Risk Management at Critical Care Units: A Concept Analysis

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Abstract: Today, risk management efforts in healthcare organizations are aligned behind patient safety and finding ways to work together more effectively and efficiently to ensure that their organizations provide safe, high-quality patient care and continue to reduce risk. **Purpose:** The current research aimed at clarifying and defining the concept of risk management, its attributes, it is implications, process, risk management roles and responsibilities at critical care units. **Method:** In this study, the steps of concept analysis were as follows: Select a concept, determine its aim, identify various definitions of the concept, attributes, determine its implications, process and identify the risk management roles and responsibilities. **Data Collection:** For the purpose of this concept analysis, PubMed, Google search engines, Ovid, CINAL and ProQuest, were scanned and searched using the keywords. **Conclusion:** Risk management is a requirement for hospital accreditation and focuses on improving the quality and safety of healthcare services. Healthcare providers want to improve outcomes while minimizing the risk of harm to patients. Despite the provider's best efforts, medical error rates remain high with significant disability and death. **Recommendations:** Conducting further research aimed at raising awareness of the concept of risk management and its effect on quality patient care in the intensive care units among different health sectors is recommended.

Keywords: Concept analysis, Critical care units, Risk management.

Introduction

Literature suggests that the risk management in critical care units' concept has been developing over the past 20 years. Risk management in healthcare is a complex set of clinical and administrative systems, processes, procedures, and reporting structures designed to detect, monitor, assess, mitigate, and prevent risks to patients. Risk is defined as the probability that a specific adverse event will occur in a specific period of time or because of a specific situation. In addition, it is the combination of likelihood and that a specific adverse event will occur in consequence of a hazard being realized (Donaldson et al., 2021). Moreover, risk is hazard, danger, and exposure to mischance or peril. It implies the potential for unexpected or unwanted outcomes (Rout and Sikdar, 2017).

Risk assessment and management interventions in the Critical Care Units (CCU) should be performed as general and job-specific controls; therefore, safety hazards affecting the CCU workforce should be assessed individually, considering the work task–specific hazards that they might face. For example, biological risks,

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hazardous materials (WHO, 202١). In addition, working in the CCU is a dynamic and changeable process. The hospital workers must be trained to respond or react to various situations because they encounter unique risks that are uncommon in other setting, which include patient lifting, repositioning and transferring (WHO, 2021).

Patient safety is a fundamental issue in hospitals, which falls within the scope of risk management. Patient safety is so important in their strategic goals and values and one of the main issues in patient safety in hospitals is medical error reporting, rout cause analysis of errors and identifying potential error and preventing them. One of the main problems with the errors is the imposition of heavy costs on the health system, patients, and their families. It seems to be of paramount importance to reduce the probability of clinical risks to improve the quality of health care services, make the relationship between service providers and patients more effective, enhance patient satisfaction, and decrease the rate of complaints regarding medical errors in hospitals. One of the methods to reduce clinical risks is to assess the probability of clinical risks in hospital wards (Esfahani & Mazhari, 2019).

Purpose:
The present study was conducted with the aim of clarifying and defining the concept of risk management, its value, process & risk management roles and responsibilities at critical care unit (CCU).

Method:
The aim of concept analysis is to examine the basic elements of a concept. The process allows researchers to distinguish between similarities and differences between concepts. The concept analysis method helps to clarify concepts, its strengths,

and limitations used in nursing practice that have a broad scope. (Polit & Beck,2019) In this study, the steps of concept analysis were as follows: Select a concept, determine the aims of the analysis, identify various definitions of the concept, determine the concept attributes and identify process and consequences.

Data Collection:
For the purpose of this concept analysis, PubMed, Google search engines, Ovid, ProQuest, and CINAHL were scanned. These databases were searched for the keywords "risk management, "CCU" and "concept analysis". All studies between the years 2012 and 2022 were reviewed. Inclusion criteria were: First, studies that contained the word "risk management" in their title were selected. Afterward, studies which included discussions of definitions. Finally, studies were written in English, and described or studied risk management in any settings were included.

Concept of risk management:
Risk management is an important aspect in health care system; to not only prevent breakdowns but also to ensure quality and proper decision-making (Skaret et al., 2019). Risk management in health care is a structured process for minimizing potential liability to health care providers, avoiding harm to patients, stabilizing health care providers (Rozel & Zacharia, 2021).While, Pascarella et al., (2021) defined risk management as a systematic process of risk identification, analysis, treatment, evaluation of potential and actual risks and controlling incidents which are inconsistent with the normal practice and activities of the hospital, incident reporting becomes the foundation stone of a sound system of managing risks. Furthermore, Rosen et al., (2018)

defined risk management as the culture and process which are directed towards the effective management of potential opportunities and adverse effects.

Risk management cuts across a health system's entire ecosystem, affecting everything from patient safety and compliance to operations, human resource, and operating margins. Risk managers in the healthcare industry trained to identify, evaluate, and mitigate risks to patients, staff, and visitors. Insurance, claims management, event/incident management, patient safety, provider quality management, compliance, enterprise risk management, third-party risk management, and more all fall under the risk management umbrella (Albolino et al., 2017).

