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Evaluation of risk management practices: data analysis of NHS England hospitals

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Abstract

Risk management practices are applied in the National Health Service (NHS) England hospitals to reduce harm rates and to ensure safety. This study evaluates current risk management practices in the NHS England hospitals through highlighting non-compliance issues within the practice and through explaining board level risk priorities. All data were collected for selected (N=34) NHS England hospitals. Data were gathered from the NHS Litigation Authority (NHSLA) reports to reveal risk management problems and from Board Assurance Frameworks (BAF) to define top risks. Results from an external authority of the NHSLA show that local induction of staff is a major non-compliance issue for risk management practice with more than half of the hospitals having difficulties. Following that supervision of medical staff in training is the second highly observed deficiency. Results from hospitals' board level demonstrate that top risks in hospitals were regarding quality and performance issues. Additionally, most of the board level defined top risks were categorized as organizational and clinical-related risks. Within these, workforce issues and non-compliance with requirements are highlighted as top risks for organizational-related risks while Accident and Emergency (A&E) targets and treatment delays are prioritized as part of clinical-related risks. Financial deficit is also frequently defined at board level as a top risk for financial-related risks. Both the NHSLA and hospital board level assessments show that workforce related issues are still a major concern in hospital risk management practices. It is therefore a slight influence of an external authority (NHSLA) has been recognized on prioritization of board level defined risks.

Keywords

Risk, safety, risk management, hospital

1. Introduction

Prevention of adverse events in the healthcare sector is a growing worldwide concern (Clarkson et al., 2004). As much as one in three of the patients admissions are estimated to experience the adverse events (Landgrigan et al., 2010). This indicates that hospitals are potentially error-prone. However, this hazardous environment of hospitals can be reduced by risk management activities with also an effort to improve quality and to lower costs (P Barach & Small, 2000).

In the healthcare industry, risk management has been practiced as an essential part of hospital administration since the 1970s due to a healthcare insurance crisis in the USA (Kuhn & Youngberg, 2002). Then, the understanding of risk management moved to be quality and safety-centric. With the development of risk management methods and the reaching of safety maturity levels in other industries, safety awareness in the healthcare industry has also been developed (Eidesen, Sollid, & Aven, 2009; C Vincent, 2010).

Risk management is a combination of culture, structure and process which aims to promote continuous risk identification to take preventative actions, and to help decision makers with respect to resource allocation by increasing the awareness of safety in the organization (Garvey, 2009; Macdonald, 2004). In order to implement risk management practice, these 5 steps should be followed: (1) risk identification (what could go wrong?), (2) risk analysis (how bad is it and how often does it occur?), (3) risk evaluation (is there a need for action?), (4) risk treatment (how to treat it?), and (5) risk monitoring (how to control assessed risk?) (BS EN 31010, 2010; Haimes, 2009; HM Treasury, 2004; Kaplan & Garrick, 1981; Macdonald, 2004; Mullai, 2006; NPSA, 2006). Asking these questions leads individuals to understand the risks around them, and provides an opportunity to take action to avoid, reduce, transfer, or accept risks.

In the literature some studies focus on risk management in specific areas such as needle stick, falls, and moving and handling (Alan Card, Harrison, Ward, & Clarkson, 2012; Nunes, Santos, da Silva, Lourenço, & Carvalhais, 2015), and focus on specific weaknesses such as blaming and safety culture (Kitch, Ferris, & Campbell, 2008) observed in risk management practice. However, there is little research examining externally defined risk management deficiencies and board level defined risk priorities. Therefore, this study evaluates current risk management practices at NHS England hospitals through addressing three following questions: “what are the common deficiencies in current risk management practice?”, “what are the priorities of the NHS England hospitals in their risk management practices?”, and “does the NHSLA risk management assessment have an influence on hospitals board level risk prioritization?”.

2. Material and methods

2.1 Dataset used

The National Health Service Litigation Authority (NHSLA) was established in 1995 to resolve disputes, to improve risk management, to share lessons learnt and to improve safety for patients and staff (Department of Health, 2013).

In order to reveal the NHS England hospitals’ key deficiencies in their risk management practice and concerns regarding their top risks, a grey literature review was conducted by gathering data from the NHSLA risk management assessment reports for each hospital, and from hospital BAF notes via each hospital web-site. Risk management assessment reports were reviewed to define common risk management deficiencies. Also, BAF notes were reviewed to highlight each hospital’s top (strategic) 5 risks which have potential threats or losses on organizations or organizational plans (Allan & Beer, 2006).

