# A Study on Risk Identification and Developing Risk Management Strategies for the Non-clinical Departments of Thumbay Hospital Ajman

**By-Dr. Sheeba**

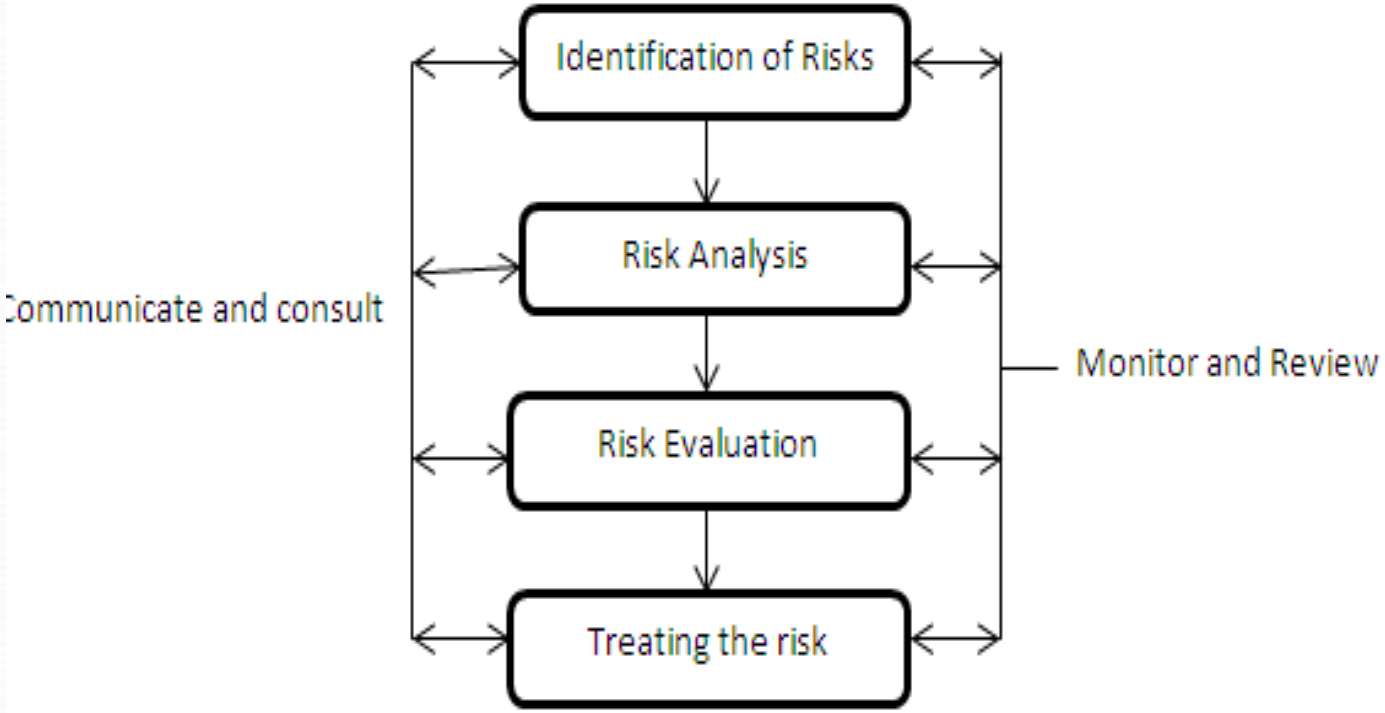
**Under the guidance of :**
**Dr. Anoop Khanna**

# INTRODUCTION

- Managing the unexpected is an essential concern in high-risk organizations such as hospitals.
- Risk is defined as a probability of threat or damage, injury, liability, loss, or any other negative occurrence that is caused by *external or internal vulnerabilities*, and that may be avoided through preemptive action.
- Robust risk management is critical in reducing preventable errors or adverse events esp. in healthcare. Neglecting to have comprehensive risk management plans in place can compromise patient care, increase liability risks, and result in financial losses.
- Risk management is the identification, assessment, and prioritization of risks (defined in ISO 31000 as the effect of uncertainty on objectives) followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities.

**Risk Management should:**

- create value – resources expended to mitigate risk should be less than the consequence of inaction
- be an integral part of organizational processes
- be part of decision making process
- explicitly address uncertainty and assumptions
- be a systematic and structured process
- be based on the best available information
- be tailorable.
- take human factors into account
- be transparent
- be dynamic, iterative and responsive to change
- be capable of continual improvement and enhancement


Identification of Risks
Risk Analysis
Risk Evaluation
Treating the risk
Communicate and consult
Monitor and Review

# Rationale

- Enhance patient safety
- Improve financial outcomes
- Better asset management and maintenance
- Improve reputation
- Better information for decision making

# Objectives

- To **identify and describe risks** for the non-clinical departments for the register:
- To determine **the organization's ability to mitigate the risks** identified i.e. to describe the existing controls (policies, procedures, physical controls etc.) for the risks.
- To **assess** the identified risks
- To suggest additional **measures of risk management**

# Methodology

- Type of Study: Descriptive Cross-sectional Study
- Study Location: Following departments at Thumbay Hospital, Ajman(UAE):

1. CSSD
2. Biomedical
3. Housekeeping
4. Facility Management Services
5. Nursing
6. Pharmacy
7. OPD
8. Physiotherapy
9. Patient Affairs Department
10. Patient Relations Office
11. Nutrition and dietetics
12. Human Resource department

- Study Duration: 3 months (March 2016 – May 2016)- The study was carried out during this period but the risks identified, did not exist only for the study period.
- Tools and Techniques:
  - Risk Register template
  - Technique-
    - Brainstorming sessions with designated staff of each department.
    - Interviews with Quality Control Officers (QCOs).
    - Observation during hospital rounds.
    - Process Mapping and process evaluation of the departments.
    - Tracking Incident Reports for the past 1 year.
    - QCO(Quality Control officers) meetings

The template was explained to all the QCOs in the meeting held on March 2016.Thereafter, the individual departments were visited and the actual as well as potential risks pertaining to the department were identified along with the QCO and other staff members.

- Following are the steps for filling up the template:

- Risk identification
- Risk analysis
- Risk evaluation/prioritization
- Risk treatment

# Risk Identification

Includes:

- What are the risks associated with not carrying out our responsibilities?
- When, where, why, and how are risks likely to occur?
- Risk Target (i.e. patient safety risk, employee risk etc.).
- Nature of risk (physical resource risk, financial risk etc.).
- Potential consequences if the risk were to materialize.

# Risk analysis

- For Consequence analyses, consequences were divided on the basis of their seriousness and potential costs into the following categories:
- Insignificant (category 1),
- Minor (category 2),
- Moderate (category 3),
- Major (category 4), and
- Extreme (category 5)

The risks were categorized into the above categories on the basis of following criteria

| Attribute | Insignificant | Minor | Moderate | Major | Extreme |
|---|---|---|---|---|---|
| Patient Injury | No Injury | Minor Injury | Temporary Morbidity | Significant Morbidity | Death or permanent loss of function/Disability |
| Staff injury/Ill Health | No Injury | (i)Minor Injury/ (ii)Minor Treatment/ (iii)No lost time or restricted duties | (i)Temporary Morbidity/ (ii)Simple Treatment/ (iii)Lost time or restricted duties for 1-2 staff | (i)Significant Morbidity (ii)Hospitalization of 2 staff (iii)Lost time or restricted duties or illness of >2 staff members. | (i)Major permanent loss of function/disability or death (ii)Hospitalization of ≥3 staff members |
| Visitor Injury | No Injury | (i)Minor Injury (ii)Minor Treatment | (i)Temporary Morbidity/ (ii)Simple Treatment/ (iii)Treatment of upto 1-2 visitors not requiring hospitalization. | (i)Significant Morbidity (ii)Hospitalization of 2 visitors | (i)Major permanent loss of function/disability or death (ii)Hospitalization of ≥3 visitors |

| | | | | | |
|---|---|---|---|---|---|
| Operation Interruption (Critical e.g. water, electricity. Medical gases etc.) | < 1 min | < 5 min | < 10 min | < 30 min | > 30 min |
| Operation interruption(Non-critical) | < 1 hour | < 1 day | 1 - 7 days | > 1 week | Permanent loss of service or facility |
| Financial Impact | < AED 5K | AED 5K - 10K | AED 10K - 25K | AED 25K - 50K | > AED 50K |
| Environmental Impact | Nuisance releases | Minor off site release contained without outside assistance. | Moderate off site release contained without outside assistance | Major off site release with no detrimental effect. Fire or other environmental hazard requiring no evacuation. | Toxic release off-site with detrimental effect. Fire or other environmental hazard requiring evacuation. |

| Attribute | Insignificant | Minor | Moderate | Major | Extreme |
|---|---|---|---|---|---|
| **Reputation** | Minor morale issues; 1-2 staff | Low staff morale within a unit/department | Low morale and dissatisfaction amongst majority of staff | (i)Medium term impact on public memory<br>(ii) Serious staff concern<br>(iii) Corporate image significantly affected. | Enquiry by public body. E.g. Legislative Council, Criminal Prosecution |
| **Media Attention** | None | Media Enquiries only | One off-newspaper article or radio/television mention. | Sustained media attention for 3 or more days. | Political Intervention |

