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ANALYSIS OF EXISTING RISK MANAGEMENT METHODS IN HEALTHCARE PRACTICE IN FOREIGN COUNTRIES

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Annotation. This article analyzes the theoretical and practical aspects of risk management in the healthcare system. The study examines the causes of clinical, operational, financial, legal, technological, and epidemiological risks encountered in healthcare institutions, as well as their impact on the quality of medical services and patient safety. Modern approaches to risk management, including risk identification, assessment, monitoring, and mitigation mechanisms, are discussed. Furthermore, the advantages of implementing risk management systems in healthcare organizations based on international standards such as ISO 13485 and ISO 14971 are highlighted. The findings contribute to the development of scientific and practical recommendations aimed at improving patient safety, reducing medical errors, and enhancing the efficiency of healthcare services.

Keywords: healthcare system, risk management, RCA, FMEA, safety management systems, quality management, ISO 31000, ISO 13485, healthcare institutions, clinical risk.

Аннотация. В данной статье анализируются теоретические и практические аспекты управления рисками в системе здравоохранения. В исследовании рассматриваются причины клинических, операционных, финансовых, правовых, технологических и эпидемиологических рисков, встречающихся в медицинских учреждениях, а также их влияние на качество медицинских услуг и безопасность пациентов. Обсуждаются современные подходы к управлению рисками, включая идентификацию, оценку, мониторинг и механизмы смягчения рисков. Кроме того, подчеркиваются преимущества внедрения систем управления рисками в медицинских организациях на основе международных стандартов, таких как ISO 13485 и ISO 14971. Полученные результаты способствуют разработке научных и практических рекомендаций, направленных на повышение безопасности пациентов, снижение количества медицинских ошибок и повышение эффективности медицинских услуг.

Ключевые слова: система здравоохранения, управление рисками, анализ первопричин (RCA), FMEA, системы управления безопасностью, управление качеством, ISO 31000, ISO 13485, медицинские учреждения, клинический риск.

Annotatsiya. Ushbu maqolada sog'liqni saqlash tizimida xavflarni boshqarishning nazariy va amaliy jihatlari tahlil qilinadi. Tadqiqotda sog'liqni saqlash muassasalarida duch keladigan klinik, operatsion, moliyaviy, huquqiy, texnologik va epidemiologik xavflarning sabablari, shuningdek, ularning tibbiy xizmatlar sifati va bemorlar xavfsizligiga ta'siri o'rganiladi. Xavflarni boshqarishning zamonaviy yondashuvlari, jumladan, xavflarni aniqlash, baholash, monitoring qilish va kamaytirish mexanizmlari muhokama qilinadi. Bundan tashqari, sog'liqni saqlash tashkilotlarida ISO 13485 va ISO 14971 kabi xalqaro standartlarga asoslangan xavflarni boshqarish tizimlarini joriy etishning afzalliklari ta'kidlangan. Tadqiqot natijalari bemorlar xavfsizligini oshirish, tibbiy xatolarni kamaytirish va sog'liqni saqlash xizmatlari samaradorligini oshirishga qaratilgan ilmiy va amaliy tavsiyalarni ishlab chiqishga hissa qo'shadi.

Kalit so'zlar: sog'liqni saqlash tizimi, xavflarni boshqarish, RCA, FMEA, xavfsizlikni boshqarish tizimlari, sifatni boshqarish, ISO 31000, ISO 13485, sog'liqni saqlash muassasalari, klinik xavf.

INTRODUCTION.

Healthcare systems worldwide operate in highly complex environments where clinical, operational, financial, technological, and legal risks can directly affect patient safety and organizational performance. According to the World Health Organization (WHO), unsafe healthcare practices contribute to millions of adverse events annually, making risk management a critical aspect of healthcare governance [1].

Over the past decades, developed countries such as the United States, the United Kingdom, Canada, Australia, Germany, and Japan have introduced comprehensive risk management frameworks aimed at minimizing medical errors and improving healthcare quality. These frameworks integrate risk assessment tools, patient safety initiatives, quality management systems, and evidence-based decision-making processes. The purpose of this article is to analyze existing risk management methods applied in healthcare practice in foreign countries and identify best practices that can be adapted to improve healthcare management systems [2].

