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2024

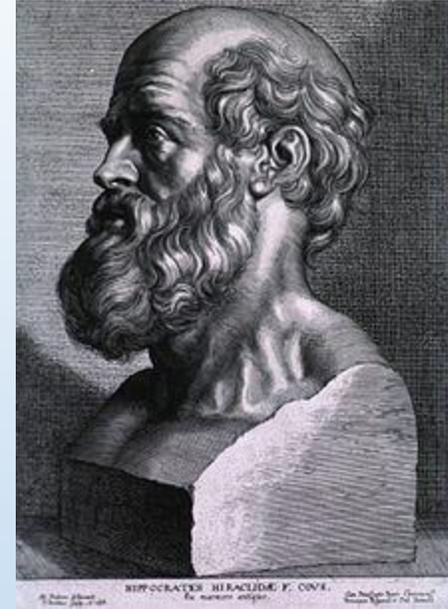
Risk Management in Healthcare

First, Do Not Harm

- Primum non nocere
- **Hippocratic Oath**

BUT....

Things can go wrong sometimes!





Definitions

Hazard

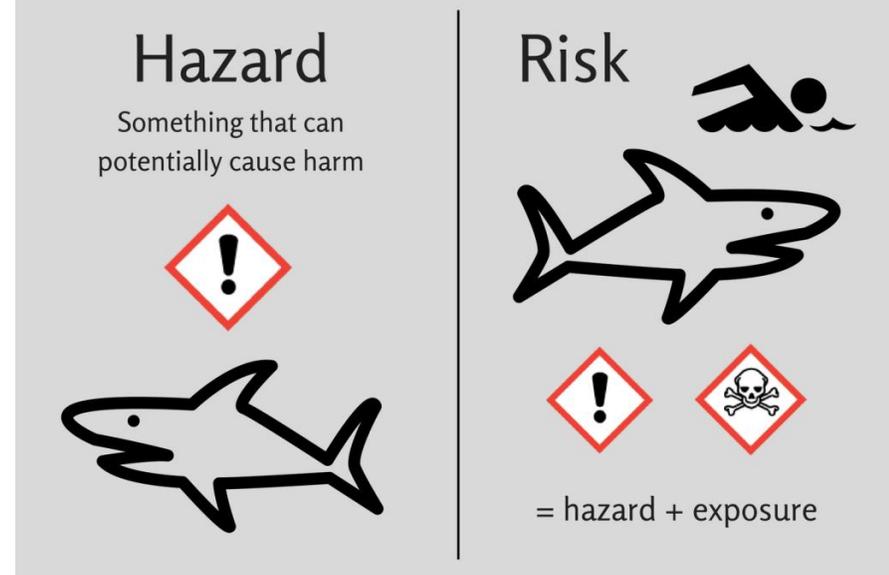
vs.

Risk

A hazard is something that has the potential to cause harm

Risk is the probability that a hazard will cause harm

- **Probability:** is the measure of the likelihood that an event will occur.
- **Hazard:** potential source of harm.
- **Risk:** “is a threat that any event or action will adversely affect the ability to achieve the desired goals , it may be avoided through preventive action/s”.



Factsheet



- Risk of dying while travelling by airplane= 1 in 3 million
- Risk of patient death occurring due to a preventable medical accident, while receiving health care = 1 in 300
- Risk of a patient being harmed while receiving hospital care = 1 in 10

(WHO, 2023)

Risk management

- Is the organized effort of *strategies* determined to identify, assess, and *to reduce* the negative impact of *risk*.
- There are two ways :

Reactive vs proactive

1. **Reactive:** strategy is a **response-based** approach to **risk**. A plan that specifies what actions staff members should take **after** an adverse outcome has occurred.
2. **Proactive :** a plan to **prevent** the opportunity for an adverse outcome (harm) **before** it happens.

Reactive strategies should be studied to determine if a proactive strategy might be developed to prevent this specific outcome from happening again.



Objectives of Risk Management in Healthcare Settings:



Patient Safety:

The primary objective of risk management in healthcare is to enhance patient safety by identifying and mitigating risks associated with clinical care, medical procedures, and healthcare processes.



Financial Stability:

Risk management aims to protect the financial health of healthcare organizations by minimizing financial risks, optimizing revenue cycles, and controlling costs.



Legal and Regulatory Compliance:

Risk management ensures compliance with laws, regulations, and standards governing healthcare delivery, billing practices, data privacy, and patient rights.



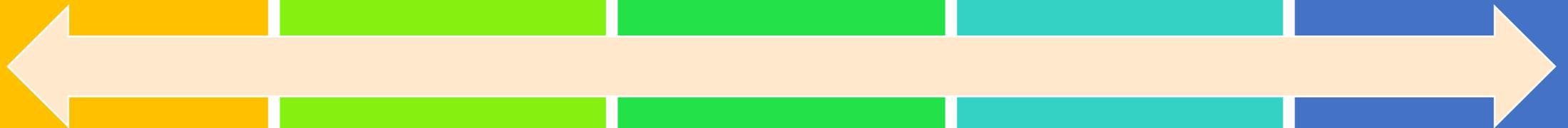
Quality Improvement:

Risk management care for a culture of quality improvement by identifying areas for enhancement, implementing preventive measures, and learning from adverse events to prevent their recurrence.