*Table 1- Consequence Table*

**For likelihood analysis, the likelihood of the incidents pertaining to a particular risk was divided into:**

- Remote (Category 1)
- Unlikely (Category 2)
- Possible (Category 3)
- Likely (Category 4)
- Almost certain (Category 5)

The risks were categorized in the above categories on the basis of following criterion:

| | Actual Frequency | Probability |
|---|---|---|
| **Almost certain(5)** | At least monthly | 99% |
| **Likely(4)** | Bimonthly | 90% |
| **Possible(3)** | May occur every 1-2 years | 50% |
| **Unlikely(2)** | May occur every 2-5 years | 10% |
| **Remote(1)** | May occur every 5 years or more | 1% |

*Table2- Likelihood Table*

- The risk rating was calculated by multiplying the consequence and the likelihood.
- Thereafter, the risks were categorized as following:

| Scores | Inference |
|---|---|
| 1-5 | Low Risk |
| 6–15 | Moderate Risk |
| >16 | High Risk |

*Table3-Classification of risks*

# Risk Evaluation:

The risk evaluation was used to determine whether a risk is acceptable or needs to be eliminated. Risks deemed to be low or acceptable may only need to be minimized via simultaneous monitoring and regular checking, while risks deemed to unacceptable need to be eliminated or avoided.

# Risk Treatment/Elimination:

- Appropriate strategies/control measures were suggested for the risks that need to be eliminated.

# Findings And Analysis

# Risk Identification

Includes:

- Unique ID: For the purpose of transferring risks elsewhere and also for the purpose of aggregation, every risk on the risk register should have a unique ID reference. Typically this will be a combination of a code representing the department or project together with a reference number.
- Date: This is the date that the risk was initially identified and/or assessed.
- Risk Owner: This is the individual who will be held accountable for the risk and its effective control. The maxim of 'the risk taker is the risk owner' should be adopted.

- Risk description: Includes description of the potential consequences if the risk were to materialize; the causal factors that could make the risk materialize; the context of the risk, e.g. is the risk 'target' well defined (e.g. staff, patient, department, hospital, etc.) and the 'nature' of the risk(e.g. financial, safety, physical loss, perception, etc.
- Whether the risk is "Actual" or "Potential": Has the risk occurred in the past (i.e. an 'actual' risk'), or is it a risk that has not materialized to-date, but could at some time in the future (i.e. a 'potential' risk).
- Existing Controls: All the controls that are currently in place to help mitigate the risk, e.g. policies, procedures, physical controls, etc.
- Risk Register- Final.xlsx

# Risk analysis

*Figure 2* - Frequency Distribution of the risks as "Actual" and "Potential"

