

# **RISK MANAGEMENT**

**Dr. Ibrahim Al.Ibrahim**



## **ACKNOWLEDGEMENT**

In the name of Allah, the Most Gracious and the Most Merciful  
Alhamdulillah, all praises to Allah for the strengths and His blessing in completing this book  
( risk management program ).

We thank the large number of open source and related project that critically facilitate our work including, National patient safety agency ( risk matrix for risk manager/ January 2008), Northrop Grumman Corporation ( Risk Management plan/ September 2007), Australian Society for Simulation in Healthcare ( Risk Management plan/ 2008) & East Central Regional Hospital/ Gail C. Jackson ( Risk Management plan/ 2010)

Special appreciation goes to Dr. Mohammed Abdulallai KFHH hospital director, for his supervision and constant support. His invaluable help of constructive comments and suggestions throughout the experimental and thesis works have contributed to the success of this book. Not forgotten, my appreciation to my colleagues and team for their support and knowledge regarding this topic.

I would like to express my appreciation to Ms. Amena Al.Beshar who contributed effectively in writing this book.

To those who indirectly contributed to this book, your kindness means a lot to me. In additional thanks to my patient for being the inspiration for the format of this book.

**Thank you very much.**

<b>Table of Contents:</b>
<b>content</b>
<b>1. Purpose:</b> <b>1.1Obligation</b> <b>1.2Objective</b> <b>1.3Risk Management Context</b> <b>1.4Goals</b>
<b>2. Responsibility</b> <b>1. Risk management</b> <b>2. Executive committee</b> <b>3. Hospital director</b> <b>4. Risk manager</b> <b>5. Clinical auditor</b> <b>6. Hospital director technical assistant</b> <b>7. Nursing director</b> <b>8. Safety Engineer</b> <b>9. Security manager</b> <b>10.Biomedical maintenance department</b> <b>11.Other committee</b> <b>12.Hospital departments</b> <b>13.Chief of departments</b>
<b>3. Key function of risk management plan in KFHH</b>
<b>4. Approach</b> <b>4.1Risk management framework</b> <b>4.2Managing project risks</b>
<b>5. Methodology:</b> <b>5.1Risk Identification</b> <b>5.2Risk treatment</b> <b>5.3Tracking and reporting</b> <b>5.4Process to address immediate unforeseen risks</b>
<b>6. Risk Management process chart</b>
<b>7. Forms:</b> <b>7.1. Risk Notification Form</b> <b>7.2. Healthcare Failure-mode Effects &amp; Analysis Template.</b>
<b>8. References</b>

## **1. PURPOSE:**

### **1.1 Obligation**

- 1.1.1.** King Fahad Hospital Hufuf (KFHH) is committed to establishing a sound Risk Management framework for all organization undertaking.
- 1.1.2.** Specific risks identified for the organization are documented in a Risk Register in accordance with this Risk Management Plan.

### **1.2 Objectives:**

- 1.2.1 The risk management plan is an integral part of the organization governance frame work
- 1.2.2 The objectives of the risk management plan are to:
  - 1.2.2.1 Manage risk such that an acceptable risk profile is established for the organization
  - 1.2.2.2 Maximize the chance of achieving organization objectives by managing risk

### **1.3 Risk Management Context**

- 1.3.1 Risk is part of the environment within which any organization operates. Risk management:
  - 13.1.1 involves the systematic identification, analysis and management of threats
  - 13.1.2 Where appropriate, acceptance of risks is integral to efficiency and effectiveness
  - 13.1.3 Enabling KFHH to proactively identify, evaluate and manage risks, opportunities and issues arising out of activities.
  - 13.1.4 Risk management typically involves a balance between the pressures to be risk-takers and the pressures of prudence and risk-avoidance.
  - 13.1.5 This Plan seeks to establish an environment where the organization executive board can determine what an acceptable project risk profile is.

### **1.4 Goals**

#### **4.1.1 Decrease severity and number of patient , visitors and staff injuries by:**

- 4.1.1.1 Carefully assessing potential risks at each unit and levels of the organization and prepare action plan to prevent harm or injury due to these risks
- 4.1.1.2 Receiving and reviewing incident and occurrence reports, as well as patient/visitors complaints.
- 4.1.1.3 Periodically reviewing credentialing procedures
- 4.1.1.4 Being involved in the education of medical staff and employees via grand rounds, in-services and other venues on risk management issues and reducing harm
- 4.1.1.5 Improve communications among care givers
- 4.1.1.6 Implement and monitor compliance with the international patient safety goals

#### **4.1.2 Assure that documentation of care is adequate by:**

- 4.1.2.1 Working closely with medical record committee
- 4.1.2.2 Educating medical staff and employees on proper documentation procedures
- 4.1.2.3 Avoid the use of unacceptable abbreviations that may lead to misinterpretations

#### **4.1.3 Limit financial loss related to clinical care and provide a mechanism to deal fairly with issues related to claims from adverse outcomes in clinical care through:**

- 4.1.3.1. Identify trends in medical errors and analyze their causes to prevent recurrence

## **2. RESPONSIBILITY:**

**Risk management** is the responsibility of every employee at the facility. Due to the size and complexity of the facility & its programs, participation for all the staff is necessary for effective management of risk.

