

Risk Assessment Model for Hospitals



Khalil Rizk, MPH, MHA, CPHQ, CPHRM
*JCI Consultant,
 Chief of Quality Important & Risk
 Management, Alameda Healthcare*

1. Introduction

Risk is defined as the uncertainty of an event or an action that might lead to an adverse impact on the objectives, processes or the organization as a whole. Hospitals are complex organizations dealing with a sensitive and dangerous business that touches upon human lives. Now more than ever before, hospitals are bound to face a multitude of risks ranging from financial to operational and other physical hazards. We in hospital management need to be cognizant of such risks and try to identify and mitigate them in a safe manner. For this purpose, it is imperative to implement an active risk management program.

Risk Categories and Domains: (1)

Operational / Clinical	Risks related to the conduct of the business operation that results from inadequate or failed internal processes, people, or systems (medical malpractice) that affect patient safety.
Financial / Business Continuity	Risks such as capital structure, credit and interest rate fluctuations, foreign exchange and accounts receivables. These are risks that affect the profitability, cash position, access to capital, or external financial ratings through business relationships or the timing and recognition of revenue and expenses.
Strategic / Reputation	Brand, reputation and advertising risks, and risks associated with business strategy. Failure to adapt to changing environment, changing customer priorities, competitive risk, clinical research.
Legal / Regulatory	Incorporates risks arising out of product liability, management liability, failure to comply with statutes, standards, rules and regulations, and issues related to intellectual property.
Technological / Projects	An area of tremendous growth in health care including risk associated with the adoption of new systems and processes, (e.g., computerized physician order entry (CPOE), bar coding, electronic medical record (EMR), picture archiving and communication system (PACS), robotics, simulation, modeling, medical monitoring, telemedicine, cyber-medicine, etc.).
Natural Disaster / Hazard	Risks attributable to physical loss of assets or a reduction in their value, including risk arising from earthquakes, windstorms, tornadoes, floods, fires, etc. Traditionally insurable risk related to natural hazards and business interruption.

Accrediting organizations such as the Joint Commission require participating hospitals to have “An ongoing program of risk management to identify and to proactively reduce unanticipated adverse events and other safety risks to patients and staff”. Such a program should have the following essential components:

- a) risk identification
- b) risk prioritization
- c) risk reporting
- d) risk management
- e) investigation of adverse events
- f) management of related claims (2)

According to the Joint Commission Accreditation Hospital Standards, hospital leadership should adopt effective measures to identify those risks, prioritize and trend them, implement action plans to mitigate those risks with highest scores. The hospital risk management program should be focused on prevention or risk-reduction and should adopt a proactive approach to risk management. Healthcare professionals are responsible to safeguard the facility and its occupants (patients, visitors and staff themselves) against possible risks that have the potential to cause harm. The first step toward achieving this objective is to develop a simple, yet dependable,

risk assessment model that can be used by hospital risk managers with minimal resources.

The proposed risk assessment model aims to answer four simple questions-What can go wrong? How often? How bad? And what action should be done to avoid risks or reduce consequences? It may not be possible to eliminate all risks facing the hospital or a specific department / service.

In the following sections, I will describe the main features of this risk assessment model. The risk manager should collaborate with department / service leaders to identify possible risks that might impact the human, financial, operational performance and will affect the image or reputation of the hospital. This collaborative risk assessment exercise should be realistic and factual whereby the participants will provide input based on past hospital experience and documented events. The risk assessment activity can be performed for each department / service within the hospital separately and the end results will be compiled by the risk manager to establish the highest risk priority.

2. Risk Assessment Worksheet

Steps to be followed in completing the risk assessment format:

Score	Consequence Score				
	1	2	3	4	5
Domain	Insignificant	Minor	Moderate	Major	Catastrophic
Operational / Clinical	Adverse event leading to minor injury not requiring first aid. No impaired functions	Minor injury or illness, first aid treatment is required. <3 days absence or < 3 days extended hospital stay. Impaired functions. Greater than 3 days less than one month	Significant injury requiring medical treatment e.g. fracture and/or counselling. >3 Days absence or 3-8 Days extended hospital stay. Impaired functions greater than one month but less than six months	Major injuries/long term incapacity or disability (loss of limb) requiring medical treatment and/or counselling. Impaired functions greater than six months	Incident leading to death or major permanent incapacity. Event which impacts on large number of patients or members of the public. Permanent impairment of Functions or incapacity
Financial Business Continuity	Interruption in a service which does not impact on the overall delivery of services. Improvement actions required	Short term disruption to service with minor impact on overall services of the hospital	Some disruption in service with unacceptable impact on overall services. Temporary loss of ability to provide services	Sustained loss of service which has serious impact on overall delivery of services. Requires Major contingency plans	Permanent loss of core service or facility. Disruption of overall hospital services. May lead to significant ‘knock on’ effect

