



## IMPACT OF NURSING EDUCATION TOWARDS BEHAVIOR CHANGES AND PREVENTION IN BED SORES

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### ABSTRACT

**Introduction:** Pressure ulcer is a global health problem that is common among inpatients and elderly people with physical-motor limitations. Chronic infections like Pressure sacral ulcers, also identified as bed sores, are confined areas of tissue damage developing due to excess pressure and shearing forces. The mortality rates from this disease are 2 to 6 times as much as from other diseases, with 60,000 deaths annually due to this complication. Continuous nursing teaching and training have been associated with better implementation of clinical nursing practice at the patient level. Our work, emphasizes the importance of hospital nursing staff training for the prevention of pressure ulcers. **Methods:** A batch of nursing staff posted in the intensive care unit of Chirayu Medical College & Hospital was selected and given 6 Days nursing education using informative illustrative charts 1 hour daily for 6 days following which the Intensive Care Unit was observed for a reduction in the incidence of bedsores for a period of 6 months. **Result:** It was observed that the pre-training Bed sores rate was 8 /1000 days and it decreased considerably after training of health care professionals. Our study supports the concept of training and education among nursing staff to increase compliance with infection control protocols in bedridden patients. **Discussion:** Pressure ulcers may lead to death, prolongation of treatment, increase in treatment costs and in general, irreparable complications for the patient and the family, the study of their incidence rate, causative factors, and prevention along with efficient training of staff should be incorporated into the priorities of health care systems across the world.

**KEYWORDS :** nursing education, pressure sore, bed sore

### INTRODUCTION:

A pressure ulcer is a global health problem that is common among inpatients and elderly people with physical-motor limitations. To deliver nursing care and prevent the development of pressure ulcers, it is essential to identify the factors that affect it. Nursing care and nurses form mainstay of any healthcare organization. Execution of policies and practices related to patient care lies on their shoulders. Continuous nursing teaching and training have been associated with better implementation of clinical nursing practice at patient level. To prevent infection in chronic bed ridden patients, training and education of nurses will create good impact in infection control practices lead to decrease in healthcare-associated infections (HAIs) to a great extent.<sup>1</sup>

Chronic infection like Pressure sacral ulcers, also identified as bed sores, are confined areas of tissue damage developing due to excess pressure and shearing forces. Nowadays, pressure ulcers are the third most costly disease after cancers and cardiovascular diseases. The mortality rates from this disease are 2 to 6 times as much as from other diseases, with 60,000 deaths annually due to this complication. Pressure ulcer occurs more frequently in the tissues of the extremities of the body and in bony extensions such as sacrum and heel in inpatients.

The most important risk factors for pressure ulcers are low physical activity, decreased consciousness, urinary and faecal incontinence, malnutrition, advanced age and improper use of diaper. The pressure ulcer is associated with pain, a patient's reduced autonomy, increased risk of infection and sepsis, long periods of hospital stay, and the imposition of more costs on the patient, his/her family, and health care system. Patients with pressure ulcers have significant physical-social and self-care dysfunction and may have certain complications such as depression, pain, topical infection, osteomyelitis, sepsis, and even death.

The incidence of pressure ulcer is different in the clinical setting, but its incidence rate ranges from 4% to 38% in hospitalization wards and the mortality rate due to pressure

ulcers and its associated secondary complications among the elderly is approximately 68%, increase total treatment costs by 4% and increase workload of the nursing staff by 50%.<sup>2</sup>

The first step to prevent an increase in the incidence of pressure ulcers is the identification of its risk factors, although there is currently no consensus on its risk factors. Pressure ulcer is a major concern for patients and healthcare staff, and understanding the disease process and prophylactic methods is so important that counselling and prevention systems for it have been developed in the USA and Europe and similar efforts have been made in countries like Thailand.<sup>3</sup>

Education of nursing staff has been recognized as an essential component of pressure ulcer prevention. These educational training programs are focused towards influencing performance change on the part of the healthcare professional and to inspire preventative practices with the purpose of dropping the incidence of bed sores development.<sup>4</sup>

Various studies around the world to find out the incidence of pressure ulcer and planning to reduce the incidence of pressure ulcers.<sup>6</sup> Therefore, this study aims to estimate the incidence of pressure ulcers and planning for prevention by modification in healthcare professionals' knowledge, changing healthcare professionals' clinical behavior, and assessing the effects of educational training programs for healthcare professionals on bed sores prevention.<sup>9,10</sup>