Analysis of existing risk management methods in healthcare practice in foreign countries. Risk management in healthcare has become one of the most important components of patient safety and healthcare quality worldwide. Research conducted in developed countries such as the United States, United Kingdom, Germany, Australia, Canada, and the Netherlands has focused on identifying, assessing, preventing, and controlling clinical and organizational risks.

1. Root Cause Analysis (RCA)

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One of the most widely used methods in foreign healthcare systems is Root Cause Analysis (RCA). This method is applied after adverse events or medical errors occur to identify their underlying causes and prevent recurrence.

Research in the United States and the United Kingdom shows that RCA is among the most frequently used risk management tools in hospitals. It is particularly effective in analyzing medication errors, surgical incidents, and patient safety events [3,4].

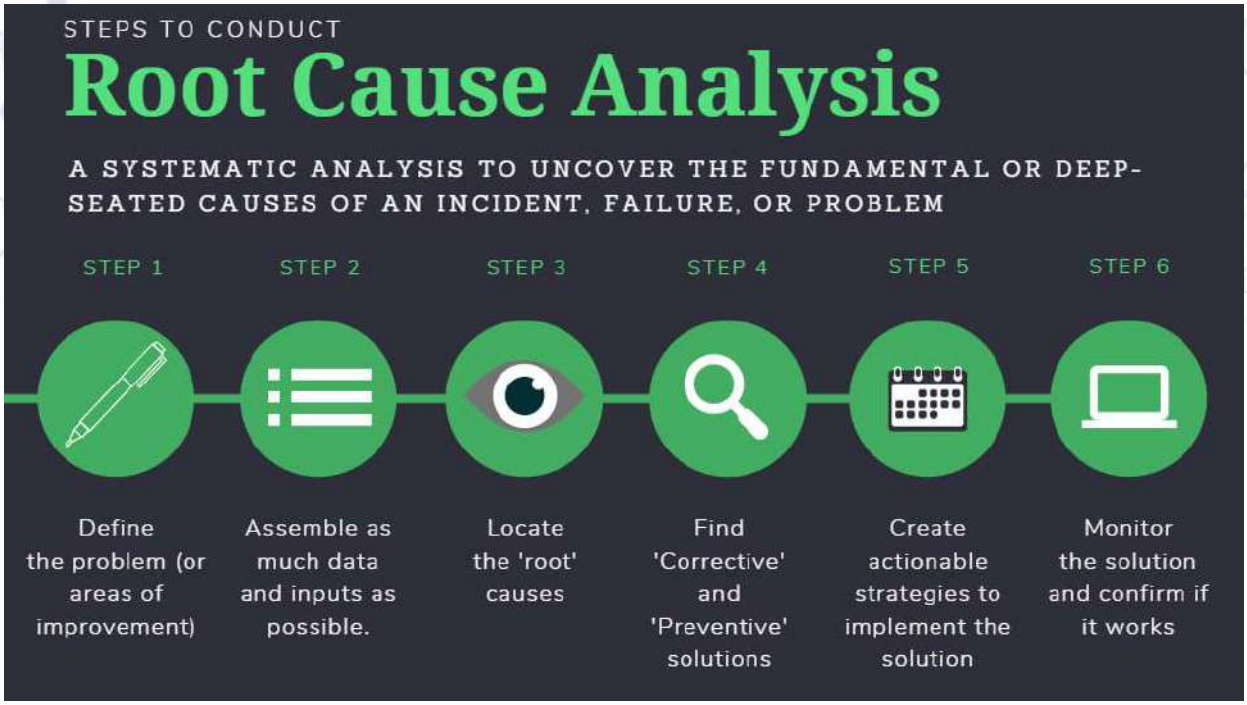


Fig 1. Root Cause Analysis (RCA) [5,6]

We give a bit of advances.

Advantages:

- Identifies the real causes of incidents.
- Supports corrective and preventive actions.
- Improves patient safety culture.
- Retrospective approach.
- Does not always predict future risks.

2. Failure Mode and Effects Analysis (FMEA) and HFMEA

Another extensively studied method is Failure Mode and Effects Analysis (FMEA) and its healthcare adaptation, Healthcare Failure Mode and Effects Analysis (HFMEA).

HFMEA is a proactive risk management tool used to identify potential failures before they occur. Research from the USA, Europe, Iran, and several Asian countries demonstrates its effectiveness in reducing patient safety incidents and improving healthcare processes.

- Medication administration processes.

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- Surgical services.
- Electronic medical record systems.
- Emergency departments.