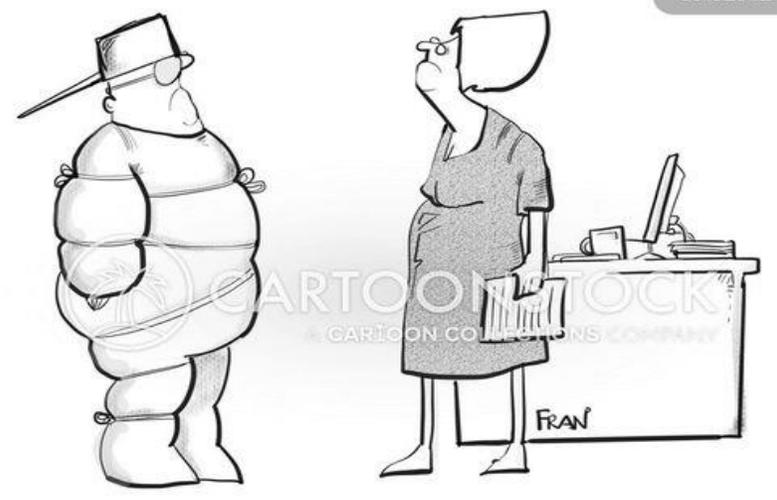


Reputation Management:

Effective risk management maintains the reputation and credibility of healthcare organizations by preventing adverse incidents, managing crises, and maintaining trust among patients, providers, and stakeholders.



RISK MANAGEMENT STEPS

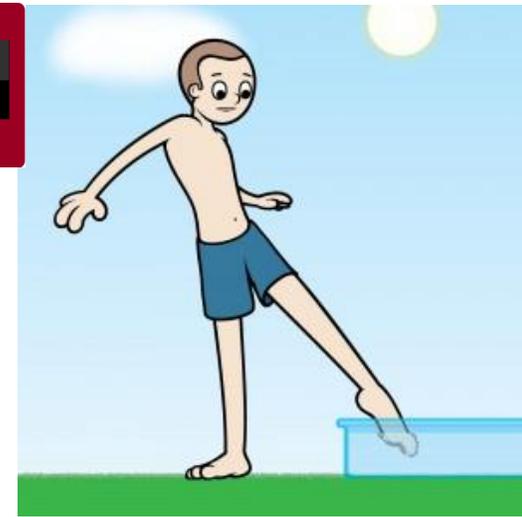


Life is about **MANAGING** risk, not not taking any.



Risk management process uses a five step management decision-making model.

Source: AS/NZS ISO 31000:2009



Step 1: Establish the Context

- It is done by an evaluation of the external and internal factors:
 - ✓ **External risks** are exposures that result from conditions that the health system usually cannot influence (External factors: the healthcare market, competitors, socio-economic trends, and geopolitical factors.)
 - ✓ **Internal risks** : including the health system operations and its objectives;
- Organizational objectives(the mission, vision, goals, and strategic priorities of the healthcare organization).
- Legal and regulatory requirements: Identifying relevant laws, regulations, standards, and guidelines.
- Organizational structure: Understanding the organizational chain of command, roles and responsibilities of key stakeholders, and lines of authority and communication.

Establish The Context



Step2: Identify Risks



- Risk identification is the process whereby the healthcare professional and the healthcare employees become aware of the risks in the health care services and environment.

The risks identified are entered in the Risk Management Tool (RMT)
(See next slide)



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Categories of Risk in healthcare



1. Clinical Risks

2. Operational Risks

3. Financial Risks

4. Legal and Regulatory Risks



1. Clinical Risks

- Clinical risks: associated with clinical practice – direct patient care and indirect factors that may impact patient care, safety, and treatment outcomes within healthcare settings.
- **Examples:**
- medication errors, surgical complications, misdiagnosis, infections acquired during hospitalization, adverse drug reactions, and patient falls.



2. Operational Risks

- Operational risks includes challenges associated with the day-to-day operations and processes within healthcare organizations.
- **Examples:**
- supply chain disruptions, equipment failures, staffing shortages, scheduling errors, facility maintenance issues, and inefficient workflow processes.



3. Financial Risks

- Financial risks refer to threats to the financial stability, sustainability, and viability of healthcare organizations.

- **Examples:**

revenue losses due to low patient volumes or payer reimbursement cuts, billing errors or fraud, budget overruns, inadequate cash flow management, and increasing healthcare costs.



