

Research Article

Deteriorating Patient: A Necessary Definition for Cardiac Arrest Prevention

Hector Roche Molina* 

Villa Clara University of Medical Sciences, Ernesto Guevara Cardiocenter Hospital, Santa Clara, Cuba

Abstract

Background: Clinical deterioration not promptly recognized can result in increased patient morbidity and mortality. Early warning of cardiac arrest is a criterion commonly used in nursing staff's daily practice to identify patient deterioration. However, it is not always clear what a deteriorating patient means. **Objectives:** Provide an evidence-based approach to creating the definition of deteriorating patient. **Contextualize the definition of a deteriorating patient.** **Methods:** A documentary review study was conducted through a bibliographic search of the databases to address the term deteriorating patient. Information about deteriorating patients was collected. **Conclusion:** As a result, valuable data were obtained to conceptualize the term deteriorated patient in nursing practice.

Keywords

Nursing, Clinical Deterioration, Cardiac Arrest, Deteriorating Patient

1. Introduction

Early warning of cardiac arrest is a criterion commonly used in nursing staff's daily practice to identify patient deterioration. However, it is not always clear what a deteriorating patient means.

Little is known about the role of nurses or midwives in out-of-hospital settings and their recognition, response, and communication of information about patient deterioration. The complex and subtle nature of mild deterioration makes it difficult to define and subsequently assess the role and impact of nurses in these settings [1].

2. Clinical Deterioration

Clinical deterioration in patients hospitalized outside of in-

tensive care units (ICUs) is a significant problem in healthcare systems. Studies show that more than 15% of patients hospitalized in general wards are at medium risk and 17% are at high risk of clinical instability [2]. Late detection of this deterioration is associated with higher mortality rates, and it is of particular concern that patients who worsen in general wards before being transferred to the ICU have a 50% mortality rate [2].

In recent years, care for patients with deteriorating conditions has improved thanks to technological advances. The aging of the global population means that patients often present with more complex comorbidities, and therefore, their health status deteriorates from an increasingly complex baseline situation. Nursing staff constitute the largest segment of the healthcare workforce and often have frequent contact with patients, making them more likely to be able to detect deteri-

*Corresponding author: hrochem@infomed.sld.cu (Hector Roche Molina)

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oration and respond accordingly.

Much is known about various aspects of clinical deterioration, especially with regard to detection and treatment; however, little is known about how nursing staff experience clinical deterioration in their patients. [3]

Clinical deterioration is the critical progression of a disease, often measured by a set of clinical parameters, which triggers the rapid response hospital team. [4]. Clinical deterioration is a key factor in mortality in hospitalized patients and its recognition is often supported by contextual factors and variations in practice. [4-10]

The variation in the uniformity of the concept of clinical deterioration causes a gap in knowledge and requires clarification of this phenomenon for nursing research and practice. Relevance to clinical practice Identifying and intervening in clinical deterioration plays a vital role in the hospital setting, demonstrated by the dynamic nature of a patient's condition during hospitalization. It is anticipated that this conceptual analysis on clinical deterioration will contribute to greater identification of clinically modifiable risk factors and complementary interventions to prevent clinical deterioration in the hospital setting. [11]

Defining attributes include dynamic state, decompensation and objective and subjective determination. Antecedents identified include clinical state, susceptibility, pathogenesis and adverse event. Increased mortality, resuscitation, implementation of higher level of care and prolonged hospital admission were the consequences identified. Defining attributes, antecedents and consequences identified led to an operational definition of clinical deterioration as a dynamic state experienced by a patient compromising hemodynamic stability, marked by physiological decompensation accompanied by subjective or objective findings. [12]

2.1. Vital Signs

Vital sign observations are often done more frequently than necessary from a bald assessment of the patient's risk, and we show that a maximum threshold of risk could theoretically be achieved with less resource. [13]

The paper Briggs et al, safer and more efficient vital signs monitoring protocols to identify the deteriorating patients are 'observed' regularly by nursing staff so that deterioration can be spotted early [14].