Strategic / Reputation	Rumors, no media coverage. No public concerns voiced	Local media interest possible but short term coverage	Local media –adverse publicity. Significant effect on staff morale & public perception. Public calls (at local level) for specific remedial action. Review/ investigation necessary	Local media – long term adverse publicity. Public calls for specific remedial action. Comprehensive review/ investigation necessary	National/ International media/ adverse publicity, > than 3 days. Public confidence undermined. Hospital performance questioned. Government intervention. Court action.
Legal / Regulatory	Minor non- compliance with internal standards. Minor issues requiring improvement	Single failure to meet internal standards or follow protocol. Minor recommendations which can be easily addressed by hospital management	Repeated failure to meet internal standards or follow protocols. Important recommendations that can be addressed with an appropriate management action plan	Repeated failure to meet external standards. Failure to meet national norms and standards / regulations. Critical report or significant findings and/ or lack of adherence to regulations	Gross failure to meet external standards. Repeated failure to meet national norms and standards / regulations. Severely critical report with possible major reputational or financial implications
Technological / Projects	Insignificant cost. Increase / Minor delay in activities. Barely noticeable reduction in scope or quality	<5% over budget. Delay in scheduled activities. Minor reduction in quality/scope	10% over budget. Some delay in scheduled activities. Reduction in scope/quality	10-25% over budget. Major delay in scheduled activities. Failure to meet secondary objectives	>25% over budget. Major delay in scheduled activities. Failure to meet primary objectives
Natural Disaster / Hazard	Negligible effect	Minor effect of the facility. Limited hindrance of hospital services	Moderate effect of the facility. May affect some hospital services	Damage to the facility requiring external assistance (civil defense, radiation protection service etc.)	Many hospital services are curtailed. Detrimental effect requiring external assistance

- Identify the type of risk that might affect your department/ service
- Assign the probability of occurrence / likelihood score (for definitions use Table 1)
- Assign the consequence score (for definitions use Table 2)
- Calculate the risk score by multiplying the two scores (probability X consequences)

Department / Service:

Type of Risk	(1) Probability of Occurrence or Likelihood Score	(2) Consequence Score	(1 X 2) Risk Score
1.			
2.			
3.			
4.			
5.			

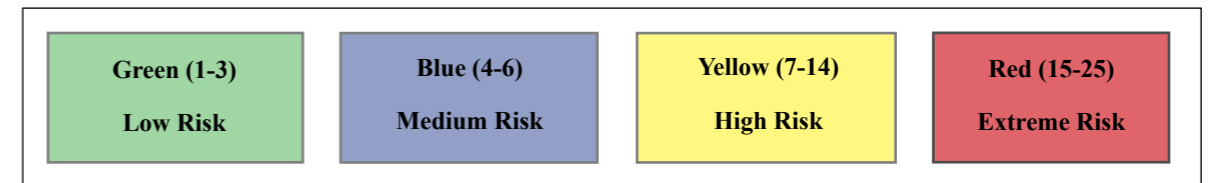
Table 1:

	Probability of Occurrence or Likelihood Score				
Score	1	2	3	4	5
Likelihood	Remote to nonexistent	Low likelihood	Moderate likelihood	High likelihood	Certain to occur (Very high likelihood)
Definition	Highly unlikely to occur (1 in 10,000)	Possible, isolated cases, chances are low (1 in 5,000)	Infrequent, reasonable chance to occur (1 in 200)	Frequent, occurs regularly (1 in 100)	Almost certain, will occur in a short period (1 in 20)

3. Mapping the Total Risks

Table 2:

	Total Risk Score				
	1	2	3	4	5
1	2	4	6	8	10
2	4	6	9	12	15
3	6	8	12	16	20
4	8	10	15	20	25
5	10	15	20	25	



4. Prepare Action Plans for the Extreme and High Risks

Prepare action plans to reduce the probability and consequences of the extreme risks with a score of 15-25. Then move down the risk levels to the high risk with a score of 7-14.