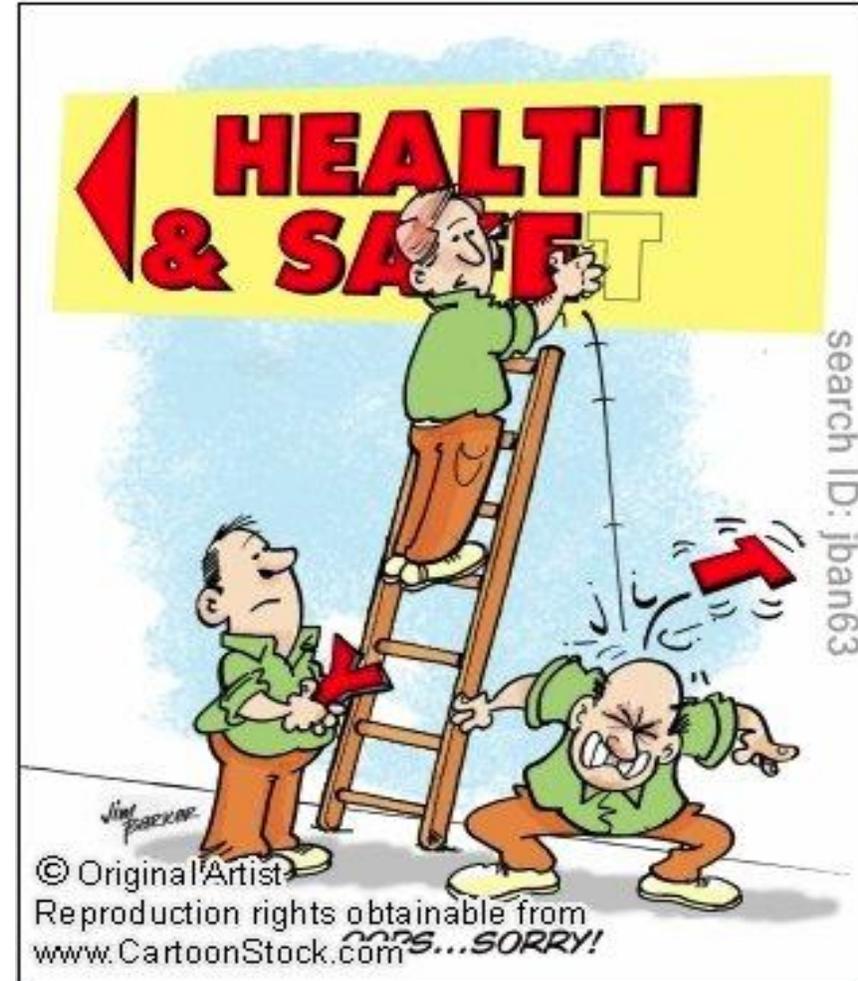
4. Legal and Regulatory Risks

- 
- Legal and regulatory risks involve the potential for non-compliance with laws, regulations, standards, and ethical guidelines governing healthcare delivery and operations.
 - **Examples:** violations of patient privacy laws, failure to meet accreditation standards, malpractice claims, lawsuits, and penalties for regulatory non-compliance.

Step2: Identify Risks

(what can go wrong?)

- Identify why and how can it happen
- Consider the possible *causes and scenarios* of each risk identified.
 - ❑ **Cause** - identify the potential triggers that may result in the risk event occurring. A single risk event may have a specific cause or multiple possible causes. A single cause may be applicable to multiple risks.
 - ❑ **Consequence** - identify the possible impact should the risk event occur. A single risk event may have a specific consequence or multiple possible consequences. A consequence may be common across multiple risks



Identify Who is at Risk

who is exposed to the harm?

- 3 groups: staff, patients, and visitors.
- Physical, financial, psychological harm



Step2: Identify Risks

Sources of risk identification

Methods for Identifying Potential Risks:
Healthcare organizations use various methods and tools to identify potential risks within their settings. These methods may include:

- **Risk assessments and audits:** Conducting systematic assessments of processes, procedures, and environments to identify potential hazards and vulnerabilities.
- **Incident reporting systems:** Encouraging staff to report incidents, Almost incidents, and safety concerns to identify areas of risk.
- **Root cause analysis (RCA):** Investigating adverse events or incidents to determine their underlying causes and contributing factors.
- **Stakeholder feedback:** Asking input from patients, staff, and other stakeholders to identify areas of concern or potential risks.(Patient complaints and satisfaction survey results)

Step 3: Analyse & Evaluate Risks

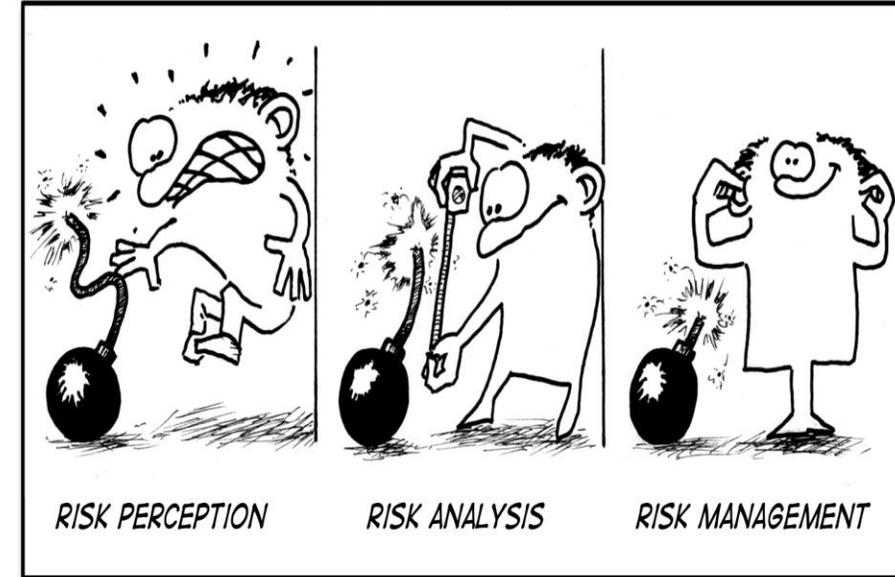


- **Analyse Risks:** developing an understanding of the risks identified. It includes the following:

1. **Level of the risk or Risk score (Analyze inherent risk)**
2. **Underlying causes**
3. **Existing control measures**

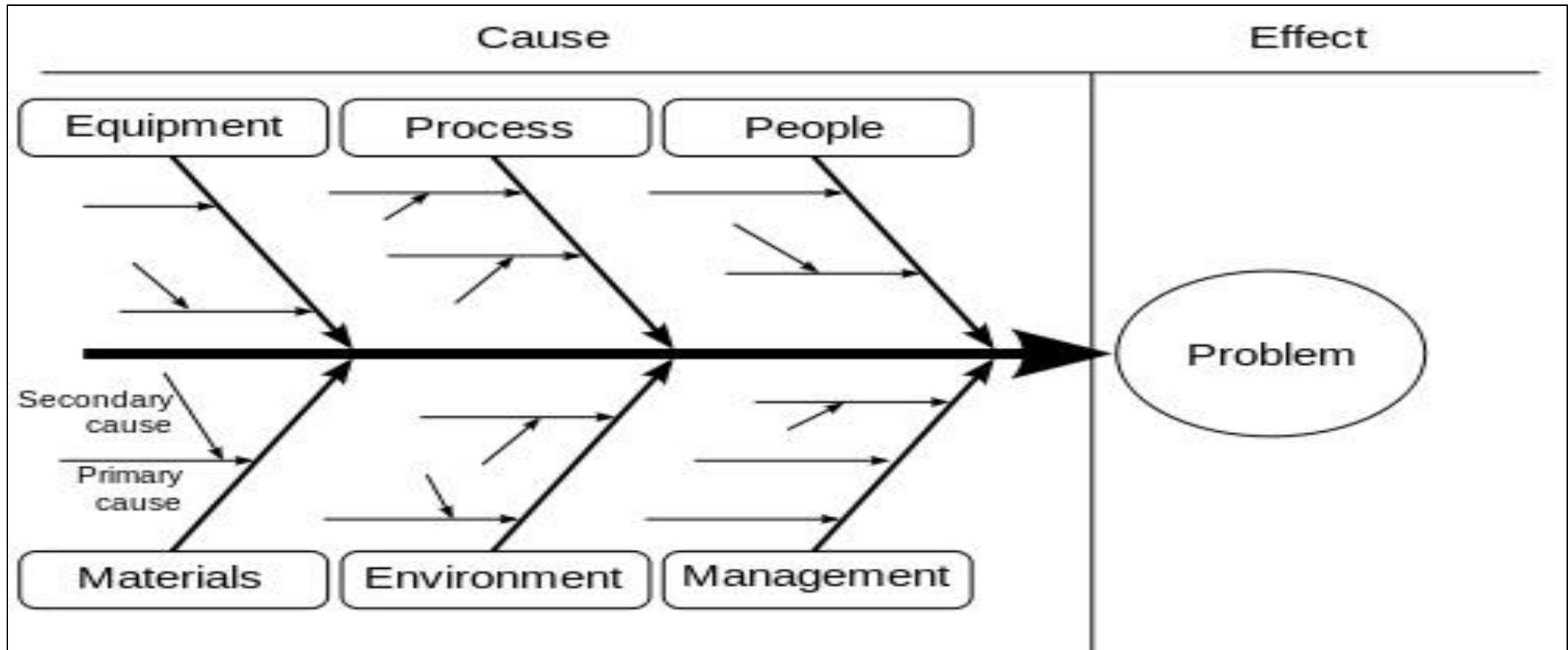
Existing controls: examining their adequacy, method of application and level of effectiveness in minimizing risk to the lowest level. Examples: Policies, procedures, protocols, guidelines, Alarms and beeps , Engineering controls ,Insurance coverage programs , Code teams, Trainings , Emergency arrangements , Preventative, maintenance controls

4. **Analyze residual risk**



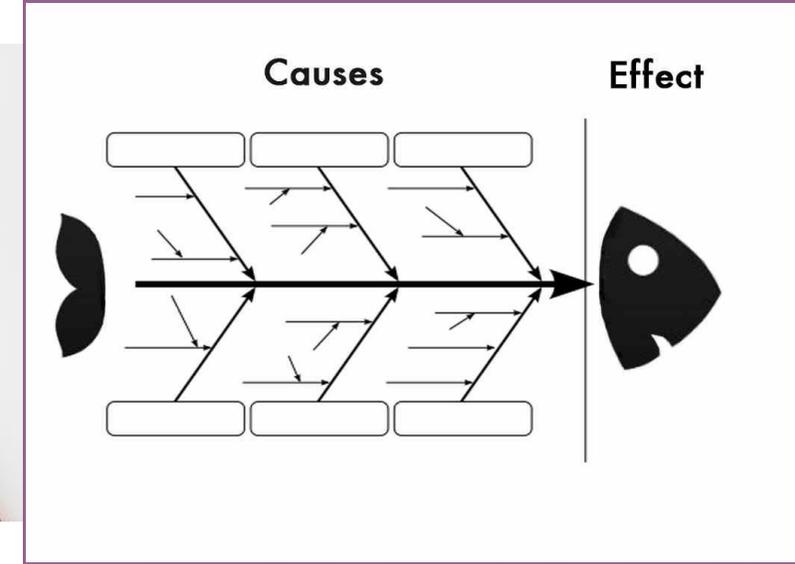
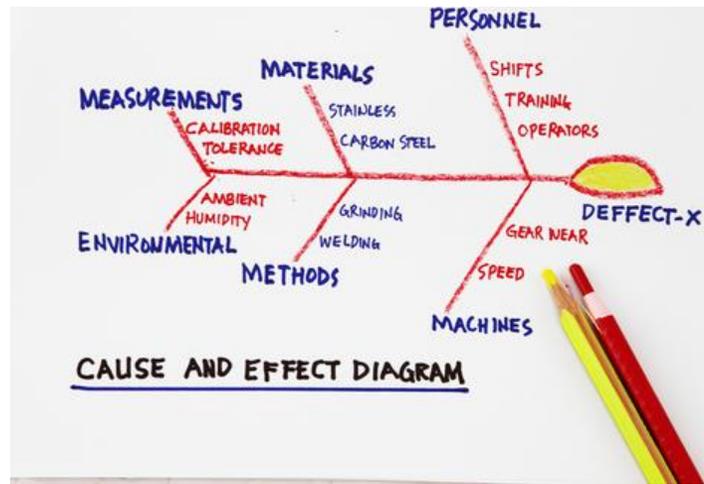
Step 3: Analyse & Assess Risks