2.2 Risk Categorization

Hazards and risks can be categorized in a variety of ways. Runciman *et al* categorize hazards into environmental factors, organizational factors, human factors, subject of incident factors, and drug, equipment and documentation (Runciman et al., 2006). Other classification schemes are also evident in the literature; for instance Niel-Laile *et al* divide generic hazards into 10 categories: regulation, medical, material, technical, human, professional, information system, management, logistic and commercial (Niel-Lainé et al., 2011). Vincent defines 7 factors that influence on clinical practice, namely: institutional context, organizational and management factors, work environment, team factors, individual factors, task factors and patient characteristics (Charles Vincent, Taylor-Adams, & Stanhope, 1998) while other research describes 6 incident contributory factors: patient, individual, task, team, work environment, and organizational management institutional factors (Rogers, 2002). Most relevantly, the risk register system in a teaching hospital categorizes risk assessment as clinical risks (e.g. risks associated with direct patient care), organizational risks (e.g. risks relating to non-clinical care), health and safety risks, and project management risks, and information risks.

Based on the teaching hospital categories and the top risks identified in the present study, board level defined top risks were divided into 6 categories: communication-related (e.g. partnership and patient experience), clinical (e.g. HSMR rate, treatment delays and A&E performance), information-related (e.g. quality of data), organizational (e.g. workforce and compliance with standards), financial (e.g. overspendings), and health and safety (H&S) related (e.g. falls) risks. Same classification scheme was also used to categorize the NHSLA defined non-compliance issues.

2.3 Sample selection

The most recent publicly available data were collected for selected hospitals. An adequate sample size for the analysis was calculated to be 34 (confidence level of 95% and precision level of 15%). 34 hospitals were randomly selected out of 160 NHS England hospitals ensuring that each region was adequately represented. Table 1 provides information about the hospital type (acute specialist, acute teaching, large, medium and small trusts) by regions (North, Midlands and East, London, and South).

Table 1 Characteristics of the selected hospitals

	North (n=10)	Midlands and East (n=9)	London (n=5)	South (n=10)
Acute Specialist (n=2)	1	-	-	1
Acute Teaching (n=8)	2	2	2	2
Large (n=10)	4	3	1	2
Medium (n=9)	2	3	2	2
Small (n=5)	1	1	-	3

3. Results

First, non-compliance issues are defined from the NHSLA risk management assessment reports to present deficiencies of risk management practices. Second, key findings from each hospital BAF report are given to highlight board level risk priorities.

3.1 The NHSLA results for the common deficiencies in risk management practices

Deficiencies in risk management practices observed in at least 3 hospitals are given in Figure 1. Training is the main challenge faced by hospitals in achieving better risk management practices and it is considered as an organizational-related issue. One in three hospitals have problems with inductions for temporary staff, almost one in five hospitals with inductions for permanent staff and approximately one in four hospitals with supervision training. The assessment of training is based on documentation (e.g. content of the training), implementation and monitoring to make sure all staff completed the training (NHSLA, 2013). Risk management training and consent training are also highlighted non-compliance issues within the assessed risk management practices. Other highlighted organizational-related issues are employment checks, health record keeping standards and training need analysis. The remaining top issues are predominantly clinical and health and safety-related. Among them, the most common weaknesses for clinical risks are found to be clinical handover of care, patient information consent and the deteriorating patient; the most defined non-compliance issues for health and safety risks are moving and handling, secure environment and slips, trips and falls.

