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# Understanding and Enhancing Current Hospital Risk Management Procedures

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**Abstract:** Many patients in the healthcare industry have unpleasant occurrences. To ensure patient safety, hospitals have developed risk management. However, present risk management procedures have a lot of opportunity for improvement. As a result, the goal of this study is to gain a better understanding of risk management methods in hospitals and propose recommendations to enhance them. While a questionnaire survey was developed to better understand current risk management applications, risk management literature was also studied in order to better understand and improve these risk management applications. According to the research, over 70% of practitioners and managers see risk management as defining patient hazards, while just a minority agree on the ISO definition of risk. In addition, over half of practitioners and managers believe that risk assessment is more important than risk mitigation. Participants generally employed Failure Mode and Effect Analysis (FMEA), brainstorming, and risk matrix strategies to control risks. Risk management procedures might be advanced based on the results of the questionnaire and the literature research by prioritizing safety culture, employee involvement, safety training, risk reporting systems, and risk management instruments.

**Keywords:** risk management, patient safety, and healthcare**.**

## I. Introduction

The healthcare system is complicated and constantly changing. Furthermore, healthcare personnel are under a great deal of pressure. As a result, guaranteeing patient safety is challenging (Jun, Ward, & Clarkson, 2010). It is estimated that 850000 medical errors occur in the UK healthcare system each year (P. J. Clarkson et al., 2004), 400 patients died or were critically harmed as a result of these mistakes (Donaldson, 2002). Furthermore, the total number of patients in England and Wales who experience adverse events each year is expected to be around 42500 (Smith, 2007) and there are nearly a million in the United States (Kohn, Corrigan, & Donaldson, 2000; Starfield, 2000). Furthermore, according to one study, these patient safety concerns occur not only in the United States and the United Kingdom, but all across the world (P. J. Clarkson et al., 2004).

Since the Institute of Medicine study was published in 2000, healthcare institutions have been pushed to learn from mishaps, build a safety culture, and enhance their risk management processes (Cagliano, Grimaldi, & Rafele, 2011; Sokol & Neerukonda, 2013). To do this, healthcare institutions have incorporated engineering approaches from safety-critical sectors (P John Clarkson et al., 2004). Risk management is one of the engineering applications that the healthcare industry has adopted to protect patient safety. While the early focus on risk management was on financial issues as a result of the United States' healthcare insurance crisis, this understanding has since transitioned to safety and quality concerns (Dückers et al., 2009; Youngberg, 2011).

Risk management has only been partially adopted in hospital settings due to resource constraints. Some researchers focused on risk management process gaps, such as risk identification (Simsekler, Card, Ward, & Clarkson, 2015; Simsekler, Card, Ruggeri, Ward, & Clarkson, 2015) as well as risk reduction (Simsekler, Card, Ruggeri, Ward, & Clarkson, 2015). (Card, Simsekler, Clark, Ward, & Clarkson, 2014). However, there is little evidence of risk management in practice and variable levels of understanding. As a result, the purpose of this research is to better understand managers' and practitioners' perceptions and their implications, as well as to identify potential areas for improvement in present risk management procedures.

## II. Method

To further understand practical and theoretical applications, this study used a questionnaire and evaluated risk management literature. The questionnaire was designed to assess practitioners' and managers' knowledge of risk management applications. To suit time restrictions in healthcare, the questionnaire was meant to be concise. As a result, there were ten multiple-choice items on the form (Please see appendix 1 for the questionnaire template).

The questionnaire was created electronically using an internet survey tool, and the survey link was then circulated via LinkedIn groups (e.g. doctors, managers, risk managers and patient safety groups). The questionnaire was also given to patients in person at a hospital. Data was collected in-person as well as online (170 replies) (20 responses). The results came in from a number of countries, including the United States (68), the United Kingdom (42) and others (80). The obtained data was then categorised depending on the respondents' positions in order to see if there were any discrepancies in attitudes between managers and practitioners. Finally, data was evaluated to better understand and improve existing risk management methods.

## III. Results

The following portions of this study focus on the questionnaire results. The findings are classified into three categories: risk comprehension and risk management, risk management strategy, and risk management tool application.