### **Executive committee:**

1. The executive committee of KFHH Medical Services represented by its chairman in KFHH bears the ultimate responsibility for the operation of risk management program
2. The executive committee will review periodic reports of findings, actions results from Risk management activities in order to assess the program's efficiency and effectiveness.
3. The executive committee chairman delegates and Hospital Director and the medical staffs to share in.
  - 3.1. Development of criteria as an indicator database for identifying and evaluating specific areas of actual or potential risk in the clinical aspects of the delivery of patient care and safety.
  - 3.2. Implementation and evaluation of appropriate corrective action to the extent possible, to alleviate or resolve identified problem or concerns with patient safety issues.
  - 3.3. Planning and implementation of programs designed to reduce or eliminate actual or potential future risks of injury.

### **Hospital Director:**

1. The hospital director is responsible for risk management activities within the hospital
2. The hospital director is responsible for providing support for the proper functioning of hospital-wide risk management and of environment activities
3. The hospital director provides the executive committee chairman with pertinent information regarding risk management activities
4. The hospital director provides support direction and or assists with resolution of problems to enhance risk management activities.

### **Risk Manager:**

1. Supervise and support risk management activities
2. Monitor and evaluate the overall performance of the risk management program
3. Request problem reports/ incidents reports and any follow-up information necessary
4. Perform or assign investigation of problem
5. Prioritize problems based upon the degree of impact of patient care or patient care services, program management and facility management and by utilizing failure mood & effect analysis ( FMEA) .
6. Conduct review for facility wide problems and trends
7. Assess the appropriateness and effectiveness of corrective actions
8. Assure communication between departments, services and programs when problems or opportunities to improve patient care involve more than one department
9. Integrate the findings of all risk management activities, as appropriate, with the clinical services program where there are opportunities to improve the quality of patient care and present program to the environment of care committee and the performance improvement and patient safety council.

### **Clinical auditor**

1. collects data from various sources and aggregates it into trending information for analysis and assessment by Leadership and other members of the staff.
2. Concerns falling into the potential risk management area are referred to the appropriate individual/ department/ committee for evaluation and improvement, with a copy to the Risk Manager.

**Hospital Director Technical Assistant:** is responsible for

1. Required credentialing and privileging of the facility's medical staff to ensure licensing and competency for the protection of the consumers of the facility.
2. Monitoring document completion and other related matters
3. Determine area for improvement.
4. Overview and support all risk management related activities.
5. Participate in the building up strategic planning related to risk management activities.

**Nursing director is responsible for:**

1. Ensuring current licensure and competency of the facility's nursing staff and sharing in many activity of risk management program, in conjunction with the Nursing Performance Committee
2. Periodically reporting data related to risk management in clinical care area to the risk assessment working group.
3. Monitoring nursing compliance to risk management roles & plans.
4. Nursing documentation completion and filing
5. Educating nursing staff in all aspect of risk management plan.

**Safety Engineer:** The safety engineer is responsible for the development, implementation and monitoring of the safety management program, which is designed to provide a physical environment free of hazards through:

1. Supervise and maintain a risk-assessment program that evaluates the impact on patient care and safety of the buildings, grounds, occupants and internal physical system.
2. Supervise and maintain an information collection and evaluation system.
3. Collect and evaluate information regarding hazards and safety practices for use in identification of safety management issues to be addressed by the facility management and safety committee.
4. Conduct and document facility-wide surveys on periodic basis ( quarterly ) to identify environmental hazards and unsafe practices.
5. Supervise and maintain hazardous materials and waste program to identify and control hazardous materials and wastes.
6. Supervise and maintain an emergency preparedness program designed to manage the consequences of natural disasters or other emergencies that disrupt the facility's ability to provide care and treatment.
7. Supervise and maintain a life safety management program designed to protect patients, personnel, visitors and property from fire and the products of combustion and to provide for the safe use of all building and grounds.
8. Supervise and maintain a safety management program designed to maintain a safety environment for patients, visitors, and employees.
9. Supervise and maintain a utilities management program to provide consistent utility services to the facility.
10. Work with appropriate staff to implement facility management and safety committee recommendations and monitor and evaluate the effectiveness of the changes.

**Security manager is responsible for:**

1. Regular fire safety inspections/drills and is responsible for requesting corrective action by the organization head. All reports will be copied and sent to the Safety Committee for monitoring and any additional follow-up required.
2. Secure all hospital entrance.
3. Determine and plan for high risk areas management.
4. Respond to all emergency calls and report to concern local authorities
5. Enforce parking regulation.
6. Enforce personal identification
7. Monitoring camera control rooms and records
8. Ensure compliance with visiting roles.
9. Educate staff about all aspect of security management program.
10. Participate in risk management planning.

**Biomedical Maintenance Department is responsible for :**

1. Ensuring the appropriate scheduled inspection and preventive maintenance of all medical
2. Ensuring all repairs/replacements accomplished when necessary.
3. Develop a written procedure to follow in the case of equipment/supply recall to assure that all equipment subject to recall is appropriately serviced, repaired, returned or otherwise removed from service when required for the safety of the consumers, employees and/or others.
4. Inspect and Certify all Demo machines used in patient care areas.