Risk analysis can be done using Root Cause Analysis (RCA)



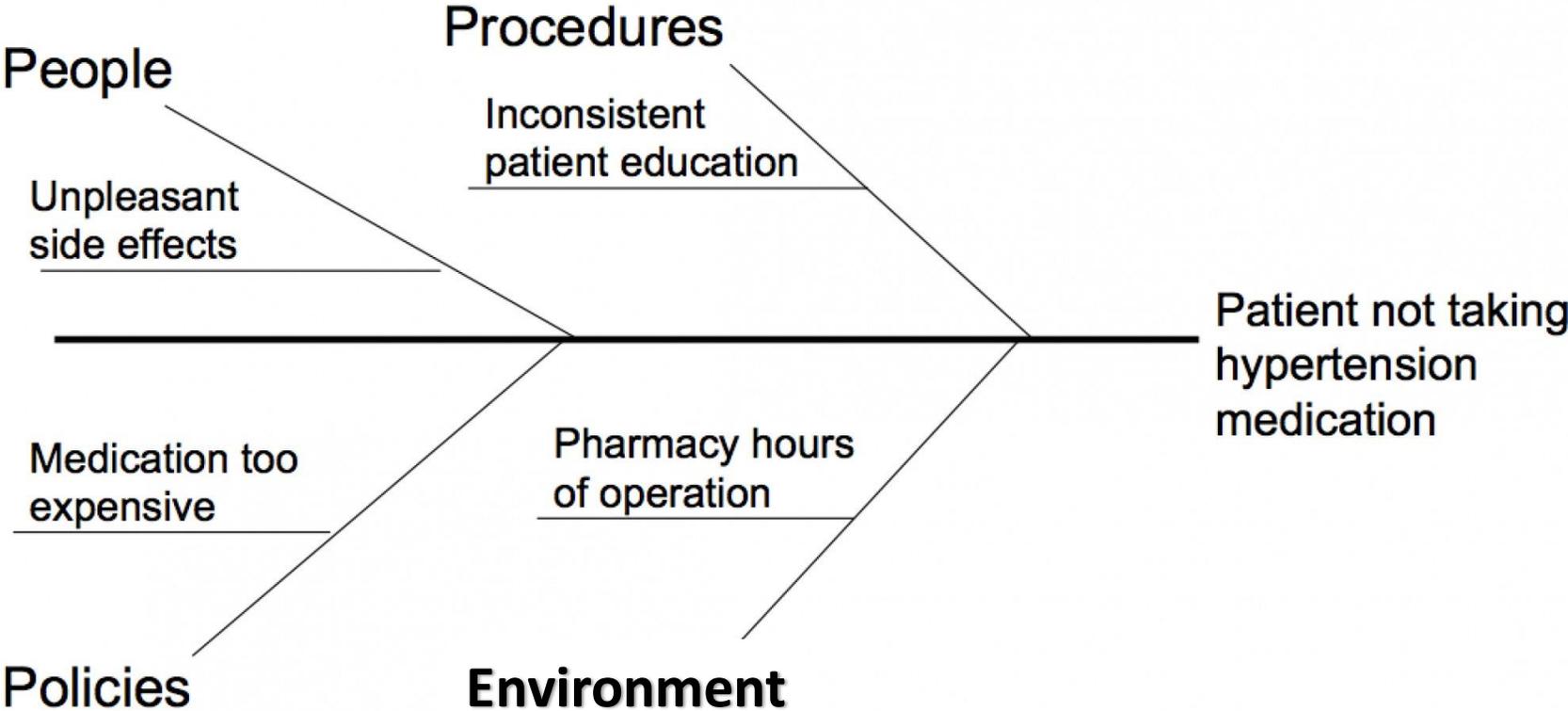
Root Cause Analysis

- Fishbone diagram
- Systematic Approach
- Best method to do RCA is brain storming!
- The purpose is to prevent recurrence at lowest cost in the simplest way.
- A root cause : is a fundamental factor that, if removed, can prevent the recurrence of the final undesirable outcome.
- A causal factor elements that contribute to an event's outcome but may not be the primary underlying cause. Removing causal factors can still improve outcomes but may not prevent recurrence with certainty.
- Not all problems have a single root cause.