### Risk comprehension and risk management

Figures 1a and 1b depict participant responses to risk and risk management-related questions. While 64% of practitioners agreed with the ISO 31000 definition of risk as "the influence of uncertainty on objectives," 73% said that risk management is about recognizing potential dangers to patients (see in figure 1b). Despite confirming a more broad grasp of risk as defined by ISO, more practitioners agreed on a specific focus: "risk management is about recognizing potential dangers to patients." Managers had the same impression, with 71% agreeing on the ISO definition and 78% agreeing on risk management comprehension.

Following data analysis based on respondent location, it was observed that the US and UK results differ. To be more explicit, UK practitioners and 100% of UK managers agreed on the risk management definition (78 percent). The trend in the United States, however, was comparable to the national results. Managers (95 percent) agreed with the proposition more than practitioners (65 percent).

### Understanding of risk and risk management

Figures 1a and 1b depict participant responses to risk and risk management-related questions. While 64% of practitioners agreed with the ISO 31000 definition of risk as "the influence of uncertainty on objectives," 73% said that risk management is about recognizing potential dangers to patients (see in figure 1b). Despite confirming a more broad grasp of risk as defined by ISO, more practitioners agreed on a specific focus: "risk management is about recognizing potential dangers to patients." Managers had the same impression, with 71% agreeing on the ISO definition and 78% agreeing on risk management comprehension.

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'Risk is the effect of uncertainty on objectives'

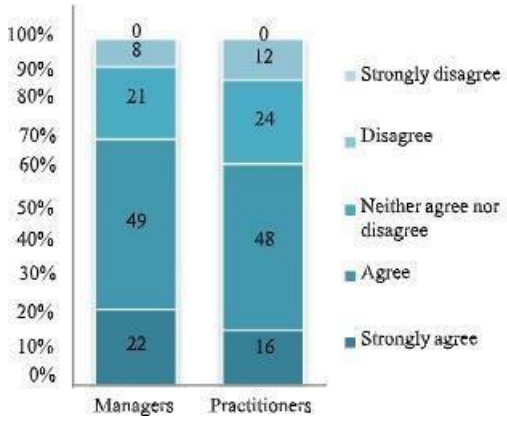


**Figure 1a: Risk definition**

'Risk management identifies possible threats to patients'

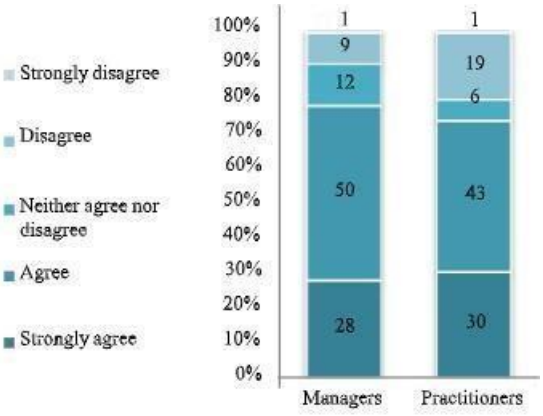


**Figure 1b: Risk managementdefinition**

**Risk management strategy**

The question was, "To what extent do you think that risk assessment is more important than risk mitigation?" to appreciate the priorities of responders Risk assessment was seen more significant by 47 percent of practitioners than risk mitigation by 44 percent of managers. Although which of these should be prioritized is arguable, risk management is more likely to lessen risks. When the answers were compared by country, the replies were similar, with the exception of UK managers and practitioners, who agreed slightly more. Figure 2 depicts the total answers to the supplied statement.