Attributes of the concept constitute a real definition, as opposed to nominal or dictionary definitions that merely substitute one synonym expression. There are many defining attributes of analytical skills, Problem-solving skills, People management and leadership skills, Relationship-building skills, financial knowledge, regulation knowledge and ability to quantify risks, risk is the probability that a patient is the victim of an adverse event attributable to medical care risk management is therefore a key area for the quality of healthcare especially in care-care unit (Donaldson etal, 2021)

Implication of risk management in health care:

Risk management in healthcare may include decreasing malpractice claims, reducing insurance costs and reducing patient falls. Establishing a risk management practice that follows these best practices helps equip healthcare organizations to manage risks, improve patient safety and impact the bottom line (Miller & Lu, 2019). Risk management cuts across a health system's entire ecosystem, affecting everything from patient

safety and compliance to operations, HR, and operating margins. Risk managers in the healthcare industry trained to identify, evaluate, and mitigate risks to patients, staff, and visitors. Insurance, claims management, event/incident management, patient safety, provider quality management, compliance, enterprise risk management, third-party risk management, and more all fall under the risk management umbrella (Albolino et al, 2017).

Healthcare organizations have significantly reduced risk over the past decade by improving patient safety, quality, and care outcomes, risk management is becoming more complex than ever. Costs are increasing as healthcare organizations incorporate new technologies like telehealth platforms. Complexity is increasing because of requirements such as new reimbursement and performance-evaluation initiatives and risks like cybersecurity and privacy compliance continue to grow in number and magnitude (Bellandi et al, 2017). Comprehensive risk management of the organization from top down including financial and business viability, patient care (clinical), medical staff (such as; credentialing, privileging, job description, employee insurance, training, medical coverage), non-medical staff (such as; job description, training, medical coverage), financial (budgeting, cost-benefit and cost-effectiveness analysis, insurance coverage), managerial (such as; job descriptions, delegation of work), project risk management (such as scope, time, cost, human resources, operational, procedural, technical, natural and political), facility management and safety (such as building safety, security of the facility, hazardous materials and waste disposals, emergencies internal and external, fire safety, medical

equipment maintenance plan and maintenance plan for each of the utility system. (Simsekler, et al., 2018).

Risk management process in CCU:

basic steps of risk management process: The five basic steps of risk management are:-

1) **Establish the context:** Context is very important in risk identification and management. ICU (Intensive care unit), O.R (Operation room), E.R (Emergency room), blood transfusion services, CCU (coronary care unit), medication management including medication administration are contextually high priority areas for risk management in relation to patient care (Nóbrega et al., 2021).

   Care professional and healthcare employees become aware of the risks in the health care services and environment. The risks identified are entered in the risk management tool, also sometimes known as the risk register (Faiella, et al., 2019).

   Sources of risk identification: Discussions with department chiefs, managers and staff, patient tracer activity of a patient from admission till discharge, retrospective screening of patient records, reports of accreditation bodies, incident reporting system & sentinel events, healthcare associated infections reports, executive committee reports, facility management & safety committee report, patient complaints and satisfaction survey results, specialized committee reports (such as morbidity and mortality committee, medication management & use infection control, blood

utilization, facility management and safety committee. (Usman, 2013).

2) **Analyze risks:** risk analysis is about developing an understanding of the risks identified. It includes the following: Level of the risk, underlying causes, existing control measures, existing controls: when examining the existing control measures, consideration should be given to their adequacy, method of implementation and level of effectiveness in minimizing risk to the lowest reasonably practicable level. These include all measures put in place to eliminate or reduce the risk and may include: Policies, procedures, protocols, guidelines, alarms and beeps, engineering controls, insurance coverage programs, code teams, training, emergency arrangements and preventative maintenance controls (Famiyeh, et al., 2015).

   Root cause analysis represents a systematic approach to identifying the underlying causes of adverse occurrences so that effective steps can be taken to modify processes and prevent future losses. Brain storming with a team of relevant and informed people still remains the best method to do root cause analysis. (Apostolopoulos, et al., 2016).

3) **Evaluate risks:** The purpose of risk evaluation is to prioritize the risks based on risk analysis score and to decide which risks require treatment and the mode of treatment. Risk evaluation can be classified as in figure 1.

Figure 1. Risk Evaluation classification.
Alam, AY. (2016) Steps in the Process of Risk Management in Healthcare. J Epid Prev Med 2(2): 118

❖ **3.1**. **Accepting the risk:** Accepting a risk does not imply that the risk is insignificant. Risks in a service may be accepted for a number of reasons: The level of the risk is so low that specific treatment is not appropriate within available resources. The risk is such that no treatment option is available

❖ **3.2**. **Treating the risk.** The decisions in treating the risk should be consistent with the defined internal, external and risk management contexts and taking account of the service objectives and goals. Treating the risk include **Controlling the risk:** The most effective methods of risk control are those which redesign the systems and processes so that the potential for an adverse outcome is reduced. Other methods of controlling the risk include reducing the likelihood of the risk and/or reducing the severity of the impact of the risk. reduce the likelihood of the risk occurring by preventative maintenance, audit & compliance programs, supervision, policies and procedures, testing, training of staff, technical controls and quality assurance programs (Etges, etal, 2017).

