

**Assessment of Nurses' Performance Regarding  
the Implementation of Patient Safety  
Measures in Intensive Care Units**

**Thesis**

Submitted for Partial Fulfillment of Master Degree in  
Medical Surgical Nursing Science (Critical Care)

By

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# **Assessment of Nurses' Performance Regarding the Implementation of Patient Safety Measures in Intensive Care Units**

## **Abstract**

**Background:** Nursing surveillance is the key to patient safety as nurses can prevent iatrogenic harm and protect patients in intensive care unit (ICU) from medical errors done by others. Role of critical care nurses in patient safety is influenced by the specific requirements of the specialty which need continuous, close monitoring of the patient, dynamic data analysis and anticipation of complications. **Aim of the study:** to assess nurses' performance regarding implementation of patient safety in the intensive care units through assessing nurses' knowledge and practice regarding implementation patient safety in the intensive care units. **Research design:** A descriptive exploratory design was utilized. **Methods:** **Subjects:** include all available nurses working in intensive care units in Damanhur Hospital, 50 nurses from both genders, with different ages, educational levels and years of experience was selected for this study. Data were obtained through two main **tools:** 1) Self-administered questionnaire tool, 2) observational checklist which divided to, patient unit observational check list and practice nurses observational check list. **Results:** Nurses had unsatisfactory knowledge and practice. There were statistically significance correlation between nurses knowledge and practice. Knowledge and practice were found to differ significantly in relation to socio-demographic data. **Conclusion:** More than half of the study nurses had unsatisfactory knowledge and practice regarding implementation of patient safety measures. **Recommendations:** The hospital should improve ICU safety structure and design and establishing a protocol to ensure consistent implementation of patient safety protocol in all ICUs. The study should be replicated on large sample & in different hospitals setting in order to generalize the results.

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**Key words:** Intensive Care Units, Nurses' Performance, Patient Safety.



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## List of Abbreviations

<b>Abb.</b>	<b>Full Term</b>
<b>ABG</b>	Arterial Blood Gases
<b>CAUTI</b>	Catheter Associated Urinary Tract Infection
<b>CBPM</b>	Continues Bed Side Pressure Mapping
<b>CRBSI</b>	Catheter Related Blood Stream Infection
<b>CVC</b>	Central Venous Catheter
<b>ECG</b>	Electrical Cardio Gram
<b>EHR</b>	Electronic Health Record
<b>ETT</b>	Endo Tracheal Tube
<b>HAI</b>	Healthcare Associated Infection
<b>HAM</b>	High Alert Medication
<b>HAPU</b>	Hospital Acquired Pressure Ulcer
<b>IAQ</b>	Indoor Air Quality
<b>IC</b>	Infection Control
<b>ID band</b>	Identification Band
<b>IoM</b>	Institute of Medicine
<b>JCI</b>	Joint Commission International
<b>KCL</b>	Potassium Chloride
<b>MRN</b>	Medical Record Number
<b>PEG</b>	Percutaneous Endoscopic Gastrostomy
<b>UTI</b>	Urinary Tract Infection
<b>VAP</b>	Ventilator Associated Pneumonia
<b>WHO</b>	World Health Organization



## Introduction

Patient safety is a key component of hospital performance and improving ICU staff nurses' performance remains an ideal that every organization strives to achieve this goal, as well as, when providing the workers with new staff development strategies make their work of a high quality and potential errors are minimized (**Vaismoradi, 2017**).

Intensive care settings provide lifesaving care for the critically ill patients, however, it is associated with significant risks for adverse events and serious errors with multiple interactions occurring between health multidisciplinary health care providers, patients, and medical devices with increasingly complex interface (**Bouldin et al., 2016**).

Nursing surveillance is the key to patient safety as nurses can prevent iatrogenic harm and protect patients in intensive care unit (ICU) from medical errors done by others. Role of critical care nurses in patient safety is influenced by the specific requirements of the specialty which need continuous, close monitoring of the patient, dynamic data analysis, anticipation of complications, complex decision making, continuous evaluation of

interventions, and emotional support of the patient and family (**Chinn and Kramer, 2017**).

Critical care nurses have a developing role in decision making regarding invasive procedures and drug prescriptions as ventilation, fluid and inotrope administration, and renal replacement therapy. They can achieve good outcomes by using of clinical guidelines and protocols (**Welch, 2016**).

Health care professionals are using multiple methods to improve patient safety and quality outcomes. The most component of patient safety measures are; patient identification, effective communication, prevention of infection, fall prevention, bed sores prevention, high alert medication precaution, administration of medication and blood transfusion, fire and electricity control (**Joint Commission International (JCI), 2016**).

## **Significance of the study**

The occurrence of adverse health events is an indicator of compromised patient safety. Globally, the reported incidence of adverse health events ranges between 4% and 17%. Interestingly, it was found that around 50% of all reported adverse events which compromised patient safety are preventable (**Killam et al., 2017**).

Nurses' formal educational preparation is reported to be a causal factor of adverse patient events made by around 50% of new nurses with less than one year of experience **(Saintising, Gibson & Pennington, 2016)**.

Medical practices errors could occur at any stage of the process of management and cause patient harm in ICU. Critically ill patient will typically experience a mean of 1.7 errors per day. Nearly all patients in an ICU will be affected by a potentially life-threatening error at some point during their stay. Medication errors account for 78% of the serious medical errors in an ICU in addition to accidental patients fall are among the most common adverse events reported in hospitals, complicating approximately 2% of hospital stays **(Cho, Park, Choi, Hwang, and Bates, 2016)**.

The World Health Organization (WHO) estimated that 7 of every 100 hospitalized patients in developed countries and 10 of 100 in developing countries will acquire at least one health care-associated infection during their hospital stay. In high-income countries, approximately 30% of patients in ICU are affected by at least one health care-associated infection. This percentage is doubled or even tripled among ICU patient in low- and middle-income countries **(WHO, 2016a)**.