Through various **committees**, King Fahad Huf of Hospital identifies areas of risk, determines means to reduce or eliminate risk, and determines means to prevent risk in the future including at least an annual failure mode and effects analysis (FMEA).

**Committees include, but are not limited to:**

1. Executive Committee
2. Ethical Committee
3. CPR Committee
4. Infection Control Committee
5. OR Committee
6. Pharmacy and Therapeutics Committee
7. Privilege & Accreditation Committee
8. Utilization Review Committee
9. Tissue Review Committee
10. Blood Review Committee
11. Steering Committee
12. Safety Committee
13. Medical Records Committee
14. Mortality & Morbidity Committee
15. Poly Trauma Committee
16. Nursing Committee

Each **Department/Service** is responsible for problem identification as well as performance improvement as a part of their Performance Improvement monitoring. Trends or deficiencies, which may result in potential loss, are reported to the **Risk Manger** for risk assessment and appropriate referral for action.

**Chief of departments** are responsible for governing the medical practice at the facility. **The chief of departmental meeting** receives information from Peer Review, Death Review, Infection Control, Pharmacy and Therapeutic, Utilization Review, Medical Record Committees and others. These committees assist the medical staff in identifying risk areas and in providing the training and supervision required to correct or decrease areas of future risk.

**In Conclusion: The following high light the important specific responsibility for different aspects of risk management:**

<b>Risk Activity</b>	<b>Responsibility</b>
<b>Risk Identification</b>	<b>All Organization Stakeholders</b>
<b>Risk scoring</b>	<b>All Organization Stakeholders</b>
<b>Risk Registry</b>	<b>Risk Manager</b>
<b>Risk Assessment</b>	<b>All Organization Stakeholders</b>
<b>Risk Statements</b>	<b>Risk Manager</b>
<b>Risk Response Options Identifications</b>	<b>All Organization Stakeholders</b>
<b>Risk Response Approval</b>	<b>Risk Manager &amp; Hospital Director</b>
<b>Risk Contingency Planning</b>	<b>Hospital Managers</b>
<b>Risk Response Management</b>	<b>Hospital Managers</b>
<b>Risk Reporting</b>	<b>Risk Manager</b>

### **3. Key functions of risk management plan in KFHH:**

#### **3.1 The hospital-wide RM plan addresses potential risk related key functions:**

- 3.1.1. Consents
- 3.1.2. Security
- 3.1.3. Utilities
- 3.1.4. Employee health
- 3.1.5. Patient complaints
- 3.1.6. Occurrence/ variance reports
- 3.1.7. Confidentiality
- 3.1.8. Safety
- 3.1.9. Hazardous materials and waste management
- 3.1.10. Licensing, credentialing and privileging
- 3.1.11. Equipment
- 3.1.12. Disaster planning
- 3.1.13. Infection control
- 3.1.14. Testing of emergency response systems
- 3.1.15. Emergency preparedness
- 3.1.16. Claims and loss of property
- 3.1.17. Medical records audit for proper documentation
- 3.1.18. Informed consent process
- 3.1.19. Risk assessments and precautions
- 3.1.20. Needle sticks and sharps container.
- 3.1.21. Patient falls



## 4. APPROACH:

### 4.1. Risk Management Framework

4.1.1 KFHH incorporates risk management into its business planning.

4.1.2 Various risk-reduction techniques are used.

**4.1.2.1.** Proactive techniques and processes include, but are not limited to the following:

**4.1.2.1.1.** Comprehensive orientation and training for new employees and refresher training for continuing employees.

**4.1.2.1.2.** Plans for risk management fire safety, hazardous material, disasters, and infection control, with staff training on a regular basis in the means to carry out those plans.

**4.1.2.1.3.** The facility is smoke free with designated smoking areas outside of occupied building.

**4.1.2.1.4.** The safety committee members do regular surveys to identify and correct safety hazards. Information is reported on a regular basis to the safety committee, which meet quarterly

**4.1.2.1.5.** Drug therapy is monitored through the pharmacy and therapeutics committee and through physician peer review.

**4.1.2.1.6.** Staff is trained to observe consumers for indications of adverse drug reactions and response to treatment by:

**4.1.2.1.6.1.** Routine verification of orders for accuracy of transcription

**4.1.2.1.6.2.** Unit dose dispensing for medication

**4.1.2.1.6.3.** Special lettering techniques to enhance distinction between look-alike/ sound alike drug names

**4.1.2.1.6.4.** Adherence to the international patient safety goals.

**4.1.2.1.6.5.** Failure mode and effect analysis (FMEA) assessment

4.1.3 Reactive techniques and processes include:

**4.1.3.1.** Incidents are defined, managed, reported, aggregated and trended. They are analyzed and used to reduce future risk.

**4.1.3.2.** Serious incidents are individually reviewed, investigated, as needed, tracked, trended. They may result in activation of the sentinel event protocol and root cause analysis process.