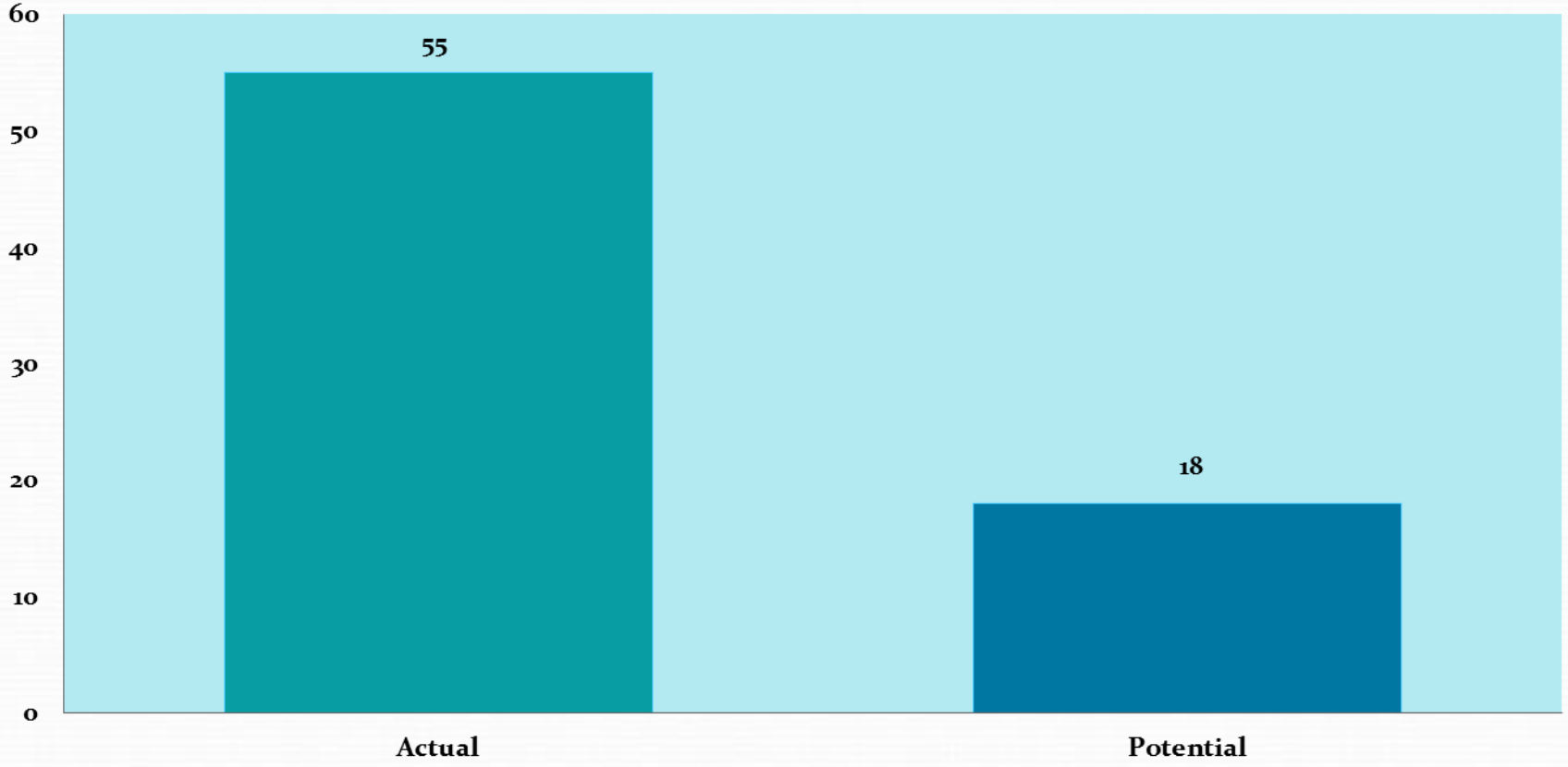
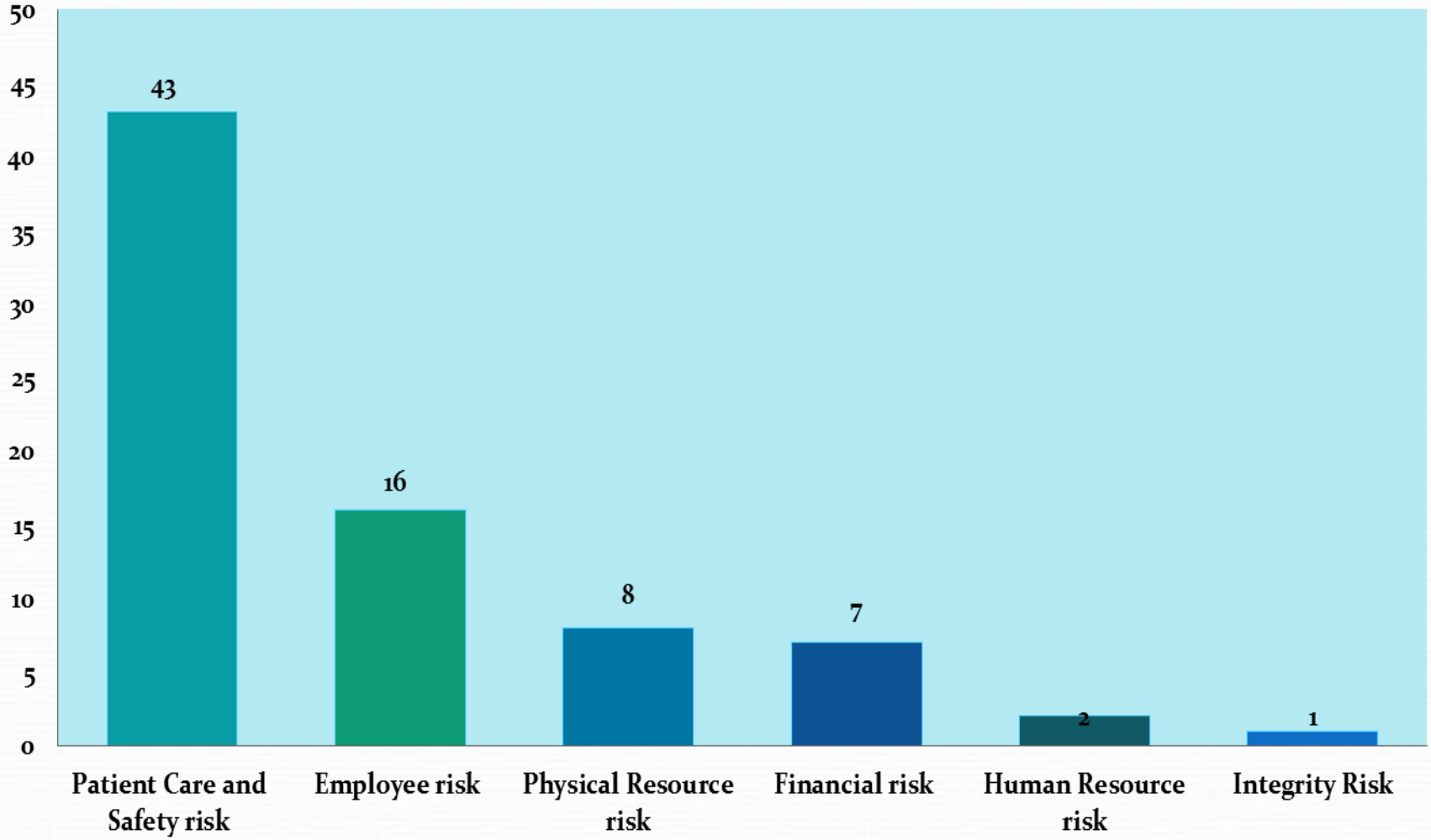
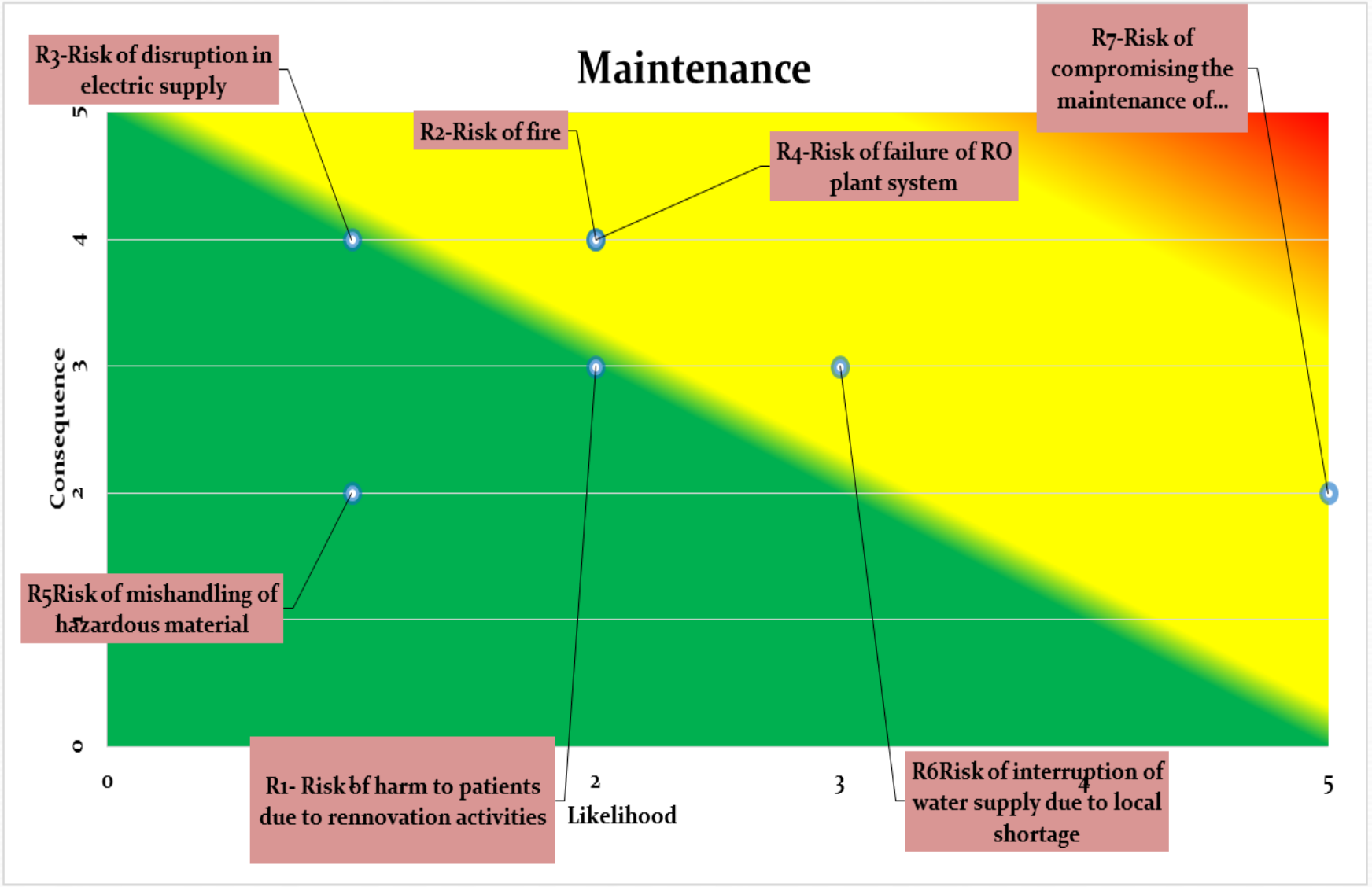


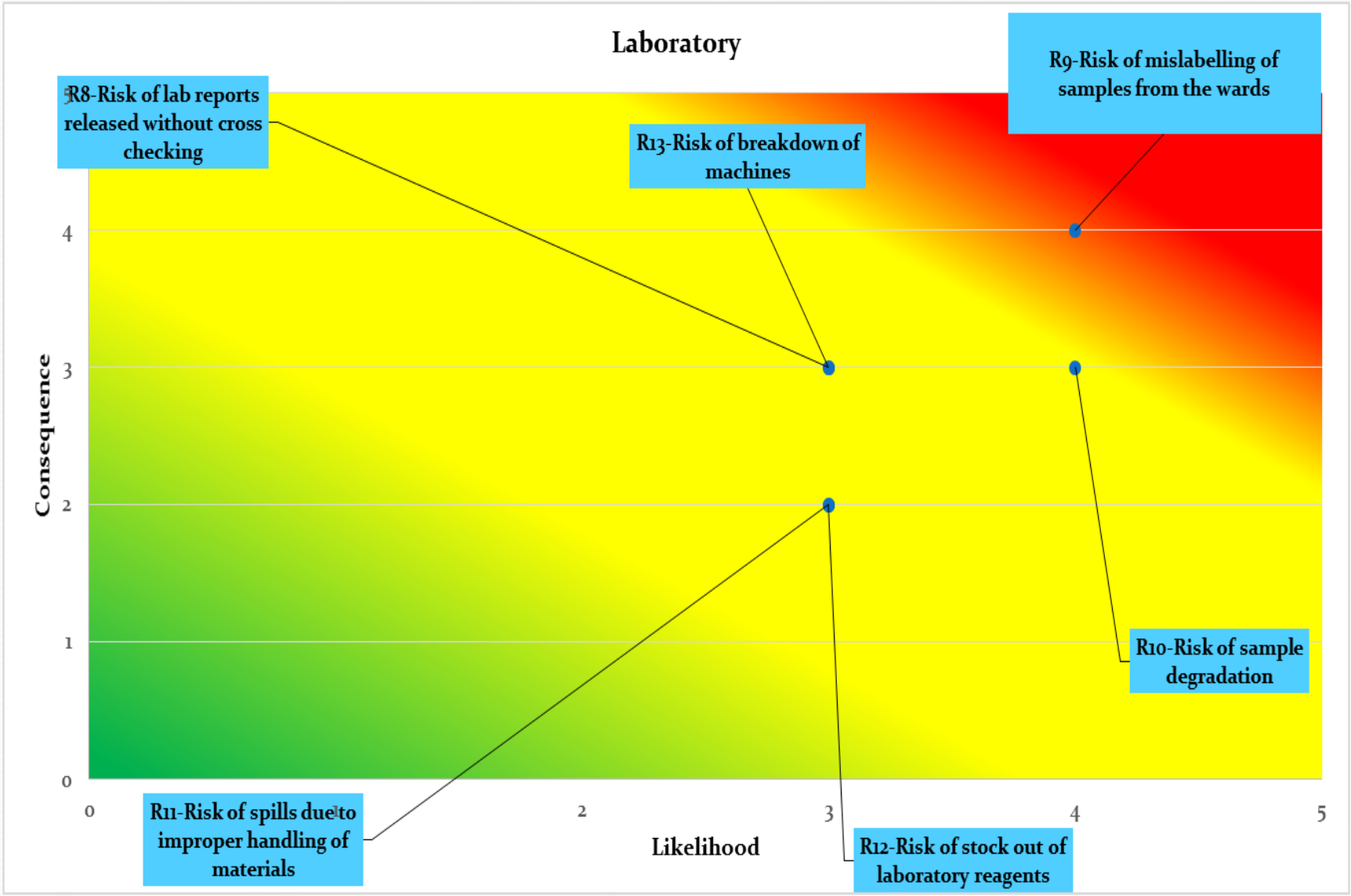
Figure 3 - Frequency distribution of the risks acc. to the target of the risks