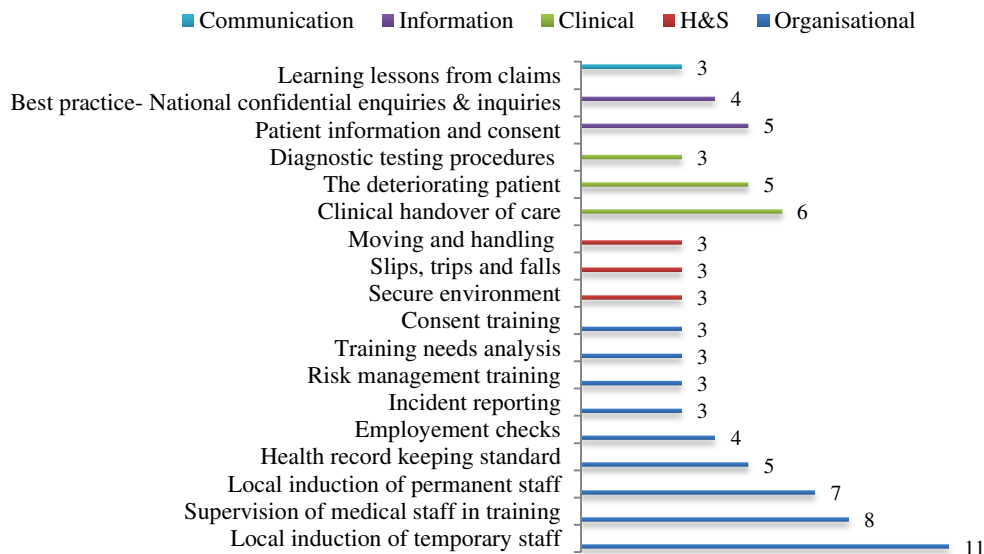


Figure 1 Non-compliant issues for 34 hospitals

In a nut shell, organizational-related issues (e.g. training and health record keeping standards) are the main deficiencies faced by hospitals on their risk management practices. Clinical-related issues (e.g. patient handover, patient information consent and deteriorating patient) and health and safety related issues (e.g. slips, trips and falls) are other key deficiencies in risk management practices. Having outlined the current key risk management deficiencies at NHS England hospitals, the next section describes what hospital board levels define as their risk priorities.

3.2. BAF results for prioritisation of risk

Top risks of hospitals were reviewed from BAF reports. Figure 2 illustrates board level defined top risks within the defined risk categories.

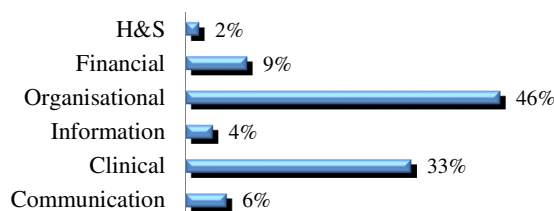


Figure 2 Board level defined top risks by risk category for n=34 hospitals

Hospitals at board level tend to prioritize organizational risks (46%) and communication-related risks (33%). Almost half of the hospitals top risks are related to workforce issues including staff capacity, staff vacancies, and workforce recruitment. Among top clinical risks, mortality rate, infection targets, A&E targets, patient discharge, patient handover, incidents and treatment delays are frequently defined at board level. Furthermore, patient complaints are defined by the boards in their top risks, coming under communication-related risks. Also, some other risks are determined under other risk categories. To give some examples of these risks: overspending is the most common financial-related risk, falls are the main health and safety risks, and e-care is seen as in the top risks for information related risks. Figure 3 demonstrates at board level defined top risks in at least 3 hospitals.

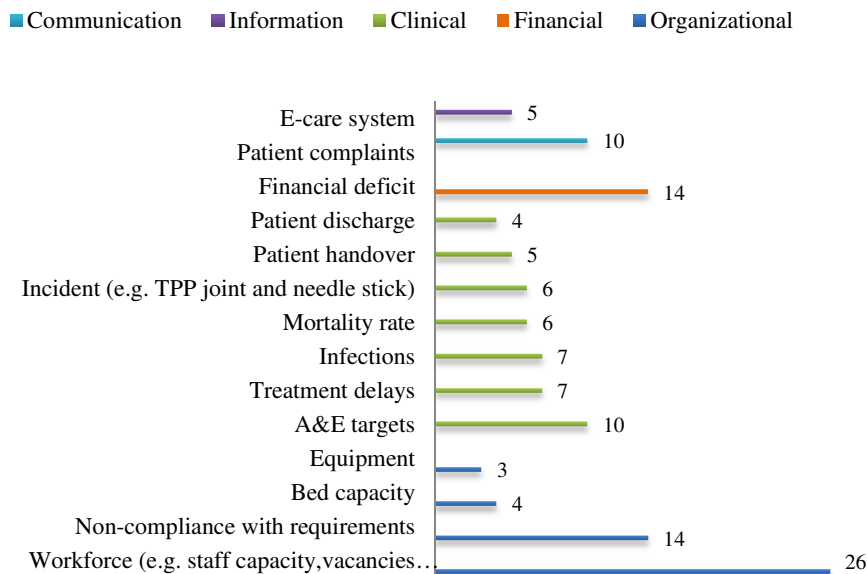


Figure 3 Hospitals board level defined top risks by given number of hospitals

4. Discussion

This study reveals that hospitals primarily define organizational-related risks as their top risks. Clinical risks are also frequently mentioned as top risks. Among clinical risks, a large number of risks address regulatory or national requirements which supports the idea that authorities have power to make changes or have influence on hospitals in terms of safety and quality applications (AJ Card, 2014; Gaba, 2010). To seek whether or not the NHSLA assessments have influence on board level defined top risks, a comparison conducted between the NHSLA and BAF datasets. Although there is no direct influence was recognized among the collected data, there is still some indirect influence observed as in workforce-related issues defined by both the NHSLA and BAF reports. Having no direct influence can be explained by having no exact datasets between the NHSLA and BAF to compare except data of patient handover, training, discharge, patient falls and open culture. Also, there are some other external authorities that effecting decisions made by hospital board level such as the CQC (Care Quality Commission) and the NPSA (National Patient Safety Agency). Therefore, it is reasonable not to observe a strong relationship between the NHSLA and BAF datasets. As an example of indirect relationships, the NHSLA reports define hospitals' deficiencies on training when hospitals at board level focus on workforce and culture-related risks. As training is for staff, any staff related issues may result in problems with training. Also, any culture related issues may affect willingness of staff to take voluntary training.