**4.1.3.3.** Root cause analysis (RCA) for serious incidents and development of risk reduction strategies.

**4.1.3.4.** Documentation and reporting of incidents: The facility documents and utilizes various forms for risk management and performance improvement purposes. They include but are not limited to:

4.1.3.4.1. Accident/ incident report

4.1.3.4.2. Serious and unusual incident report

4.1.3.4.3. Employee injury reports

4.1.3.4.4. Nursing administration shift reports

4.1.3.4.5. Safety inspections.( **directly after the incidents** )

4.1.4. Special plans

**4.1.4.1.** The facility has developed the following plans to address special safety issues in emergency situations. These plans are a vital part of the facility's risk management plan

4.1.4.1.1. General safety plan

4.1.4.1.2. Hazardous materials and waste plan

4.1.4.1.3. Medical equipment plan

4.1.4.1.4. Utility system management plan

4.1.4.1.5. Construction and renovation.

4.1.4.1.6. Security plan

4.1.4.1.7. Infection control plan

4.1.4.1.8. Patient safety plan

4.1.4.1.9. Emergency management manual

4.1.4.1.10. Fire plan

## 5. Managing Project Risks

5.1. The Risk Management Plan covers the identification, analysis, prioritization and treatment of project threats as well as the implementation of risk management procedures to control specific risks that are still rated as *high*, or of *significant* risk, after mitigation.

### 5.1.METHODOLOGY

#### 5.1.1 Risk Identification

**5.1.1.1** Risks are defined as events that, should they occur, will limit KFHH ability to successfully achieve the organization objectives. Risks will be identified using the following processes:

5.1.1.1.1 Past performance experiences.

5.1.1.1.2 Consideration of the risks against each of the objectives identified in the Organization Management Plan

5.1.1.1.3 Consideration of the risks in terms of Organization Milestones and Tasks that they affect

5.1.1.1.4 Consideration of risk by the Organization Team and Organization Executive committee

**5.1.1.2** Establishing a formal risk submission process.

**5.1.1.3** Where existing controls are in place, they are recorded in the Risk Register together with the Risk Analysis information

**5.1.1.4** Risk awareness requires that every organization team member be aware of what constitutes a risk to the organization, and being sensitive to specific events or factors that could potentially impact the organization in a positive or negative way.

**5.1.1.5** Risk identification consists of determining which risks are likely to affect the project and documenting the characteristics of each.

**5.1.1.6** Risk communication involves bringing risk factors or events to the attention of the risk manager and organization team.

**5.1.1.7** It is the KFHH top leadership responsibility to assist the stakeholders with risk identification, and to document the known and potential risks in the Risk Register.

**5.1.1.8** Updates to the risk register will occur as risk factors change.

**5.1.1.9** Risk management will be a topic of discussion during the Hospital Executive Committee Meeting.

**5.1.1.10** Risk Manager will discuss any new risk factors or events and these will be reviewed with the KFHH managers

**5.1.1.11** The project manager will determine if any of the newly identified risk factors or events warrants further evaluation. Those that do will undergo risk quantification and risk response development, as appropriate, and the action item will be closed.

**5.1.1.12** The Risk manager is responsible for logging the risk in the Risk Register.

**5.1.1.13** Notification of a new risk should include :

5.1.1.13.1 Date: when is the risk identified

5.1.1.13.2 Location: where is the risk occur

5.1.1.13.3 Identifier: the name of the person who is report or identify the risk

5.1.1.13.4 Risk reference number : A unique reference number can be assigned to each identified risk which compose of two initials of the department , serial no. in the risk register system ( which will be given to you by the risk register person) as a second part and the third part will composed of the month and year ( **for example: pharmacy department on date 12/12/1433 referred to PH 1.12.33**)

5.1.1.13.5 Risk Description of the factor or event

**5.1.1.13.6 Consequences statement to defining grade according to the following number and description:**

1. Negligible
  2. Minor
  3. Moderate
  4. Major
  5. Catastrophic
- ( as per consequence table No. 1)

**The following table details the key elements of risk identification:**

<b>External scrutiny and inspection</b>	<b>Occurrence</b>	<b>Internal Assessment</b>
<b>Prospective</b>	<b>Retrospective</b>	<b>Prospective</b>
<ul style="list-style-type: none"> <li>• Internal audit report</li> <li>• Accreditation bodies report</li> <li>• HAI report ( health care associated infection report)</li> <li>• Report from professional bodies</li> <li>• Health and safety executive reports/ visits</li> <li>• Facility management &amp; safety committee report</li> </ul>	<ul style="list-style-type: none"> <li>• Incident &amp; near miss reporting</li> <li>• Sentinel event</li> <li>• Complaints, medicolegal claims</li> <li>• Patient and client satisfaction measures</li> <li>• Work related injuries ( e.g. needle stick)</li> <li>• Sickness and absence records</li> <li>• Staff turnover</li> </ul>	<ul style="list-style-type: none"> <li>• Quality Screen specialized committee ( MMU, PCI, Blood utilization &amp; MMC, .. etc)</li> <li>• Hazard reporting related               <ol style="list-style-type: none"> <li>a. Sharp container</li> <li>b. Waste management</li> </ol> </li> <li>• Other self assessment tools:               <ol style="list-style-type: none"> <li>a. Testing of emergency response system and preparedness</li> <li>b. Fire safety</li> </ol> </li> <li>• Departmental report</li> <li>• Medical Records:               <ol style="list-style-type: none"> <li>a. Proper documentation</li> <li>b. Confidentiality.</li> </ol> </li> </ul>