**'Risk assessment is more important than risk mitigation'**

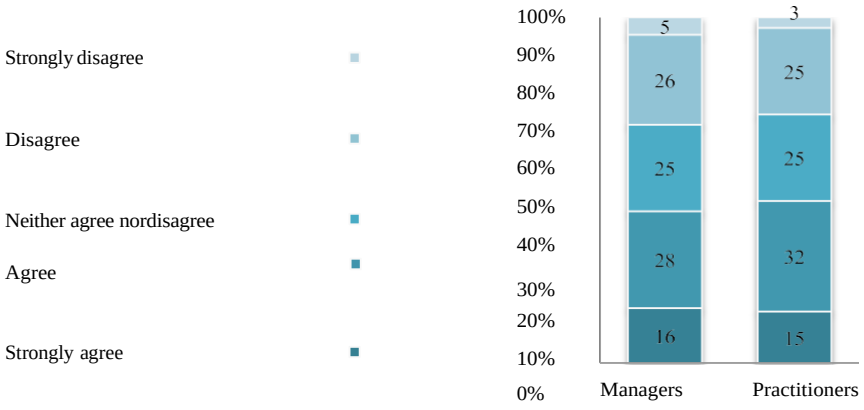


**Figure 2 Risk management strategy**

**Use of the risk management techniques**

In this study, respondents were also asked which strategies they utilize for risk management applications. The most widely utilized tool, according to the findings, was Failure Mode Effect Analysis (FMEA). After that, the risk matrix and brainstorming were employed (see figure 3). Most crucially, the research demonstrated that practitioners rarely employ tools, with the exception of brainstorming and what-if procedures. However, it should be remembered that using a large number of tools does not ensure success.

This may not always imply sound risk management. Only employ risk management tools when absolutely essential.

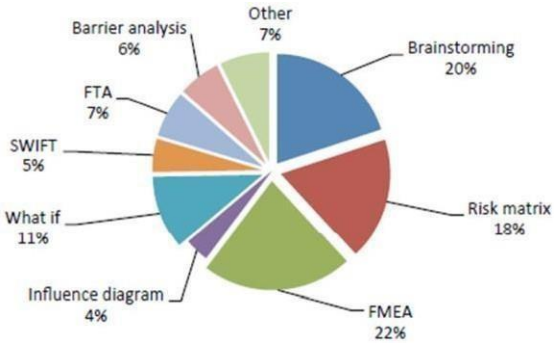


**Figure 3 Risk assessment techniques used by respondents**

## IV. Discussion

Managers and practitioners had slightly different conceptualizations of risk and risk management. Furthermore, healthcare personnel prioritize risk assessment over risk reduction. This could be because external authorities promote risk assessment. As a result, healthcare workers may have acquired a common understanding of how many risks were assessed, allowing for considerably better risk management. In contrast, the optimal risk assessment is to reduce hazards. These two must be balanced in order to accomplish effective risk management practices. Not unexpectedly, managers are more likely to adopt risk management approaches than practitioners, meaning that front-line staff are not completely involved in risk management activities. Among these instruments, FMEA is the most commonly used technique. This is explained by the establishment of Healthcare Failure Mode and Effect Analysis by the Department of Veterans Affairs. (HFMEA) (DeRosier, Stalhandske, Bagian, & Nudell, 2002) as well as an enormous number of publications in the literature (Lu, Teng, Zhou, Wen, & Bi, 2013; Manger, Paxton, Pawlicki, & Kim, 2015; Perks, Stanic, Stern, & et al., 2012; Shebl, Franklin, & Barber, 2012). When the results are broken down by respondent location, it is observed that UK respondents display distinct patterns from those from other countries. Diverse findings across nations could be explained by different healthcare systems and different amounts of influence by national authorities on healthcare organizations.

Creating a safety culture is one approach for enhancing risk management techniques (Al-Assaf, Bumpus, Carter, & Dixon, 2003), encouraging worker involvement in risk management practices (Khatri, Brown, & Hicks, 2009), providing safety training (Mackert, Ball, & Lopez, 2011), as well as promoting the use of risk management reporting systems and technologies. While a safety culture is vital for encouraging all healthcare employees to participate in risk management, blame is a key barrier to its implementation (P. J. Clarkson et al., 2004; Muralidhar, Taneja, & Ramesh, 2012). Healthcare personnel should not be scared to make errors, and team members should assist one another in recovering from errors. This is a prevalent idea in the aviation business. During flights, cabin crew make various mistakes, but anyone who detects the fault addresses the problem (Firth-Cozens, 2001). As a result, crew teams keep mistakes from turning into disastrous disasters. It should also be mentioned that, while bad cooperation increases the frequency of errors, good teams decrease errors by assisting and correcting each other's mistakes (Lester & Tritter, 2001; Wiegmann, ElBardissi, Dearani, Daly, & Sundt, 2007).

Another key component that could improve risk management practice, particularly for practitioners, is the provision of safety training. (Mackert et al., 2011). A survey of 40 practitioners inquired if they had received risk management or patient safety training, and the results showed that none had (Arfanis & Smith, 2012).
However, all practitioners must register concerns in their local risk register systems. As a result, healthcare organizations should teach their employees to assist them in their role in risk management practice.