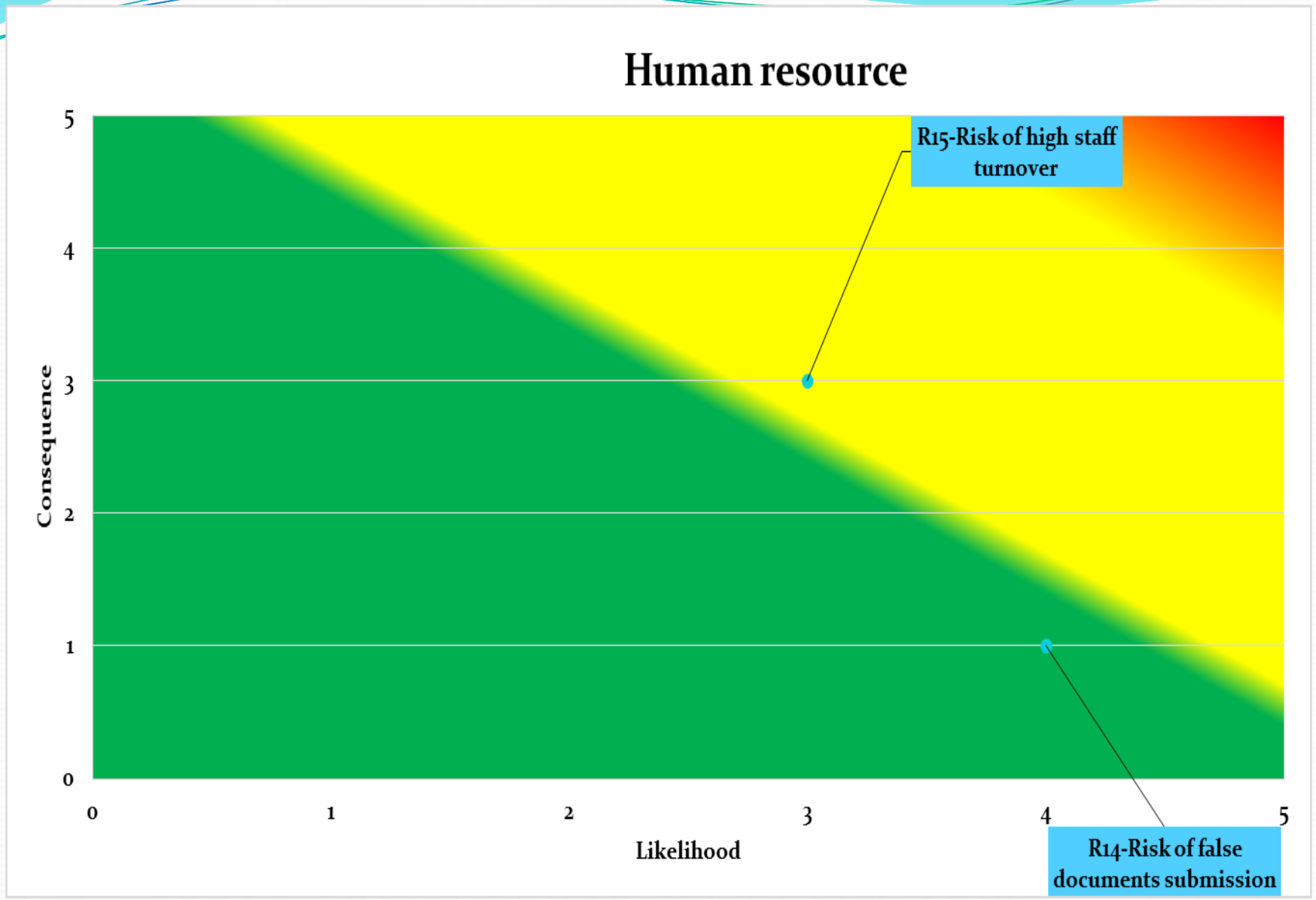


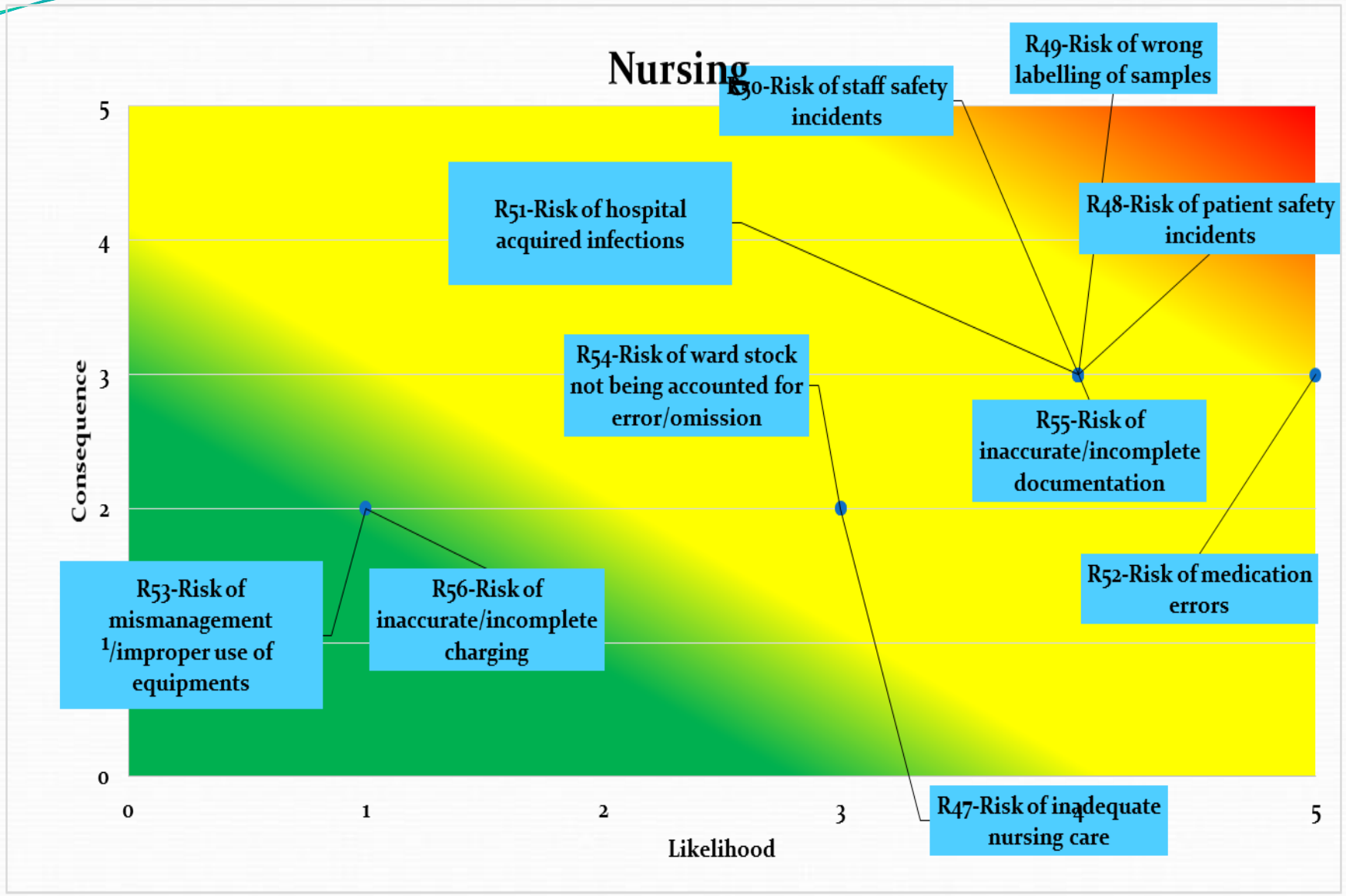
# Prioritization of risks

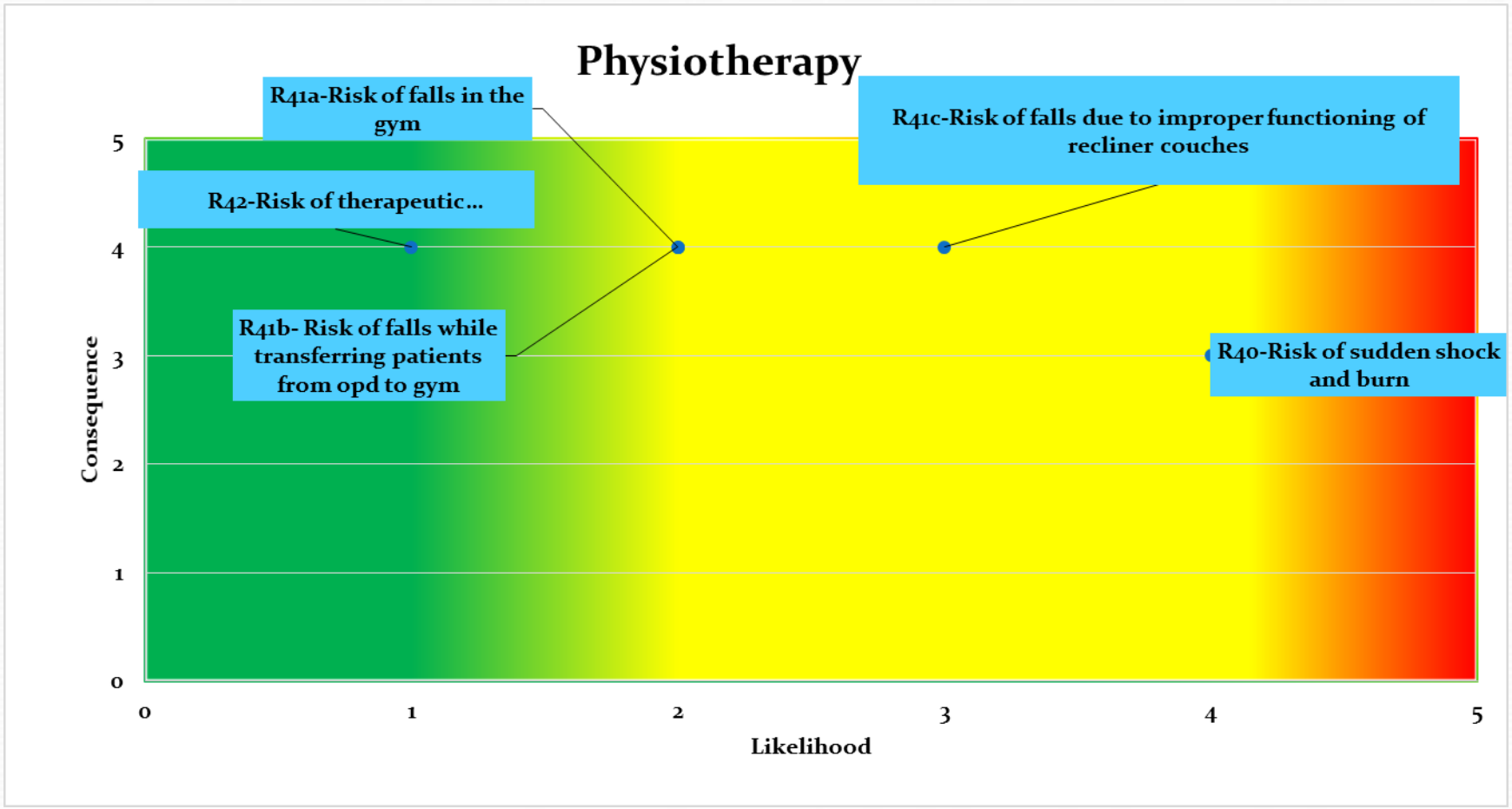
| Colour Coding | Type of Risk |
| --- | --- |
| | High Risk |
| | Medium Risk |
| | Low Risk |

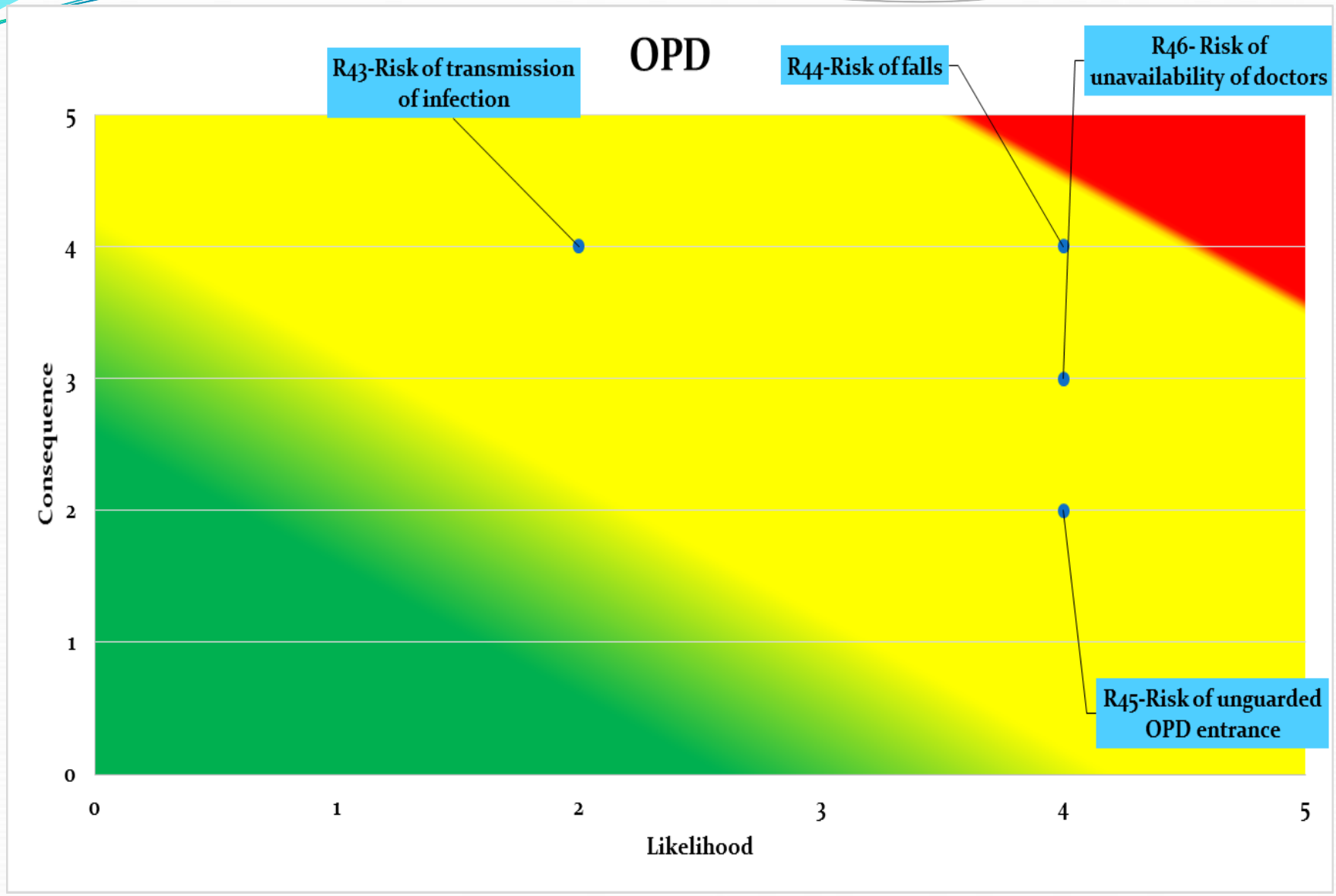

Maintenance
R3-Risk of disruption in electric supply
R2-Risk of fire
R4-Risk of failure of RO plant system
R7-Risk of compromising the maintenance of...
R5Risk of mishandling of hazardous material
R1- Risk of harm to patients due to rennovation activities
R6Risk of interruption of water supply due to local shortage
Consequence
Likelihood
0
1
2
3
4
5