**Table 1 Consequence scores choose the most appropriate domain for the identified risk from the left hand side of the table then work along the columns in same row to assess the severity of the risk on the scale of 1-5 to determine the consequence score, which is the number given at the top of the column.**

	<b>Consequence score ( severity levels) and examples of descriptors:</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Domains</b>	<b>Negligible</b>	<b>Minor</b>	<b>Moderate</b>	<b>Major</b>	<b>catastrophic</b>
Impact on the safety of patients, staff or public ( physical/ psychological harm)	Minimal injury requiring no/minimal intervention or treatment No time off Work	Minor injury or illness requiring minor intervention Requiring time off work for <3 days Increase in length of hospital stay by 1-3 days	Moderate injury requiring professional intervention Requiring time off work for 4-14 days Increase in length of hospital stay by 4-15 days Incident Report An event which impacts on a small number of patient.	Major injury leading to long-term incapacity disability Requiring time off work for > 14 days Increase in length of hospital stay by >15 days. Mismanagement of patient care with long-term effects	Incident leading to death Multiple permanent injuries or irreversible health effects An event which impacts on a large number of patients
Quality / complaints/ audit	Peripheral element of treatment or service sub-optimal Informal complaint/ inquiry	Overall treatment or service sub-optimal Formal complaint (stage 1) Local resolution Single failure to meet internal standards Minor implications for patient safety if unresolved Reduced performance rating if unresolved>	Treatment or services has significantly reduced effectiveness Formal complaint ( stage 2) Local resolution ( with potential to go to independent review) Repeated failure to meet internal standards Major patient safety implications if findings are not acted on	Non-compliance with national standards with significant risk to patients if unresolved Multiple complaints/ independent review Low performance rating critical report	Totally unacceptable level or quality of treatment/service Gross failure of patient safety if finding not acted on inquest/ ombudsman inquiry Inquest/ombudsman inquiry Gross failure to meet national standards.
Human resources/ organizational development/ staffing/ competence	Short term low staffing level that temporarily reduce service quality ( < 1 day)	Low staffing level that reduce service quality	Late delivery of key objective/ service due to lack of staff Unsafe staffing level or competence (> 1 day) Low staff morale Poor staff attendance for mandatory/key training	Uncertain delivery of key objective/service due to lack of staff Unsafe staffing level or competence (>5 days) Loss of key staff Very low staff morale No staff attendance for mandatory/key training	Non-delivery of key objectives service due to lack of staff Ongoing unsafe staffing levels or competence Loss of several key staff No staff attending Mandatory Training key training on an ongoing basis
Statutory duty/ inspections	No or minimal impact or breach of guidance/ statutory duty	Breach of statutory legislation  Reduced performance rating if unresolved	Single breach in statutory duty Challenging external recommendations/ improvement notice	Enforcement action Multiple breaches in statutory duty Improvement notices Low performance rating critical report	Multiple breaches in statutory duty Prosecution Complete systems change required Zero performance rating Severely critical report
Adverse publicity/ reputation	Rumors Potential for public concern	Local media coverage – short-term reduction in public confidence Elements of public expectation not being met	Local media coverage-long-term reduction in public confidence	National media coverage with < 3 days service well below reasonable public expectation	National media coverage with >3 days service well below reasonable public expectation. MP concerned (question in the house) Total loss of public confidence
Business objectives/ projects	Insignificant cost increase/ schedule slippage	< 5 per cent over project budget schedule slippage	5-10 per cent over project budget Schedules slippage	Non-compliance with national 10-25 percent over project budget Schedule slippage Key objectives not met	Incident leading >25 per cent over project budget Schedule slippage Key objectives not met
Service/ business interruption Environmental impact	Loss/interruption of > 1 hour minimal or no impact on the environment.	Loss/interruption of >8 hours Minor impact on environment	Loss/interruption of > 1 day Moderate impact on environment	Loss/interruption of > 1 week Major impact on environment	Permanent loss of service of facility Catastrophic impact on environment

**5.1.1.14 Probability that the event will occurs which can be identified according number and description as:**

1. Rare
2. Unlikely
3. Possible
4. Likely
5. Almost certain ( place schedule of definition under )

When assessing likelihood, it is important to take into consideration the controls already in place.

**5.1.1.15 The likelihood score is a reflection of how likely it is that the adverse consequence described will occur. Likelihood can be scored by considering:**

- Frequency (how many times will the adverse consequence being assessed actually be realized?)