Studies indicate that HFMEA significantly reduces operational risks when combined with continuous monitoring and evaluation.

3. ISO 31000-based risk management framework

Many foreign healthcare organizations have adopted the principles of the international standard ISO 31000 Risk Management Guidelines.

The framework includes:

- Risk identification.
- Risk analysis.
- Risk evaluation.
- Risk treatment.
- Monitoring and review.

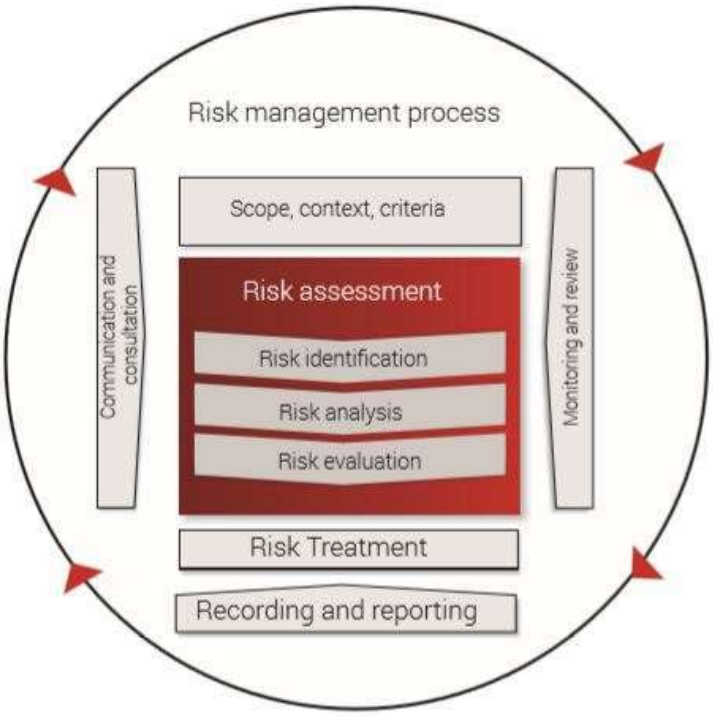


Fig 2. ISO 31000 Risk Management Guidelines

Research shows that hospitals implementing ISO 31000 principles achieve lower rates of adverse events, healthcare-associated infections, and medication errors.

4. Risk matrix method

The Risk matrix is commonly used in the United Kingdom, Germany, and Australia to assess risks according to probability and severity.

This method helps healthcare managers:

- Prioritize risks.

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- Allocate resources effectively.
- Develop preventive strategies.

Studies report that risk matrices are among the most frequently applied tools in UK healthcare organizations.

5. Safety Management Systems (SMS)

Several countries, including Australia, Canada, New Zealand, Ireland, and the Netherlands, have implemented comprehensive Safety Management Systems (SMS) in healthcare.

These systems integrate:

- Incident reporting systems.
- Risk assessment procedures.
- Staff training programs.
- Continuous quality improvement mechanisms.

A 2025 international review concluded that SMS implementation contributes significantly to patient safety improvement and organizational learning.



Fig 3. Safety Management Systems

6. Systems-Based clinical risk management models

Recent studies have emphasized systems-thinking approaches. Researchers have developed models combining:

- RCA,
- FMEA,
- SEIPS (Systems Engineering Initiative for Patient Safety).

These integrated models analyze interactions among healthcare workers, technologies, and organizational processes to reduce adverse events and improve hospital performance.

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Challenges in Healthcare Risk Management

Despite significant progress, healthcare organizations continue to face several challenges:

- Resistance to organizational change;
- Underreporting of incidents;
- Resource limitations;
- Workforce shortages;
- Increasing technological complexity;
- Cybersecurity threats.

Addressing these challenges requires strong leadership, continuous education, and investment in healthcare infrastructure.

CONCLUSION.

Risk management has become a fundamental element of healthcare governance in developed countries. International experience demonstrates that systematic approaches such as ISO 31000, Root Cause Analysis, Failure Mode and Effects Analysis, and Enterprise Risk Management contribute significantly to improving patient safety and healthcare quality. The adoption of these methods enables healthcare organizations to identify, assess, and mitigate risks effectively. Future healthcare systems should continue integrating digital technologies, artificial intelligence, and international standards to enhance risk management capabilities and ensure sustainable healthcare delivery.

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