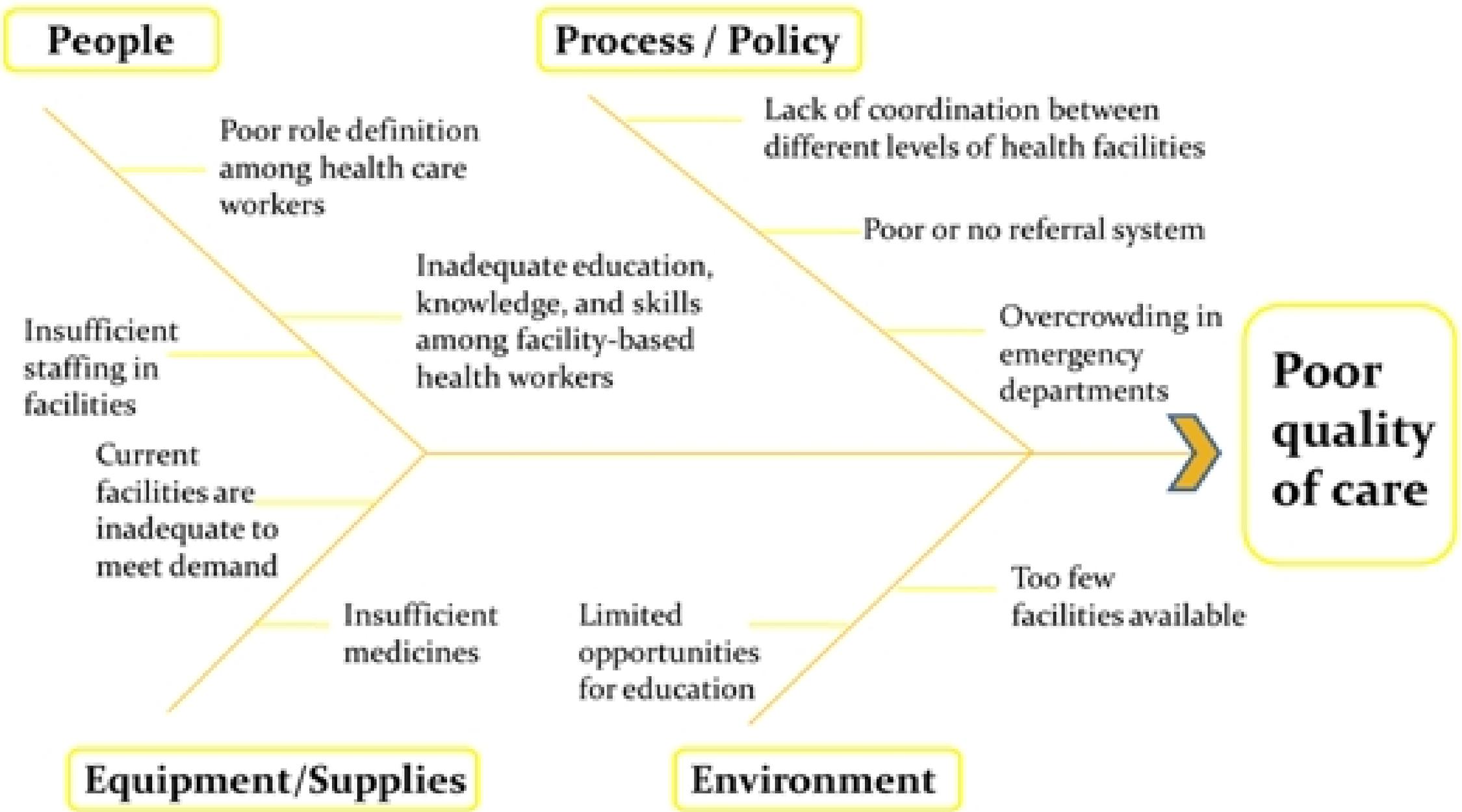


RCA

Simple Fishbone Diagram Example



Source: Kelly, D. L. 2006. Applying Quality Management in Healthcare, 2nd Edition.



Step 3: Analyse & Evaluate Risks

Risk assessment:
Determine the Risk Level

Risk score (R) = Likelihood (L) × Severity of impact (S)

Risk Assessment

- Quantitatively or Qualitatively

- In **Quantitative Risk Assessment (QRA)** a numerical estimate is made of the probability that a defined harm will result from the occurrence of a particular event.
- Require measurable and objective data for determining asset value, probability and risk values.