**OR**

- Probability (what is the chance the adverse consequence will occur in a given reference period ? )  
( as per likelihood scores table No. 2 )

**Table 2: provides definitions of descriptors that can be used to score the likelihood of a risk being realized by assessing frequency:**

<b>Likelihood score</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Descriptor</b>	<b>Rare</b>	<b>Unlikely</b>	<b>Possible</b>	<b>Likely</b>	<b>Almost Certain</b>
Frequency How often might it/does it happen	This will probably never happen/ recur	Do not expect it to happen/ recur but it is possible it may do so	Might happen or recur occasionally	Will probably happen/recur, but it is not a persisting issue/ circumstances	Will undoubtedly happen / recur possibly frequently

**2.1.1.1 Risk scoring and grading:**





- 2.1.1.1.1 Define the risk(s) explicitly in terms of the adverse consequences(s) that might arise from the risk
- 2.1.1.1.2 Use table 1 to determine the consequence score(s) for the potential adverse outcome(s) relevant to the risk being evaluated
- 2.1.1.1.3 Use table 2 to determine the likelihood score(s) for those adverse outcomes. If possible, score the likelihood by assigning a predicted frequency of occurrence of the adverse outcome.
- 2.1.1.1.4 Calculate the risk score by multiplying the consequence by the likelihood:  $C \text{ ( consequence ) } \times L \text{ ( likelihood ) } = R \text{ ( Risk score ) } \text{ ( } C \times L = R \text{ ) }$

The risk matrix in table 5 shows both numerical scoring and color bandings. A trust's risk management policy or strategy should be used to identify the level at which the risk will be managed in the trust, assign priorities for remedial action, and determine whether risks are to be accepted, on the basis of the color bandings and/or risk score.

**Table 3 Risk matrix:**

	Likelihood				
Consequence:	1	2	3	4	5
	Rare	Unlikely	Possible	Likely	Almost certain
5 Catastrophic	5	10	15	20	25
4 Major	4	8	12	16	20
3 Moderate	3	6	9	12	15
2 Minor	2	4	6	8	10
1 Negligible	1	2	3	4	5

For grading risk, the scores obtained from the risk matrix are assigned grades at follows:

	1-3	Low risk
	4-6	Moderate risk
	8-12	High risk
	15-25	Extreme risk

## 2 Risk Treatment:

2.1 Risk treatment involves identifying the range of options for treating risk, assessing those options and then establishing agreed controls.

2.2 Risk treatment options include:

- 2.2.1 Avoidance – Change the structure or process to avoid the risk. Change scope, objectives, etc.
- 2.2.2 Transference – To transfer risk to someone else.
- 2.2.3 Mitigation – Take steps to reduce the probability and/or impact of a risk. Taking early action, close monitoring, more testing, etc.
- 2.2.4 Acceptance – Simply accept that this is a risk. ( include risk sores equal 6 )When choosing acceptance as a response the KFHH is stating that given the probability of occurring and the associated impact to the project that results.
- 2.2.5 Deferred – A determination of how to address this risk will be addressed at a later time.

The results of the risk assessment process are documented in each Risk Statement and summarized in the Risk Register which will be reported on a monthly basis.

### **3 Tracking and Reporting**

As project activities are conducted and completed, risk factors and events will be monitored to determine if in fact trigger events have occurred that would indicate the risk is now a reality.

Based on trigger events that have been documented during the risk analysis and mitigation processes, the KFHH managers will have authority to enact contingency plans as deemed appropriate. Day to day risk mitigation activities will be enacted and directed by the organization managers. Large scale mitigation strategies will be initiated by the Directorate.

Contingency plans that once approved and initiated will be added to the project work plan and be tracked and reported along with all of the other project activities. Risk management is an ongoing activity that will continue throughout the life of the project. This process includes continued activities of risk identification, risk assessment, planning for newly identified risks, monitoring trigger conditions and contingency plans, and risk reporting on a regular basis. Project status reporting contains a section on risk management, where new risks are presented along with any status changes of existing risks. Some risk attributes, such as probability and impact, could change during the life of a project and this should be reported as well.