The NHSLA risk management assessment reports highlight that induction training is the main concern to improve risk management practices, coming under organizational risks. Induction training is to integrate new employees into their working environment, to motivate them, to ensure they work in a safe environment, and to provide an overview of the organization and organizational culture. There are some statutory requirements for induction training. For instance, induction training covers the topics of fire safety, health and safety, manual handling, equality and diversity, and information governance (Coleman, 2013). Training in general is considered to be a factor that influence on safety culture of the organization (Farrington-Darby, Pickup, & Wilson, 2005; Glendon & Stanton, 2000). Additionally, safety training interventions reduce hazards and risks in the working environment and improve safety behaviors of all level staff (Dong, Entzel, Men, Chowdhury, & Schneider, 2004; Kinn, Khunder, Bisesi, & Wholley, 2000). A research also claims that mandatory training has significant influence on the workers' attitude by reducing incidents in their working environment in construction industry (Bahn & Barratt-Pugh, 2012). Furthermore, training of the healthcare staff is considered key to a better risk management practices, and training remains a serious issue for healthcare organizations (CQC, 2015; DoH, 2007; European Communities, 2009). It is therefore, training is an essential factor for safety in the organizations. However, researchers have claimed that healthcare practitioners are under-trained in safety (Alan Card, Ward, & Clarkson, 2012; Dul, Bruder, & Buckle, 2012; Pham et al., 2010; Youngson & Flin, 2010). Hence, it is understandable that external authorities are assessing hospitals risk management practices by measuring a variety of training practices.

Healthcare staff training is not the only problem that hospitals are facing, but they are also coping with workforce issues. Hospitals themselves define workforce issues as the main part of their top risks. The workforce-related issues in healthcare are also cited in the literature as a global problem (Gupta et al., 2015). Additionally, mortality rate (Chou et al., 2015), infection risks (Youssef, Novosad, & Winthrop, 2016), treatment delay (Verweji et al., 2015), and A&E targets are also widely mentioned in the literature as clinical risks all over the world and in our study as part of clinical-related top (strategic) risks. These highlighted clinical-related risks are explained as elements of key performance indicator factors (Chen & Wang, 2015; Gockel, Ahlbrand, Arras, Schreiber, & Lang, 2015; Harvey et al., 2015). As performance indicators are defined as part of quality measurement (Azami-Aghdash, Tabrizi, Sadeghi-Bazargani, Hajebrahimi, & Naghavi-Behzad, 2015; Mainz, 2003), it can be inferred that at hospitals board level defined risks are mostly quality and performance related concerns. Barach and Small state that reducing risks in healthcare is defined as an effort to improve quality by lowering costs (Paul Barach & Small, 2000). Moreover, Lord Darvi defines quality with three dimensions: safety, effectiveness and patient experience, while quality in general is defined as a degree to meet needs of both stakeholders and systems (Berwick et al., 2013). Thus, quality in healthcare is understood as a more comprehensive discipline including safety. This comprehensive understanding of quality can be observed through this review as risk management mostly focusing on quality and performance issues.

However this study has some limitations. First, the study reviewed only a limited number of hospitals; therefore results may not represent risk management practices of all hospitals. However, even for a single hospital, it should be noted that different services may have different priorities and weaknesses. As an example of this, surgical wards and intensive care units aim for reliability with high quality whilst some others including blood transfusion, anesthesiology, and radiotherapy have safety as a priority (Amalberti, Auroy, Berwick, & Barach, 2005). Second, reports may not represent results for the exact time period. Still, the most recent publicly available data were used. Lastly, classification scheme may be biased because risks or issues may be defined under different categories or under multiple categories depending on the individual's perception.

5. Conclusion

This study drew attention to the common weaknesses in current risk management practices that were defined by an external authority (NHSLA), and risk priorities in hospitals that were determined at the board level of hospitals. Whilst staff safety training is still the main deficiency for risk management practices, workforce related risks are defined to be the main risk priority from the board level. Therefore an indirect influence of external authorities concerns on board level priorities is observable.

Further research can be carried out to understand the underlying reasons of defined weaknesses and prioritized risks within risk management practices.

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