They stated that vital sign trends increased detection of clinical deterioration. Critical appraisal was performed using evaluation tools. The studies had moderate risk of bias, and a low certainty of evidence. Additionally, four studies examining trends in early warning scores, otherwise eligible for inclusion, were evaluated. [15]

2.2. Critical Value

A critical value is a laboratory result that reflects a pathological state that may endanger the patient's life unless ap-

propriate measures are taken promptly. [16]

In the not-too-distant future, we will be able to rely on portable imaging tools and studies for assessment, prediction, and planning, portable intubation devices with wireless connection to smartphones, and laptop computers and displays that feed databases and improve our management algorithms. Artificial Intelligence can generate analysis and predict events and risks; however, clinical judgment in decision-making will remain essential. [17]

Rapid response to extremely abnormal test results helps prevent adverse adult and pediatric patient outcomes. [18]

2.3. Rapid Response Team

In a study conducted by Meneguín et al., they suggest that it can also contribute to the development of other research, advancing the construction of knowledge about the role of nursing in rapid response teams, with data that can highlight the importance of the actions carried out by this professional to hospitalized patients with signs of clinical deterioration and who need immediate intervention. [19, 20]

Nursing care in situations of Cardiorespiratory Arrest (CPR) plays a crucial role, since time is a determining factor for the patient's survival. [In the study described by Valero on the evolution of CPR in hospitalized patients, it does not usually occur suddenly, but rather as a result of a gradual deterioration of these mostly multi-pathological patients. [21]

Future research should focus on evaluating the impact of strategies on the quality of care, especially in critical areas such as emergency departments, intensive care units, and primary care. This will allow progress toward a more reflective, decisive, and empowered nursing system, capable of robustly addressing current and future challenges in health care. [22]

After investigating the definition of the term deteriorated patient, as a valuable concept for usefulness in care, with essential meanings for the whole, and not finding a clear definition in Spanish, not being so in the Anglo-Saxon world where several articles refer to that term [23-25], it has been possible to define a construct of deteriorated patient.

3. Methodology

In the doctoral program: Nursing Sciences of the University of Medical Sciences of Villa Clara, Cuba under the coverage of a line of doctoral research entitled: Nursing as a science of care in the promotion, prevention, cure and rehabilitation of health; and the topic "design of the early warning system in Nursing for the prevention of cardiac arrest", from the search and review of the bibliography and the proposal of an early warning system in Nursing, it has been raised because a conceptualization that supports the term deteriorating patient was not found in the reviewed literature.

A documentary review study was conducted through a

bibliographic search of the databases to address the term deteriorating patient. Information about deteriorating patients was collected.

Search results

Initial searches yielded 909 studies (after removal of duplicates), of which 92 were selected for full-text review. Fifteen papers met eligibility criteria and an additional five were added through citation tracking and other sources before undergoing data extraction.

The methodological quality of the studies was not formally assessed in line with the framework of scoping reviews.

Of the 54 articles excluded during full-text assessment, 38 did not provide sufficient detail.

Key characteristics of primary research studies and review articles are detailed separately below.

Included Eligibility Screening Identification Studies identified from reference lists [16].

4. Result

As a result, valuable data were obtained to conceptualize the term deteriorating patient.

The above leads us to reflect on the term "deteriorating patient," which is frequently used by nursing as well as other health disciplines.

The information gathered allowed the author to carry out an analysis, debate and delimitation on proposing, adapting and contextualizing the definition of a deteriorated patient from the different dimensions and taking clinical deterioration as a premise: defining the term Deteriorated Patient as an individual whose medical condition worsens or is in decline through the detection of vital signs, signs and symptoms of worsening, critical values and/or consensus on decision-making to prevent worsening of the health status.

5. Conclusion

Deteriorating patient is a key contributor to inpatient mortality, and its recognition is often underpinned by contextual factors and practice variances. Variation in the uniformity of the concept of deteriorating patient causes a gap in knowledge and necessitated definition of this concept for nursing practice. Due to its importance and relevance, it is necessary to address this topic for future research and grow the level of professional competence and performance. Taking into account that continuous updating provides better professional preparation and better care.

Abbreviations

ICU	Intensive Care Unit
CPR	Cardiorespiratory Arrest

Author Contributions

Hector Roche Molina is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The author declares no conflicts of interest.

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