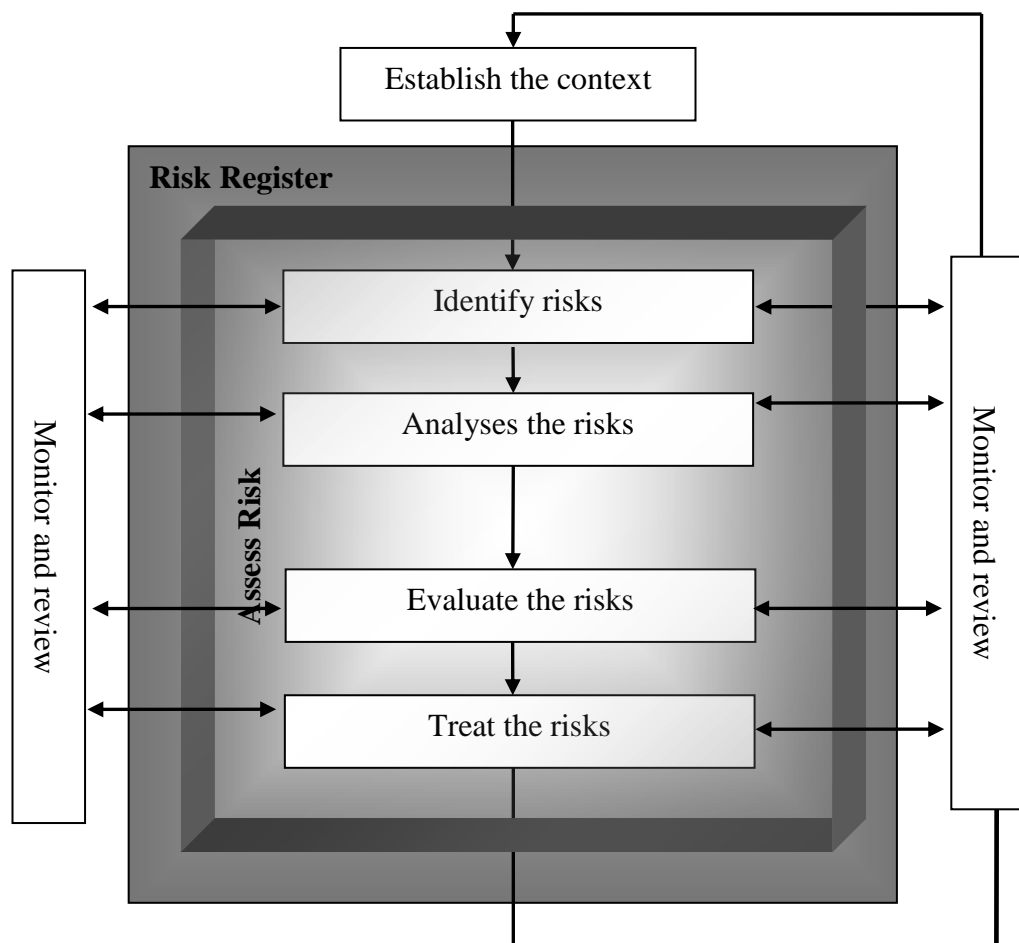
### **4 Processes to Address Immediate Unforeseen Risks**

The individual identifying the risk will immediately notify the KFHH managers. The individual notified will assess the risk situation.

If required, the organization managers will identify a mitigating strategy, and assign resources as necessary.

The organization risk manager will document the risk factor and the mitigating strategy.

## RISK MANAGEMENT PROCESS:





## RISK NOTIFICATION FORM

<b>Step No.1</b> This part to be filled by the risk identifier	<b>Date:</b>	..... Date of the event.			
	<b>Location:</b>	..... Location where is the risk occur			
	<b>Identifier:</b>	..... The person who identify the risk			
	<b>Checked by:</b>	..... Responsible person of the department or service providers			
	<b>Reference No:</b>	..... (A unique reference number can be assigned to each identified risk which compose of two initials of the department , serial no. in the risk register system ( which will be given to you by the risk register person) as a second part and the third part will composed of the month and year ( for example: pharmacy department on date 12/12/1433 referred to PH1.12.33 part A)			
	<b>Risk Description:</b>	..... ( In this Colum the user can define the risks, it's important to limit the risk definition to one or two crisp statement that give a clear idea of what the risk is)			
	<b>Consequence Statement:</b>	..... ( This space is reserved for defining the possible consequence if the risk is not mitigated.)			
	<b>Probability:</b>	<input type="checkbox"/> Almost Certain <input type="checkbox"/> Likely <input type="checkbox"/> Possible <input type="checkbox"/> Unlikely <input type="checkbox"/> Remote ( this Likelihood of occurrence of the risk can be identified as, please check the schedule part B behind the paper)			
	<b>Impact:</b>	<input type="checkbox"/> Scope impact <input type="checkbox"/> Quality impact <input type="checkbox"/> Schedule impact <input type="checkbox"/> Cost impact			
<b>Risk Rating:</b>	<input type="checkbox"/> Catastrophic <input type="checkbox"/> Major <input type="checkbox"/> Moderate <input type="checkbox"/> Minor <input type="checkbox"/> Insignificant ( please check the rating schedule part C behind the paper)				
<b>Step No.2</b> This part to be fill by the risk	<b>Risk score:</b>	..... The risk score can be obtained by multiplying the risk rating with the risk probability this score is representative of the importance or the urgency of mitigating the risk			
	<b>Control Measures:</b>	..... This column on the risk register format is reserved for enlisting the control measures are enough to mitigate the risk			
	<b>Control Score:</b>	..... A single look at this column should make it clear whether the proposed control measure are enough to mitigate the risk completely . the control measure must be rated on the following basis: 3.Sufficient: the control measure will annual the risk 2.Reasonable: can reduce the risk significantly but not completely 1.Insufficient: the control measure are enough at all			
<b>Part A: reference number can assigned to each identified risk which compose of two initial of the department and date of month and year as a second part for example: ( pharmacy department on date 12.7.1433 referred to PH.7.33.) the schedule below show the initial for each department</b>					
General Surgery	GS	Isolation	ISO	PICU	PICU
Neurosurgery	NS	Physiotherapy	PHY	ICU	ICU
Vascular surgery	VS	Infection Control	IFC	ER	ER
Plastic surgery	PLS	General Medicine	GM	OR	OR
Thoracic surgery	TS	Hematology	HM	Anesthesia	AN
Pediatric Surgery	PS	Rheumatology	RH	Radiology	RAD
Urology	UR	Nephrology	NPH	Quality	QU
Orthopedic	Ortho	Endocrinology	END	Continuous Education	CE
Dermatology	DR	Chest	CH	Patient & Family Relationship	PFR
Burn unit	BU	Cardiology	CAR	Medical Records	MR
Pharmacy	PH	Neurology	NM	Legal follow up affairs	LFA
Laboratory	LAB	Respiratory	RP	Human Recourses	HR