- More accurate
- Difficult to implement
- Large scale complex organizations

Quantitative risk assessment example

EVENT	LIKELIHOOD (A)	IMPACT (B)	RISK FACTOR (A x B)
Fire in data center	0.7	0.9	0.63
Loss of power	0.5	0.8	0.40
Staff illness	0.6	0.5	0.30
Hurricane	0.4	0.9	0.36
Water leak	0.3	0.5	0.15
Employee forgot to log off	0.8	0.3	0.24

- **Qualitative risk assessment:**

- Categorization of the risks
- Relies on the risk assessor's experience and knowledge (subjective rating system)

Categories:

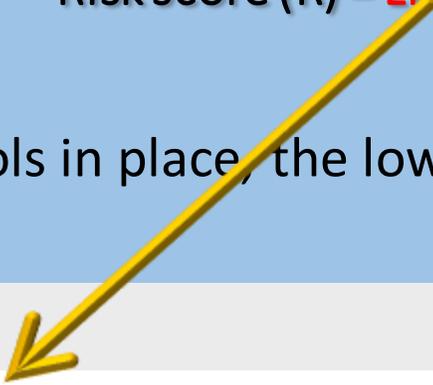
- **Low risk** = probability of any harm is unlikely (<10%); any harm caused could be minor or insignificant
- **Medium risk** = probability of harm is moderate (10%—50%); any harm caused could be moderate; preventive measures can reduce possibility; moderate limitations should be initiated
- **High risk** = probably of harm is likely or almost certain (>50%->90%); any harm caused could be major or catastrophic; preventive measures can somewhat reduce probability; strict limitations must be initiated



Likelihood

$$\text{Risk score (R)} = \text{Likelihood (L)} \times \text{Severity of impact (S)}$$

- Based on the expertise, knowledge!
- Generally the higher the degree of controls in place, the lower the likelihood.
- 1-5 score



LIKELIHOOD		
The probability of risk occurring, say within the next twelve months, that can be expressed in terms of a percentage between 0% and 100%		
RATING	POTENTIAL FOR RISK TO OCCUR	PROBABILITY
5 ALMOST CERTAIN	Likely to occur frequently (At least monthly)	>90%
4 LIKELY	Likely to occur several times a year (Bi-monthly)	50%-90%
3 POSSIBLE	Possibly occurs once a year -<2 years	10%-50%
2 UNLIKELY	Likely to occur once every few years (2->5 years)	5%-10%
1 RARE	May occur once in 5 years Or more	<5%

Severity of impact (S)

$$\text{Risk score (R)} = \text{Likelihood (L)} \times \text{Severity of impact (S)}$$



Score	Impact
1	Negligible
2	Minor
3	Moderate
4	Major
5	Extreme

Severity of impact scoring guide.

- Severity of impact indicates the impact of harm to service users, employees, service provision, environment or the organization.
- The scoring ranges from 1 (Negligible impact) to 5 (Extreme impact).

Examples of impact severity

	Insignificant	Negligible	Moderate	Major	Extreme
People	Minor injury or first aid treatment	Injury requiring treatment by medical practitioner and/or lost time from workplace.	Major injury / hospitalization	Single death and/or multiple major injuries	Multiple deaths
Property	Minor damage or vandalism to asset.	Minor damage or loss of <5% of total assets	Damage or loss of <20% of total assets	Extensive damage or loss <50% of total assets	Destruction or complete loss of >50% of assets
Economic	1% of budget (organizational, division or project budget as relevant)	2-5% of annual budget	5-10 % of annual budget	> 10% of budget	> 30% of project or organizational annual budget

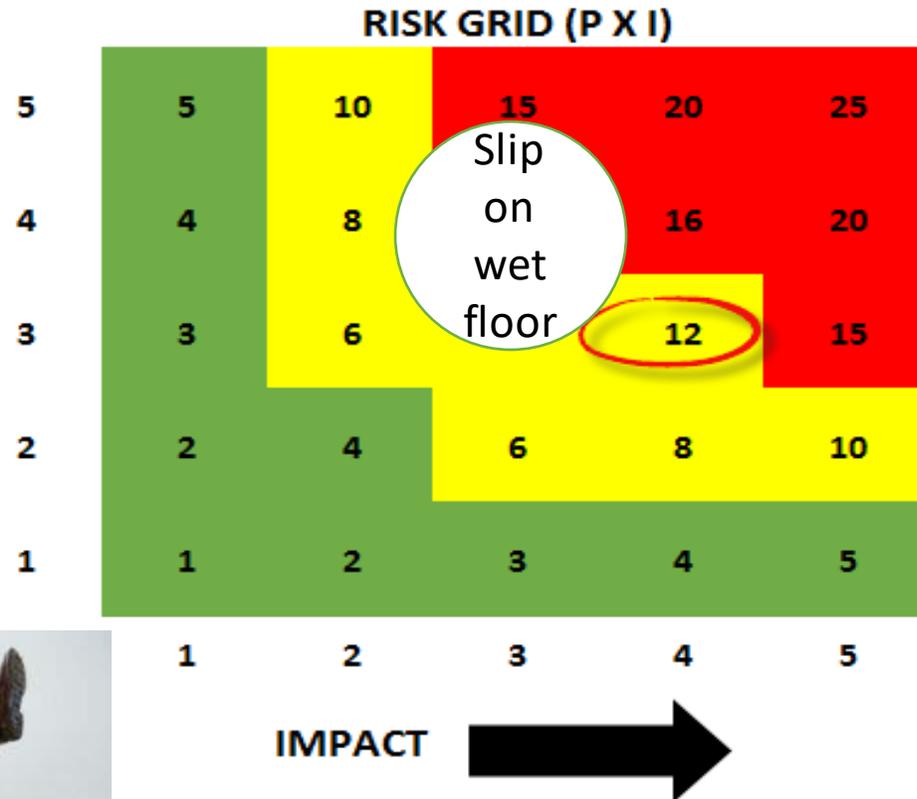
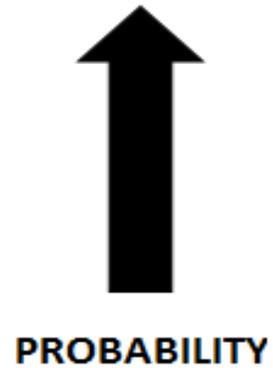
Risk Impact Areas:

People
 Economic
 Information
 Property
 Reputation
 Capability



Risk Assessment matrix

Risk score (R) = Likelihood (L) × Severity of impact (S)



Risk: Description of the Risk

Probability 3

Impact 4

Risk Value 12

Risk is classified as MEDIUM.