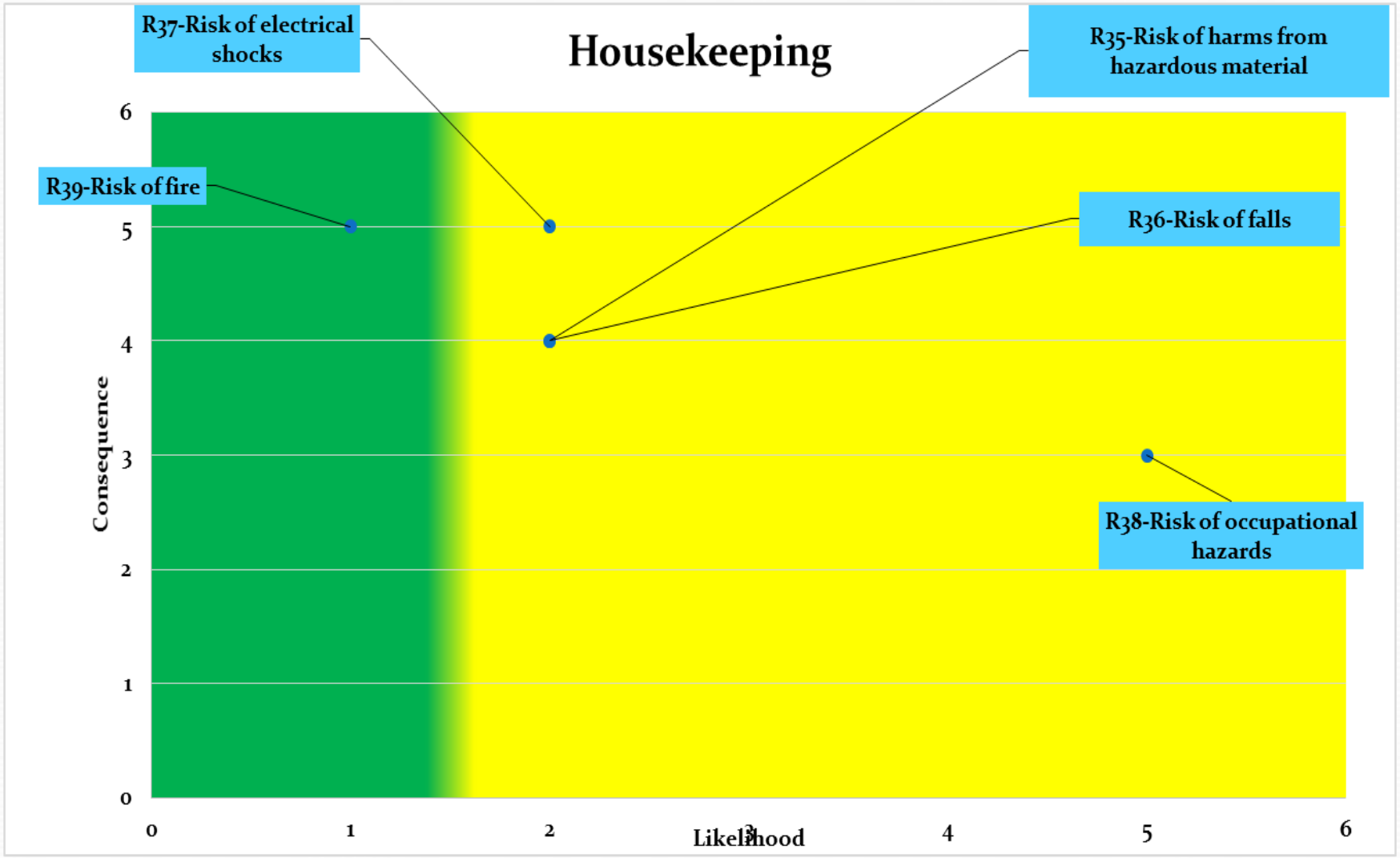

Laboratory
R9-Risk of mislabelling of samples from the wards
R8-Risk of lab reports released without cross checking
R13-Risk of breakdown of machines
R10-Risk of sample degradation
R11-Risk of spills due to improper handling of materials
R12-Risk of stock out of laboratory reagents
Consequence
Likelihood
0
1
2
3
4
5

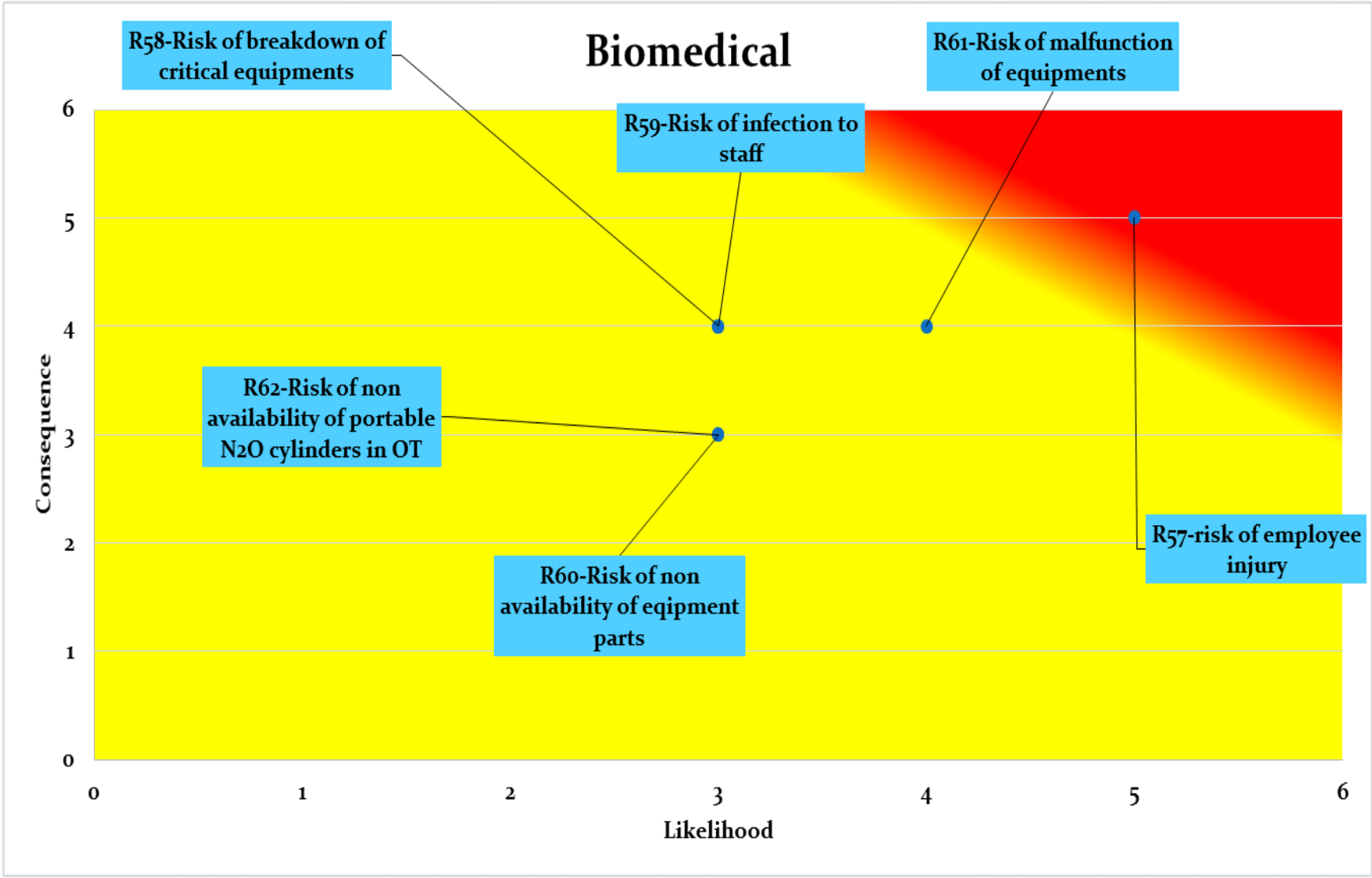

Human resource
Consequence
Likelihood
0
1
2
3
4
5
R15-Risk of high staff turnover
R14-Risk of false documents submission