Part B: Probability: this like hood of occurrence of the risk can be :					
Likelihood score	1	2	3	4	5
	Rare	Unlikely	Possible	Likely	Almost certain
Frequency How often might/does it happen	This will probably never happen/ recur	Do not expect it to happen/ recur but it is possible it may do so	Might happen or recur occasionally	Will probably happen/recur, but it is not a persisting issue/ circumstances	Will undoubtedly happen / recur possibly frequently
Part C: consequence scores choose the most appropriate domain from the left hand side of the table then work long the columns in same row to assess the severity of the risk on the scale of 1-5 to determine the consequence score, which is the number given at the top of the column.					
	Consequence score ( severity levels) and examples of descriptors:				
	1	2	3	4	5
Domain	Negligible	Minor	Moderate	Major	Catastrophic
	Minimal injury requiring no/minimal intervention or treatment No time off Work	Minor injury or illness requiring minor intervention Requiring time off work for <3 days Increase in length of hospital stay by 1-3 days	Moderate injury requiring professional intervention Requiring time off work for 4-14 days Increase in length of hospital stay by 4-15 days Incident Report An event which impacts on a small number of patient.	Major injury leading to long-term incapacity disability Requiring time off work for > 14 days Increase in length of hospital stay by >15 days. Mismanagement of patient care with long-term effects	Incident leading to death Multiple permanent injuries or irreversible health effects An event which impacts on a large number of patients
Quality / complaints/ audit	Peripheral element of treatment or service sub-optimal Informal complaint/ inquiry	Overall treatment or service sub-optimal Formal complaint (stage 1) Local resolution Single failure to meet internal standards Minor implications for patient safety if unresolved Reduced performance rating if unresolved>	Treatment or services has significantly reduced effectiveness Formal complaint ( stage 2) Local resolution ( with potential to go to independent review) Repeated failure to meet internal standards Major patient safety implications if findings are not acted on	Non-compliance with national standards with significant risk to patients if unresolved Multiple complaints/ independent review Low performance rating critical report	Totally unacceptable level or quality of treatment/service Gross failure of patient safety if finding not acted on Inquest/ ombudsman inquiry Inquest/ombudsman inquiry Gross failure to meet national standards.
Human resources/ organizational development/ staffing/ competence	Short term low staffing level that temporarily reduce service quality ( < 1 day)	Low staffing level that reduce service quality	Late delivery of key objective/ service due to lack of staff Unsafe staffing level or competence (> 1 day) Low staff morale Poor staff attendance for mandatory/key training	Uncertain delivery of key objective/service due to lack of staff Unsafe staffing level or competence (>5 days) Loss of key staff Very low staff morale No staff attendance for mandatory/key training	Non-delivery of key objectives service due to lack of staff Ongoing unsafe staffing levels or competence Loss of several key staff No staff attending Mandatory Training key training on an ongoing basis
Statutory duty/ inspections	No or minimal impact or breach of guidance/ statutory duty	Breach of statutory legislation  Reduced performance rating if unresolved	Single breach in statutory duty Challenging external recommendations/ improvement notice	Enforcement action Multiple breaches in statutory duty Improvement notices Low performance rating critical report	Multiple breaches in statutory duty Prosecution Complete systems change required Zero performance rating Severely critical report
Adverse publicity/ reputation	Rumors Potential for public concern	Local media coverage – short-term reduction in public confidence Elements of public expectation not being met	Local media coverage- long-term reduction in public confidence	National media coverage with < 3 days service well below reasonable public expectation	National media coverage with >3 days service well below reasonable public expectation. MP concerned (question in the house) Total loss of public confidence
Business objectives/ projects	Insignificant cost increase/ schedule slippage	< 5 per cent over project budget schedule slippage	5-10 per cent over project budget Schedules slippage	Non-compliance with national 10-25 percent over project budget Schedule slippage Key objectives not met	Incident leading >25 per cent over project budget Schedule slippage Key objectives not met
Service/ business interruption Environmental impact	Loss/interruption of > 1 hour minimal or no impact on the environment.	Loss/interruption of >8 hours Minor impact on environment	Loss/interruption of > 1 day Moderate impact on environment	Loss/interruption of > 1 week Major impact on environment	Permanent loss of service of facility Catastrophic impact on environment



## Healthcare Failure Mode Effectes & Analysis ( Template )

[illegible]

## **8 Reference:**

1. National patient safety agency ( risk matrix for risk manager/ January 2008)
2. Northrop Grumman Corporation ( Risk Management plan/ September 2007)
3. Australian Society for Simulation in Healthcare ( Risk Management plan/ 2008)
4. East Central Regional Hospital/ Gail C. Jackson ( Risk Management plan/ 2010)

**THE END OF THE BOOK**

**For Any Further Information Please Contact Us On:**  
**[ibrahim.alibrahim@gmail.com](mailto:ibrahim.alibrahim@gmail.com)**