Furthermore, authorities should adopt safety training requirements in order to incentivize healthcare businesses to give effective training.
Systems for reporting incidents or risks have the ability to improve present practice (Barach & Small, 2000). Incident reporting is a primary source for defining risk. According to estimates, just 22-83 percent of events are recorded (Parkes, Pyer, Wray, & Taylor, 2014; Pietro, 2000). The substantial variance in estimated event reports shows that there is an issue with the reporting culture.

As a result, effective reporting should be promoted in order to improve risk management techniques by incorporating event experiences. It should be highlighted, however, that a large number of occurrences that are not effectively recorded cannot help the risk management process. Both a low rate of reporting and a high rate of reporting are concerns that must be addressed (Macrae, 2008). As a result, a more effective balance between reporting too many and too few hazards to management should be achieved.
To help prevent mishaps, mitigate risks, and assure safety, a number of risk management solutions are available. However, according to the findings of this study, practitioners have a low tendency to employ risk assessment methods. Some of the underlying causes of this lack of execution are healthcare staff time allocation, staff knowledge levels, and staff fear of being exposed for their mistakes (Carroll, 2009; Eidesen, Sollid, & Aven, 2009; Spedding & Rose, 2008). Another issue is that hospitals employ the same risk assessment tool for all sorts of risks and processes, which is frequently insufficient. Nonetheless, risk management tools aid healthcare organizations by involving workers at all levels in the right usage and selection of risk assessment approaches (e.g., FMEA, FTA, ETA, and HRA).
Some limitations of this study should also be mentioned. The characteristics of risk management practice may vary by country. Risk management comprehension may differ between hospital types and even between hospital wards. As a result, the same risk management strategies may become less effective. In addition, questionnaires may be skewed since respondents may have tried to submit right answers rather than disclosing their genuine experiences and expertise. By addressing general issues, this study, on the other hand, gives an overview of risk management approaches.

## V. Conclusion

Current risk management approaches are ineffective at guaranteeing patient safety by preventing adverse occurrences. Some of the difficulties raised in this study include: disparities in risk management attitudes, healthcare staff focused on risk assessment rather than risk reduction, and a lack of risk management instruments used, particularly by practitioners. Risk management techniques, on the other hand, have a lot of opportunity for improvement. Interventions such as safety culture, personnel training, and adequate risk management tool use could be recommended. More study is needed before the suggested therapies may be used in a hospital context.

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## Appendix 1

This questionnaire aims to understand and develop healthcare risk management practices and strategies in hospital settings. Your answers will help to understand the current situation of risk management in hospital environment.

**Position in the hospital/ country:**

**To what extent to you agree with the following statements:**

1) Risk is the effect of uncertainty on objectives

☐ Stronglyagree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

2) Risk management is about identifying possible threats to patients

☐ Stronglyagree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

3) Risk management involves ensuring that the hospital works efficiently

☐ Stronglyagree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

4) Risk management aims to ensure that the healthcare provided is good value for money.

☐ Stronglyagree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

5) Identifying a large number of risks makes the system safer and better.

☐ Stronglyagree ☐ Agree ☐ Neither agree nordisagree ☐ Disagree ☐ Strongly disagree

6) Risk assessment is more important than risk mitigation.

☐ Stronglyagree ☐ Agree ☐ Neither agree nordisagree ☐ Disagree ☐ Strongly disagree

7) Risk is efficiently managed in my organisation.

☐ Stronglyagree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

**Could you please answer the following questions?**

8) When thinking about risk, my primary focus is on the needs of:

☐ An individual patient ☐ A group of patients (e.g. ward) ☐ The hospitalas a whole ☐ The local community ☐ The NHS ☐ Other

If other, could you please specify?

9) Which technique do you use for risk management

☐ Brainstorming ☐ FMEA ☐ What If ☐ FTA

☐ Likelihood ImpactGrid (Risk Matrix) ☐ Influence Diagram ☐ SWIFT ☐ Barrier Analysis

10) When tracking risks, I formally review risks at a frequency of:

☐ Once per day ☐ Once per week ☐ Once per month ☐ Once per year

☐ Every few days ☐ Every few weeks ☐ Every few months ☐ Every few years

Other ☐

If other, could you please specify?

**Email address (Optional) :**

☐

If you would like a summary of the *results*, *please* tick the box by providing *your email address*.

Thank you for participating in our questionnaire.