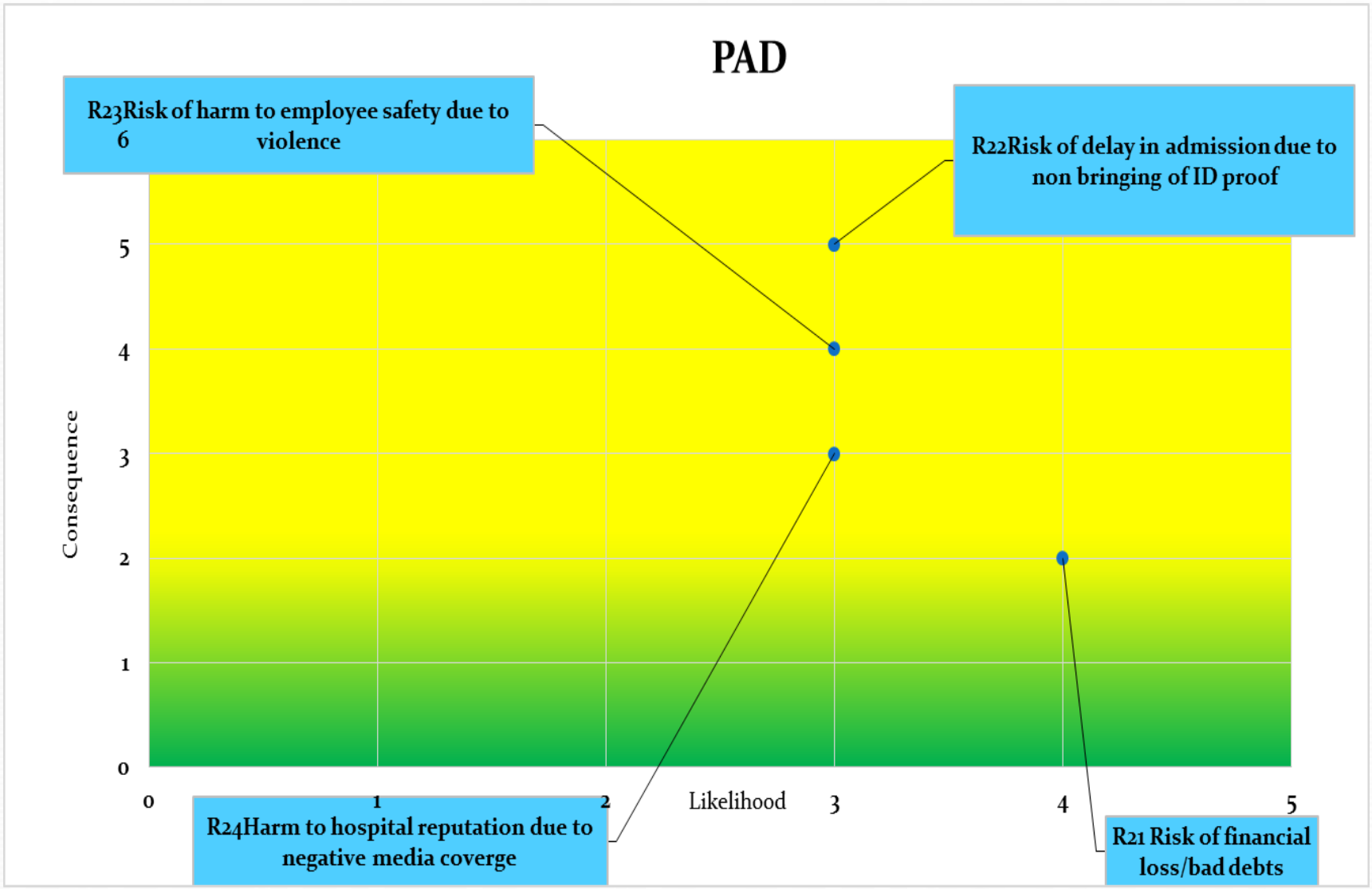

Nursing
R49-Risk of wrong labelling of samples
R50-Risk of staff safety incidents
R51-Risk of hospital acquired infections
R48-Risk of patient safety incidents
R54-Risk of ward stock not being accounted for error/omission
R55-Risk of inaccurate/incomplete documentation
R52-Risk of medication errors
R53-Risk of mismanagement /improper use of equipments
R56-Risk of inaccurate/incomplete charging
R47-Risk of inadequate nursing care
Consequence
Likelihood
0
1
2
3
4
5


Physiotherapy
R41a-Risk of falls in the gym
R41c-Risk of falls due to improper functioning of recliner couches
R42-Risk of therapeutic...
R41b- Risk of falls while transferring patients from opd to gym
R40-Risk of sudden shock and burn
Consequence
Likelihood
0
1
2
3
4
5

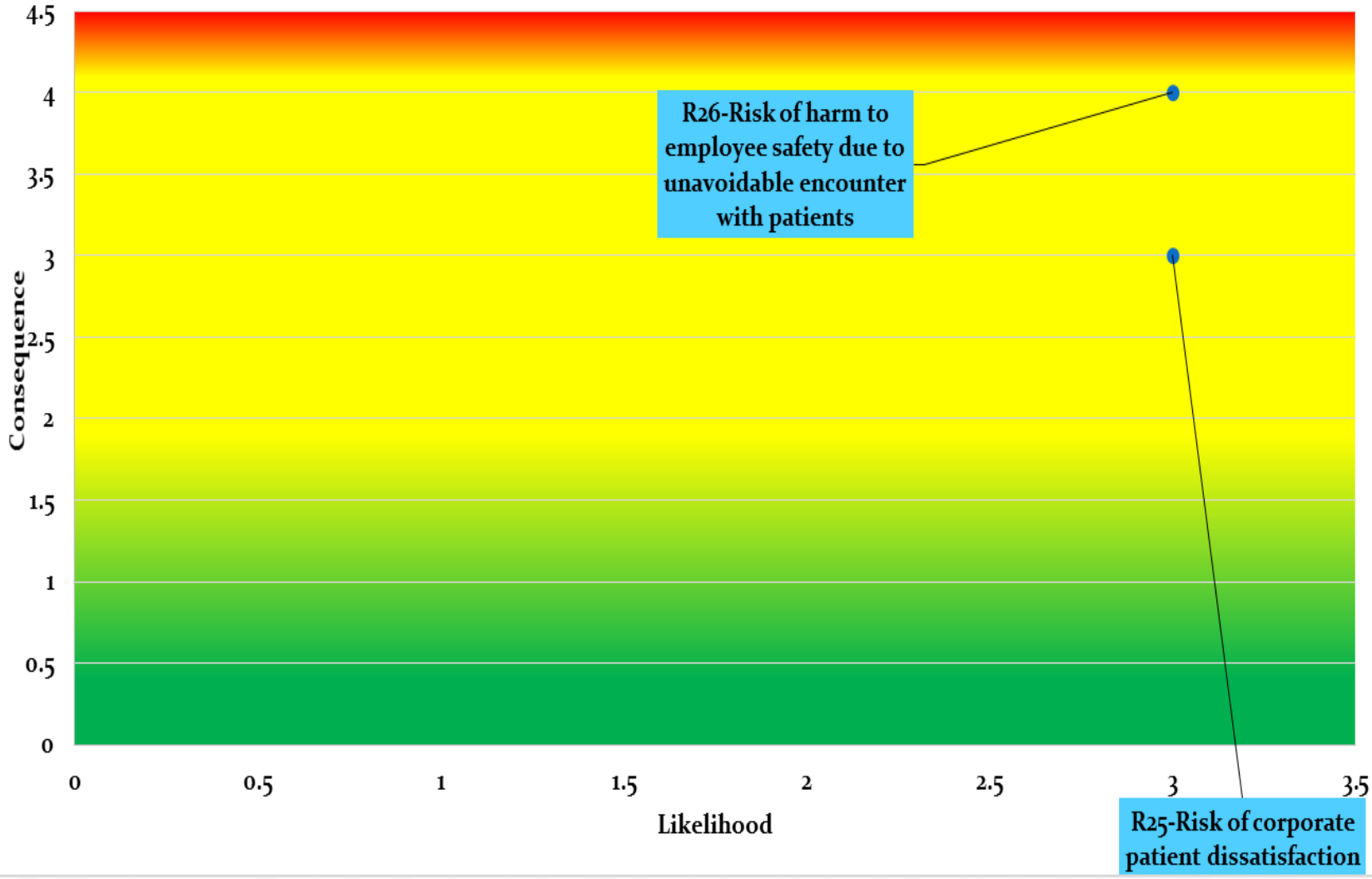

OPD
R43-Risk of transmission of infection
R44-Risk of falls
R46- Risk of unavailability of doctors
R45-Risk of unguarded OPD entrance
Consequence
Likelihood
0
1
2
3
4
5