Transferring the risk: Transferring the risk involves another party bearing or sharing some part of the risk through contractual terms, insurance, outsourcing, joint ventures, Avoiding the risk: This is achieved by either deciding not to proceed with the activity that contains an unacceptable risk, choosing an alternate more acceptable activity (Simsekler, 2019).

4) **Risk Treatment:** (Also known as Risk reduction): The decisions in risk treatment should be consistent with the defined internal, external and risk management contexts and taking account of the service objectives and goals. Risk treatment plan should have: Proposed actions, resource requirements, Persons responsible for action &timeframes (Fusco, etal, 2017) reduce the severity of impact of the risk occurring - through contingency planning (contingency plan is a back-up plan in case the identified risk actually takes place), disaster recovery plans, off-site back-up, emergency procedures, staff training, etc.

5) **Monitor & review:** Once the risk management is in place, monitoring and reviewing of the process/system which was taken care of, is an integral part of the risk management cycle as monitoring and reviewing utilizes the following sources of information. incident reporting, clinical audit indicators, Patient Tracers, safety rounds, patient complains, satisfaction survey, staff complains medical records (Capocchi, etal, 2019)

Risk management roles and responsibilities:
Board of directors: Approve the risk management policy. Defining the roles and responsibilities of the risk management steering committee, delegate monitoring and review of the risk management activities and such other functions as deemed fit to the committee. Review and consider risk management reports. Ensure in the Board's report inclusion of a statement indicating development and implementation of the risk management policy for the company including identification therein of critical elements of risk, relevant to the company (Singh and Habeeb, 2012).
Risk management steering committee (RMSC); carry out responsibilities as assigned by the board. Review and update risk management policy. Monitoring and

reviewing of the risk management activities as approved by the Board. Review and approve the risk management report for approval of the Board. Ensuring that appropriate activities of risk management are in place, ensure implementation of risk mitigation plans. Oversee recent developments in the company and external business environment and periodic updating of company's enterprise risk management program for assessing, monitoring and mitigating the risks. Company secretary: Ensure half yearly RMSC meetings. Report to and update the RMSC on the risk management activities and responsible for coordination between the RMSC, DRMC (Sfantou et al., 2017).

Management Committee:

Responsible for identifying risks. Follow directives from RMSC. Implement risk mitigation plans for identified risks. Enhance awareness within respective hospital units, divisions and functions. Ensure risk documentation and monitoring of risk mitigation plans. Recommend training programs for staff with specific risk management responsibilities. Perform half yearly review of risk register. Assist risk owners to identify, analyze and mitigate risks and escalation of issues requiring policy approvals to RMSC (Miller & Lu, 2019).

Risk Coordinator: Coordinate the risk management activities for respective division/function as per the risk management policy and the directives of the Risk Management Steering Committee. Responsible for coordination between the DRMC and the Risk. Owners and reporting to the DRMC on risk management activities. Responsible for ensuring that the required documentation has been maintained and the required sign offs have been obtained (Sfantou, et al., 2017).

Risk Owners: Responsible for identifying risks. Responsible for reassessing risks on a periodic basis. Responsible for preparing risk register and documenting mitigation plan in risk profile. Responsible for managing risk by implementing mitigation plans and reporting on the risk management activities through the Risk Coordinator: Escalate risks through the risk coordinator on a need basis (Singh and Habeeb, 2012).

Healthcare risk managers are dedicated to evaluating, analyzing, reducing, and addressing risks in a healthcare facility. These mid-level managers work closely with other administrators and must have a thorough knowledge of hospital policies and procedures. They may work for a single healthcare organization or act as a consultant on behalf of another company or group. Their day-to-day responsibilities can include interfacing with patients, logging complaints from individuals, and developing risk management strategies alongside senior staff members (Parand et al., 2018).

However, the healthcare risk manager job isn't the only position involved in risk management policies and procedures at an organization. For example, health services managers and healthcare administrators are likely to be trained in risk management. Doctors, nurses, and technicians also must incorporate a level of risk assessment and analysis in their day-to-day duties while following risk management guidelines. Individuals who work on the financial side of healthcare, such as a medical claims adjuster, incorporate risk management into their positions. Ultimately, many employees in a healthcare organization are responsible for healthcare risk management, though certain roles emphasize the development and implementation of risk management

policies more than others (Sendlhofer et al., 2018).

Conclusion

Risk management is used to increase quality and safety of patient care and includes several principles and guidelines, among which are: the creation of a safety culture; the systematic and structured execution of risk management processes; integration with all care processes; coordination with the organizational processes of health services; the best available evidence; transparency, inclusion, accountability, awareness, and ability to react to changes . One of the main problems with the errors is the imposition of heavy costs on the health system, patients, and their families.

Recommendations:

- Conducting further research aimed at raising awareness of the concept of risk management and its effect on quality patient care in the intensive care units among different health sectors is.
- Further research needs to be conducted to assess possible risks and its effect on patient care.

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