Extreme Risk	Risk Mitigation Measures	Responsibility	Completion Date
1.			
2.			
3.			
4.			
5.			
High Risk	Risk Mitigation Measures	Responsibility	Completion Date
1.			
2.			
3.			
4.			
5.			



5. Final Word

The intent of this work is to raise awareness among healthcare professionals to the importance of risk assessment and provide an easy-to-use risk assessment tool that can be used by department / service staff without

Infos

L'Alcool Directement Responsable de 7 Formes de Cancer

Des chercheurs néo-zélandais sont arrivés à démontrer une fois de plus que l'alcool interviendrait directement sur le développement de sept types de cancers: le cancer du sein, du colon, du foie, de l'œsophage, du rectum, du larynx, et de l'oropharynx. Sur ces formes-ci, la boisson est responsable de près de 6% des décès par cancer dans le monde. Il n'est pas non plus exclu que le cancer de la peau, de la prostate et du pancréas soient concernés.

L'étude, parue le 21 juillet dans le journal *Addiction*, indique que les risques concernent également les buveurs légers ou modérés.

Ainsi, «plus la consommation est importante, plus les risques sont élevés, mais l'incidence de l'alcool sur les petits consommateurs reste considérable vue sa place dans la société» indique Jennie Connor, auteur de l'étude.

Elle ajoute que fumer et boire en même temps augmente bien plus le risque d'attraper un cancer de la gorge ou de la bouche que de pratiquer une activité à la fois.

Une étude sérieuse pour combattre les mythes sur l'alcool Selon la chercheuse, les campagnes de sensibilisation devraient encourager tout le monde à arrêter plutôt que de seulement cibler les gros buveurs, ceux-ci n'ayant qu'un «potentiel limité» face aux risques de cancer.

Elle s'oppose aux récentes études sur le bienfait d'un verre de vin sur le cœur qu'elle considère comme des mythes. «Cette étude examine également la connexion entre l'alcool et le bon fonctionnement du cœur, et pour l'instant les preuves sont plutôt faibles» conclut Jennie Connor.

De manière plus rassurante, l'étude montre aussi qu'un buveur prêt à s'arrêter peut inverser le risque d'un cancer du foie, du larynx ou du pharynx, et que ce risque est réduit pour toute la durée d'abstinence.

Peut-être a-t-elle réussi à vous convaincre qu'un premier verre est déjà de trop. En tout cas s'il n'y en a qu'un, on ne dira rien!

the need for sophisticated applications. The main objective is to identify the high and extreme risks facing hospitals and prepare action plans to mitigate those risks. (4)

References

1. Roberta Carroll, *Risk Management Handbook for Healthcare Organizations*, 5th edition, Volumes 1, 2, and 3, John Wiley & Sons, 2007
2. Joint Commission International Accreditation Standards for Hospitals, 5th Ed., *Quality Improvement and Patient Safety*, Standard No. QPS. 11
3. Health Service Executive, *Risk Assessment Tool and Guidance*, Oct. 2013, https://www.hse.ie/eng/about/Who/qualityandpatientsafety/resourcesintelligence/Quality_and_Patient_Safety_Documents/riskoctober.pdf
4. National Patient Safety Agency, *Healthcare Risk Assessment Made Easy*, NHS, May 2007, <https://www.npsa.nhs.uk>

ST. MARC THE FIRST DIAGNOSTIC CENTER IN LEBANON since 1978

MEDICAL AND DIAGNOSTIC CENTER



ALL RESULTS ON LINE SINCE 2000

ISO CERTIFIED Since 2005

'DIAMOND EYE' AWARD WINNER

Jetawi-Tel.: 01/566222-01/582658
 Fax 01/563418 - 03/217297
 Zalka-Tel.: 01/885222 - 03/422112
 BH-Tel.: 01/260561-01/241222
 Email: stmarco@cyberia.net.lb
 Web site: www.stmarclab.com

Facebook: Saint Marc Medical & Diagnostic Center