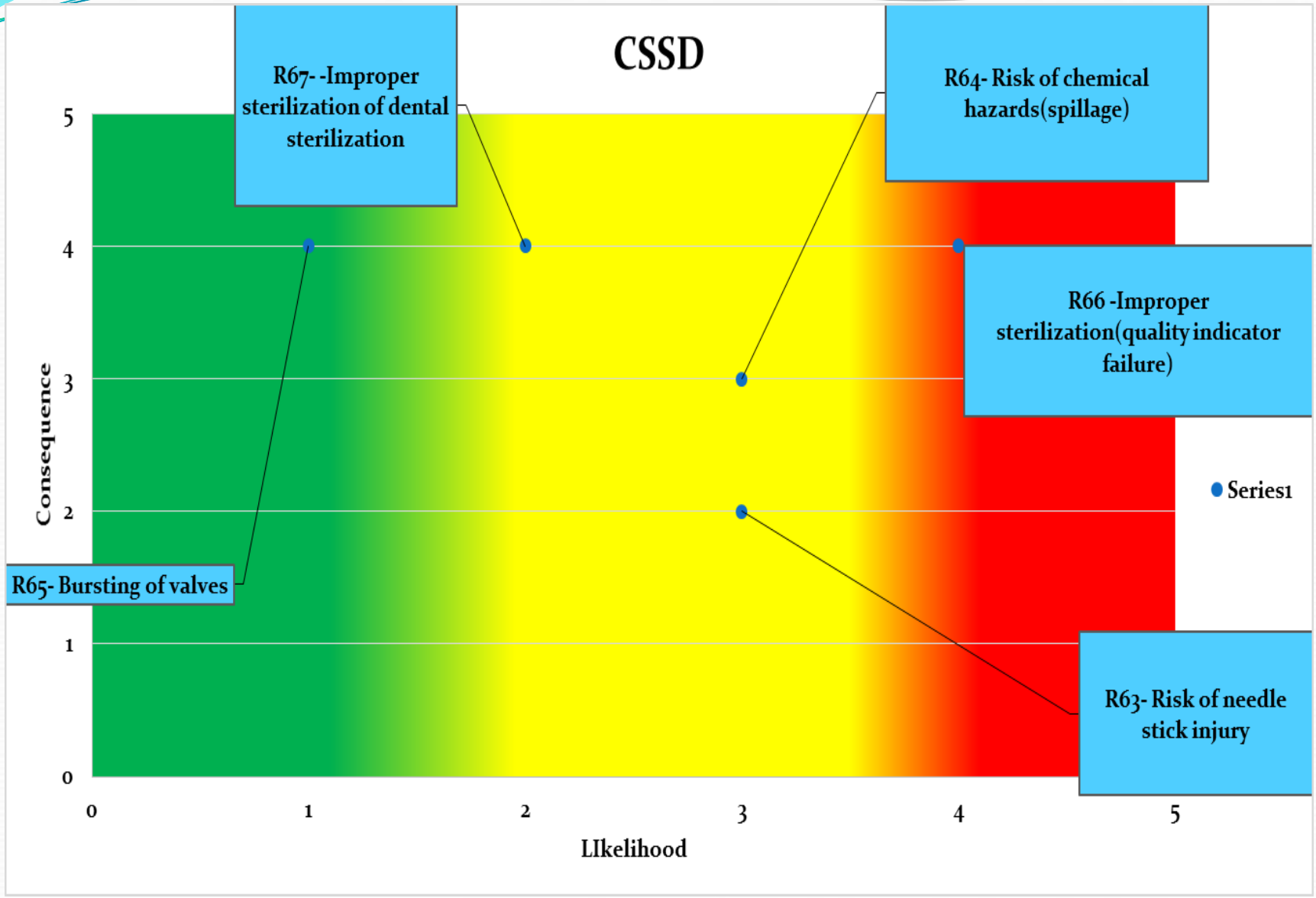

Housekeeping
R37-Risk of electrical shocks
R35-Risk of harms from hazardous material
R39-Risk of fire
R36-Risk of falls
R38-Risk of occupational hazards
Consequence
Likelihood
0
1
2
3
4
5
6


Biomedical
R58-Risk of breakdown of critical equipments
R59-Risk of infection to staff
R61-Risk of malfunction of equipments
R62-Risk of non availability of portable N2O cylinders in OT
R60-Risk of non availability of eqipment parts
R57-risk of employee injury
Consequence
Likelihood
0
1
2
3
4
5
6

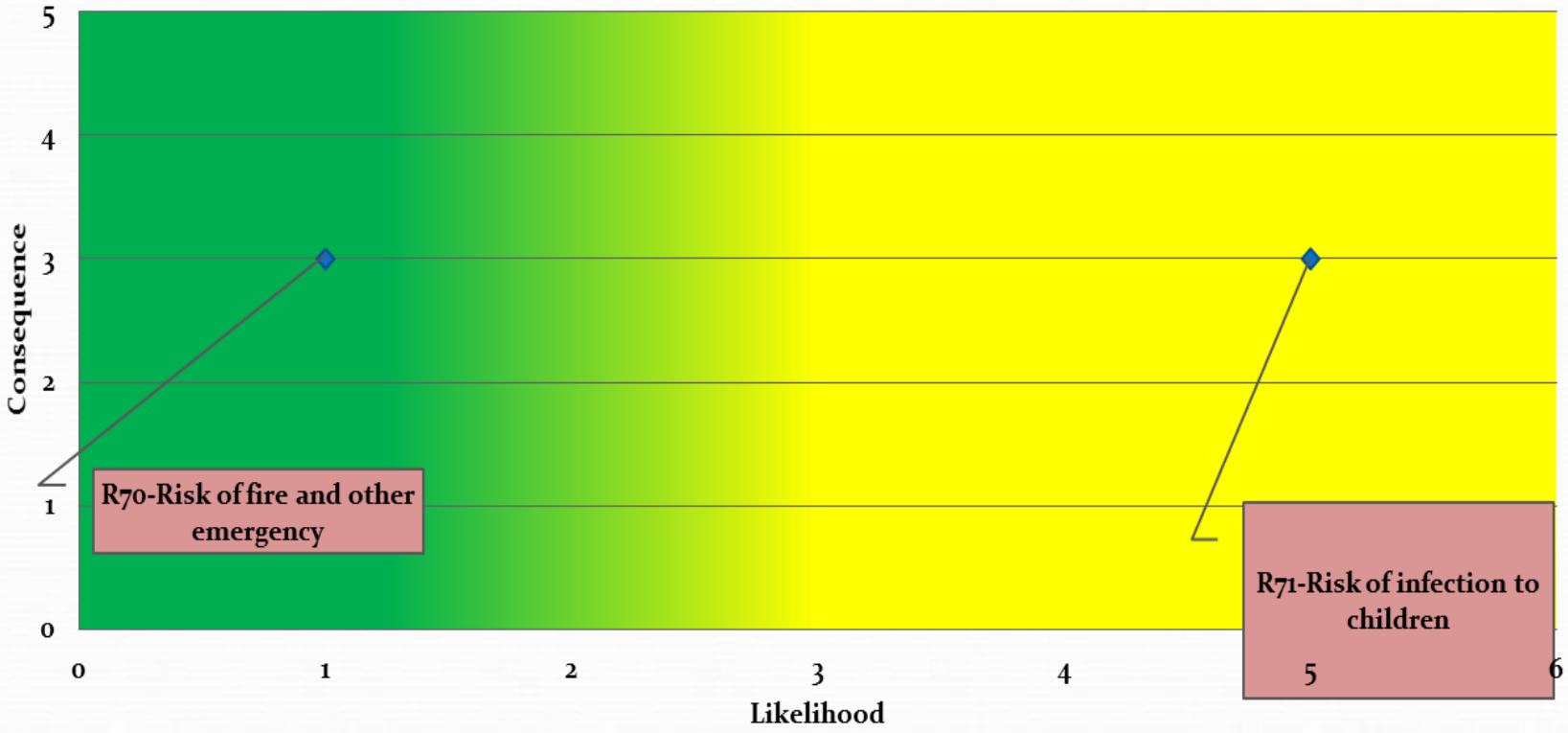

PAD
R23Risk of harm to employee safety due to violence
R22Risk of delay in admission due to non bringing of ID proof
R24Harm to hospital reputation due to negative media coverge
R21 Risk of financial loss/bad debts
Consequence
Likelihood
0
1
2
3
4
5
6

# PRO


4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Consequence
0
0.5
1
1.5
2
2.5
3
3.5
Likelihood
R26-Risk of harm to employee safety due to unavoidable encounter with patients
R25-Risk of corporate patient dissatisfaction


CSSD
R67- -Improper sterilization of dental sterilization
R64- Risk of chemical hazards(spillage)
R66 -Improper sterilization(quality indicator failure)
R65- Bursting of valves
R63- Risk of needle stick injury
Series1
Consequence
LIkelihood
0
1
2
3
4
5

# Creche


5
4
3
2
1
0
Consequence
R70-Risk of fire and other emergency
R71-Risk of infection to children
0
1
2
3
4
5
6
Likelihood

# Risk Elimination

The risks with rating ≥10 were considered for "**elimination**" while the ones below 10 as initial risk rating were considered "**acceptable**". However in case of nursing department, even if the initial risk rating was below 10, additional control strategies were suggested as this department serves as the primary point of contact with patients and the slightest of the risks also can have potential long term effects.

# Risk treatment

- Additional control measures were suggested for the risks that were to be eliminated.
- The following table shows the risks to be eliminated along with the additional control measures/strategies risk register excel sheet.xlsx

# Conclusion

- The risk register is regarded as an integral competency of mature organizations.
- It provides a more coherent management framework, greater clarity in objectives and enhanced accountability and ultimately a much sounder basis for better longer term cost performance.
- Also, it helps in protecting the organization from the adverse effects of risk .Thus it is very important for a healthcare organization develop and implement a framework for risk management.

# Limitations

- Due to time paucity (the period of dissertation being 3 months), the residual risk i.e. the risk left after the implementation of additional controls/strategies could not be calculated. Hence the effectiveness of the control measures could not be measured.
- Also the financial resources required to implement the additional controls could not be determined.
- The risk rating has been done based on perception (despite of standardization provided in Table 1 and table 2) and is likely to differ from department to department.

# THANK YOU