### MATERIALS AND METHODS-

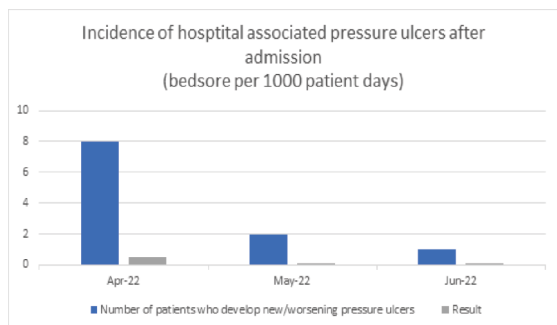
This study is carried out in ICU at Chirayu medical college & hospital, Bhopal MP. A total of 50 nurses were enrolled in this study. Permission from Institutional ethical committee was taken and informed consent was taken from nurses who were enrolled in the study from August 2022 to January 2023.

They were trained on hand hygiene, personal protective measures (PPM) to be taken, knowledge about pressure ulcer and its complications, identification of high-risk patients and focus on preventive measures.

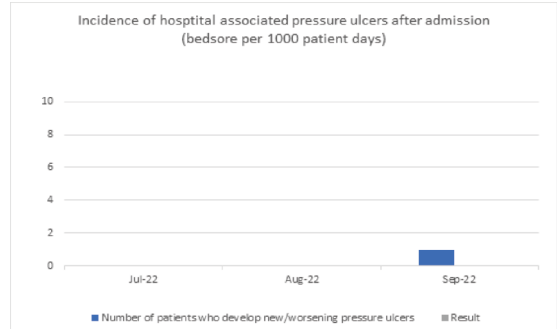
6 days training module that include-audio-visuals, PPT, Posters and Charts was made. Nursing pretraining test forms were provided which were a modified version of PUKAT<sup>11</sup>. The training was provided to and daily training sessions were given over a period of 3 months post which the Intensive care unit was observed for changes in incidences of pressure ulcers.

We assessed data obtained by Quality Control Department of chirayu medical college for incidence of bed sores at pre & post traing period.

**OBSERVATIONS:**



Month	Apr-22	May-22	Jun-22
Number of patients who develop new/worsening pressure ulcers	8	2	1
Total number of patient days x 1000	16159	16272	15890
Incidence	0.4950	0.12291	0.06293



Month	Jul-22	Aug-22	Sep-22
Number of patients who develop new/worsening pressure ulcers	0	0	1
Total number of patient days x 1000	16209	16202	165900
Incidence	0	0	0.006028

During period of April to march, we observed a steady decrease in bed sore incidence in the ICU. In April 2022, the total number of bed sores was 8 which decreased to 1 by June and went down to 0 for two consecutive months of July and august 2022 with only one case in September. The incidence of bedsore decreased from 0.49 to 0.006 per 1000 patient days.

**RESULTS-**

Our study supports the concept of training and education among nursing staff to increase compliance to infection control protocols in bed ridden patients. It was observed that pre-training Bed sores rate 8 /1000 patient days decreased considerably after training of health care professionals. The published literature on Infection Control repeats the need for regular training in the form of lecture series or bedside training by the infection control department. Support from the management of the hospital to carry out such training programs regularly for implementation of best infection control practices.

**DISCUSSION :**

Pressure sores are a great burden to the both the healthcare institutions as well as financially. Our study found that educating healthcare workers with easy to read materials and reminders helps in decreasing the incidence of pressure sores significantly. The findings of our study are in line with those of Danchaivijitr et al, Ivera et al, Gupta et al, Valles et al, Alshahrani et al, Grešš et al & Yilmazer et al which have all stressed upon importance of nursing education and development of nursing care bundles to provide easily accessible knowledge about the care of bedsore to healthcare workers with periodic training programmes and reminders. The study recommends pre and post training questionnaires to check the knowledge gained by the healthcare workers.

**CONCLUSION**

Pressure ulcers may lead to death, prolongation of treatment, increase in treatment costs and in general, irreparable complications for the patient and the family, the study of their incidence rate, causative factors, and prevention along with efficient training of staff should be incorporated into the priorities of health care systems across the world.

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