

Synopsis for Dissertation Submitted



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By

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Synopsis

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Title: Enhancing patient safety in the Intensive Care Unit: A Comprehensive Study on improving critical alert documentation by physicians

INTRODUCTION

In the realm of intensive care, where split-second decisions can determine the trajectory of a patient's health, effective documentation of critical alerts stands as a pillar of comprehensive patient care. There is an imperative need for improving compliance among doctors in the intricate task of documenting critical alerts in the intensive care unit. The ICU serves as the epicentre of acute medical care, catering to patients with life-threatening conditions that demand constant monitoring and rapid intervention. Amidst this dynamic environment, the timely and accurate communication of critical alerts is paramount, ensuring that healthcare providers are promptly informed of deviations from normal parameters and can initiate appropriate interventions without delay. A critical value is defined as a value that represents a pathophysiological state at such variance with normal (expected values) as to be life threatening unless something is done promptly and for which some corrective action could be taken. The delivery of accurate laboratory results to the concerned clinician within a suitable timeframe that ensures patient safety is known as critical alert notification. Although timeliness in critical value notification can be helpful in saving lives and reducing morbidity, failure to communicate may lead to diagnostic errors, delayed or no treatment resulting in adverse outcomes along with big liability claims. The efficacy of critical alert systems is intricately linked to the diligence with which healthcare professional's document and act upon them. Despite advancements in technology and standardized protocols, challenges persist in achieving optimal compliance in documentation practices within the ICU. Factors such as high workload, time constraints, and cognitive overload can impede doctors' ability to consistently record critical alerts with the requisite detail and precision.

AIM

To assess the current state of critical alert documentation by ICU physicians and evaluate the effectiveness of interventions in improving completeness, and accuracy of documentation practices.

RESEARCH QUESTION What are the key factors influencing compliance, and documentation challenges among healthcare professionals when adhering to critical alert documentation?

OBJECTIVES

1. To assess the current rate of completeness, timeliness and accuracy of critical alert documentation in patient medical records.
2. To identify factors associated with non-compliance in critical alert documentation by ICU physicians.
3. To explore the perceptions and attitudes of ICU physicians towards critical alert documentation.
4. To develop and implement intervention in improving the physician compliance with critical alert documentation
5. To evaluate the effectiveness of the intervention

HYPOTHESIS:

“Improving critical alert documentation by physician in the Intensive Care Unit through targeted interventions that address key factors influencing compliance, such as time constraints, lack of standardized protocols, inadequate training and varying perceptions among physicians, will lead to enhanced patient safety.”

The key components of this hypothesis are:

Independent Variable- Targeted interventions to improve critical alert documentation by ICU physicians.

Dependent Variables- Enhanced patient safety in ICU

Mediating Variables- Factors influencing physician compliance, including time constraints, lack of standardized protocols, inadequate training and varying perceptions among physicians.

The hypothesis suggests that by developing and implementing interventions that address the identified factors associated with non-compliance, physician compliance with critical alert documentation will improve, ultimately leading to enhanced patient safety in the ICU.

MATERIAL AND METHODS

Study design:

A mixed methods approach will be employed, combining quantitative and qualitative data collection method.

Quantitative study

Retrospective medical records audit: A random sample of patient's medical record from ICU will be reviewed to assess completeness, timeliness and accuracy of critical alert documentation by physicians.

Qualitative study

Semi structured informal interviews will be conducted with the purposive sample of ICU physician, nurses to explore their experiences with critical alert documentation and identify factors contributing to non-compliance.

Setting:

The study will be conducted in the Intensive Care Unit (ICU) of Medanta-The medicity hospital, Gurugram. Two medical ICU's will be chosen for the study.

STUDY TOOL:

Process Mapping Tool:

A flowchart will be utilized to map the complete workflow of critical alert communication and documentation in the ICU. Which will focus on alert initiation, communication pathway, roles and responsibilities, documentation procedures, information flow.

Root Cause analysis:

Semi-structures informal interviews will be conducted with nurses and doctors to explore their perspective on critical alert communication and documentation. Based on interview data and observations, a fishbone diagram will be constructed to visually represent the potential root causes of non-compliance in critical alert documentation by doctors.

DURATION OF STUDY:

The duration of study is three months, i.e, from 1st April to 1st July 2024.

Study population: The study population are the patients in the intensive care unit who receive critical alert during their stay in ICU.

Sample size: 100

Sampling technique: Random sampling will be employed to select a diverse and representative sample of patient records from the Intensive Care Unit, ensuring unbiased analysis and comprehensive insights into critical alert documentation practices to enhance patient safety.

Data collection methods: Retrospective file audit-A random sample of patient's medical records from the ICU will be reviewed pre and post intervention to assess critical alert documentation practices for its completeness, timeliness and accuracy.

Inclusion criteria: Patient's admitted to the ICU who experienced at least one critical alert during their stay.

Exclusion criteria: Patients who do not receive any critical alert during their stay in ICU.

OPERATIONAL DEFINITIONS:

Critical value: A pathophysiological parameter exceeding a normal value (expected value) indicating a potential threat to patient safety and requiring immediate clinical intervention.

Critical Alert System: A collection of tools and protocols designed to notify healthcare providers of potentially life threatening or serious patient situation. It aims to ensure timely intervention and improve patient safety. It is essential to achieve the IPSC goal 2- Effective Communication which includes reporting critical results of diagnostic tests.

Documentation protocols: Established procedures for healthcare providers to document their response to critical alerts in patient's medical record. This typically includes:

1. Time and type of alert received
2. Initial assessment findings
3. Actions taken in response to the alert

DATA ANALYSIS PLAN:

This study will involve the analysis of patient medical records in the ICU to evaluate how physicians document critical alerts. Data will be manually entered into Excel spreadsheets, with a scoring system developed to assess the completeness, timeliness, and accuracy of documentation. Descriptive statistics will then be computed for both pre- and post-intervention data to summarize documentation quality. Moreover, the percentage of patient records with complete documentation will be calculated to gauge compliance levels.

ETHICAL CONSIDERATIONS

1. Informed consent will be obtained for the medical records audit as it involves anonymized data.
2. The study protocol will be reviewed and approved by the institutional review board.

IMPLICATIONS OF RESEARCH: Inadequate Documentation of critical alerts in the ICU poses a significant patient safety concern. This two phase observational study will provide valuable insights into the current state of documentation practices and the factors contributing to non-compliance among the ICU physicians. By auditing the patient's medical records and implementing interventions, this study aims to provide completeness, timeliness and accuracy of critical alert documentation. The anticipated outcome is enhanced patient safety through improved communication, response and follow-up to critical events in the Intensive Care Unit.

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