines on prevention of pressure ulcer by (59.9%).

One cross-sectional study focused mainly on nurses' observation, in this study 51.9% (95% CI: 47.1%, 56.4%) of nurses reported that they have good pressure ulcer prevention practice, and data showed that 45.2% of nurses were applying proper PUP activities, results showed statistically association of nurses with bachelor degree and above qualification level, every two hours turning, using of the air mattress to relieve pressure, good knowledge and being satisfied with their career.

Bedridden patients are at risk to gain infection smoothly, several studies emphasized chlorhexidine gluconate bathing and its potential for reducing HABSIs, in one study in 2019, study results confirmed that by searching 788 articles, 179 studies were duplicates and were excluded, 420 studies were excluded after the title and abstract review leaving 189 articles for full article review, after which 163 were excluded, this left 26 articles for the meta-analysis systematic review to examine the effect of CHG bathing in reducing hospital-acquired bloodstream infections as it assesses the nurse's adherence to the intervention, they conclude the benefit of Chlorhexidine gluconate (CHG) bathing on hospitalized patients.

Another serious complication facing bedridden patients is neglecting oral care, proper oral cavity care is an important measure to prevent colonization and ventilator-associated pneumonia while patients are intubated in the intensive care unit. Following extubation and transfer, infections remain an important risk for patients, but less attention is paid to oral care. Few studies have assessed the impact of oral care in recently extubated acutely ill patients.

The chosen study that agrees with this study review develops an evidence-based oral care protocol for hospitalized patients and determines the impact of this protocol on health outcomes in recently extubated patients, it was a randomized controlled trial, subjects were randomized to usual care or an intervention protocol that included tooth brushing, tongue scraping, mouth rinsing with CHG, and lip care, seventy-four subjects were randomized. As measured by the R-THROAT, oral cavity health improved over time in both groups, but the intervention group demonstrated significantly more improvement than the control group (R-THROAT score improved by 1.97 intervention vs. 0.87 control; p = .04). Two categories, tongue and mouth comfort, demonstrated the most significant improvement. There was no difference in MSSA/MRSA colonization between the groups at the conclusion of the study. Overall, subjects in the intervention group were more satisfied with their protocol than subjects in the usual care group.

Bedridden patients are hardly communicated with, communication is a key element to reaching high-quality health care services, that could lead to improved patient health and satisfaction. As reviewing a Cross-sectional, descriptive-analytic study that was conducted on nurses and patients of two public hospitals affiliated with Alborz University of Medical Sciences, in 2012, the findings suggest that there are four categories of communication barriers, nurse related patient factors, nurse-related factors, patient-related factors and environmental factors, the most frequent communication barriers from the

nurses' viewpoint were as follows differences in languages of nurses and patients, nurses 'overworked, family interference, and presence of emergency patients in the ward. According to the patients, gender differences between nurse and patient, nurse's reluctance to communicate, the hectic environment of the ward, and patient's anxiety, pain, and physical discomfort were the most important barriers to communication.

#### 4. CONCLUSIONS

##### Pressure Ulcer Prevention

In this article review, the results suggest continuing education and training should be considered for nurses to enhance their practice regarding pressure ulcer prevention practice, nurses must participate in and attend training concerning pressure ulcers following the universal guideline for PUP.

Nurses must be provided with access to electronic libraries to review the latest literature and read scientific journals to practice PU prevention, otherwise, they will not be able to integrate research into their practice.

##### Communication

Ensuring effective communication during nursing shift-to-shift bedside, a communication chart is found to be an effective measure in increasing patient satisfaction by facilitating communication between the healthcare provider and conscious intubated patients by providing the patient's opportunity to express their needs, thoughts, and feelings. Evidence for encouraging communication among intubated patient require additional attention.

##### Chlorhexidine Gluconate Bathing

Daily CHG-bathing to reduce infections among adults admitted to the ICU should be undertaken, Immediate oral care post-intubation has an effect on improving the g oral cavity by reducing hospital-acquired infection,

##### Oral Care

Staff education and training is an effective strategy to improve oral care, attention must be given to the nurses regarding post mechanically intubated patients' oral care, and, awareness regarding negative health outcomes prevention must be provided to all nurses to encourage them to apply optimal oral care, nurses must adhere to oral care practice at bedtime to reduce colonization and infection, knowledge of the health benefits of oral care and skills related to assessment and approaches to oral care are required to be nurses, immediate oral care post-intubation has an effect on improving oral cavity by reducing hospital-acquired infection.

##### Handover

handover at the patient's bedside is essential for ensuring patient safety and continuity of care with the patient and/or family participating in the handover process, the handover incorporated a short group meeting where the outgoing team leader provided a brief overview of relevant information or identified sensitive aspects of patient care that could not be discussed at the bedside.

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