Step 3: Analyse & Evaluate Risks

The purpose of risk evaluation is to *prioritize* the risks based on risk analysis score and to decide which risks require *management* and the way of management.



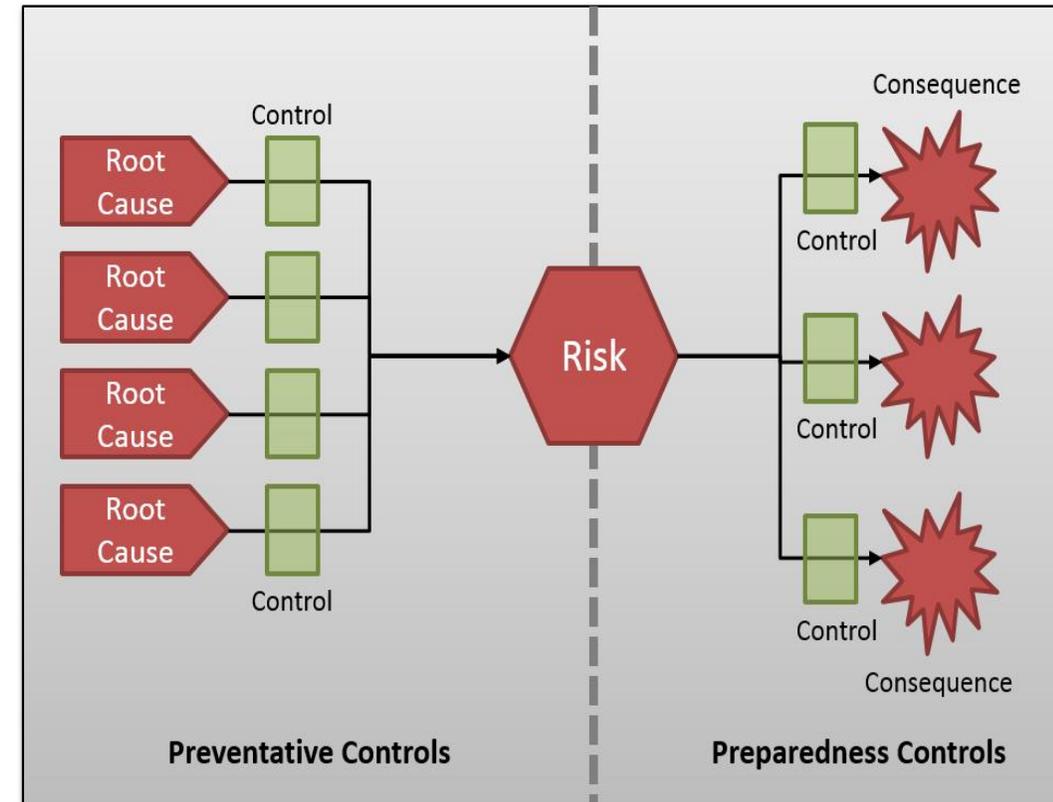
Step 4: Treat risk

Determine the action

Controlling Risk



- **Risk Avoidance** – This strategy involves a decision to avoid completely a particular risk by stopping the operation producing the risk e.g. the replacing a hazardous chemical by one with less or no risk potential.
- **Risk Reduction (mitigation /Control)** – Here the risks are systematically reduced through control measures, and by applying a strategy to reduce the likelihood or consequence of the risk to an acceptable level. This occurs when risk avoidance is considered to be difficult to do because of time or expense.

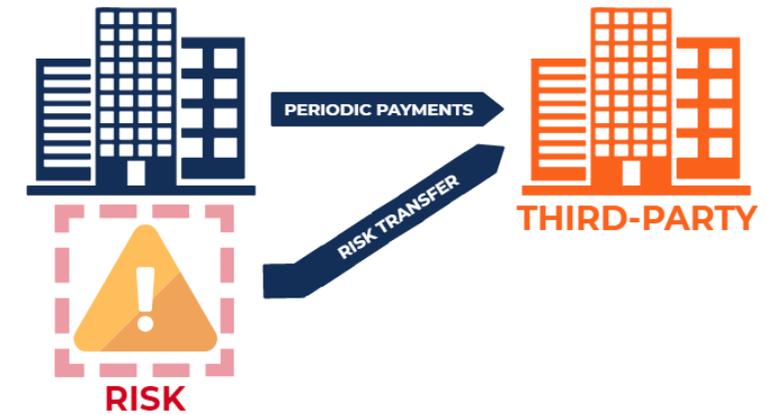


Step 4: Treat risk

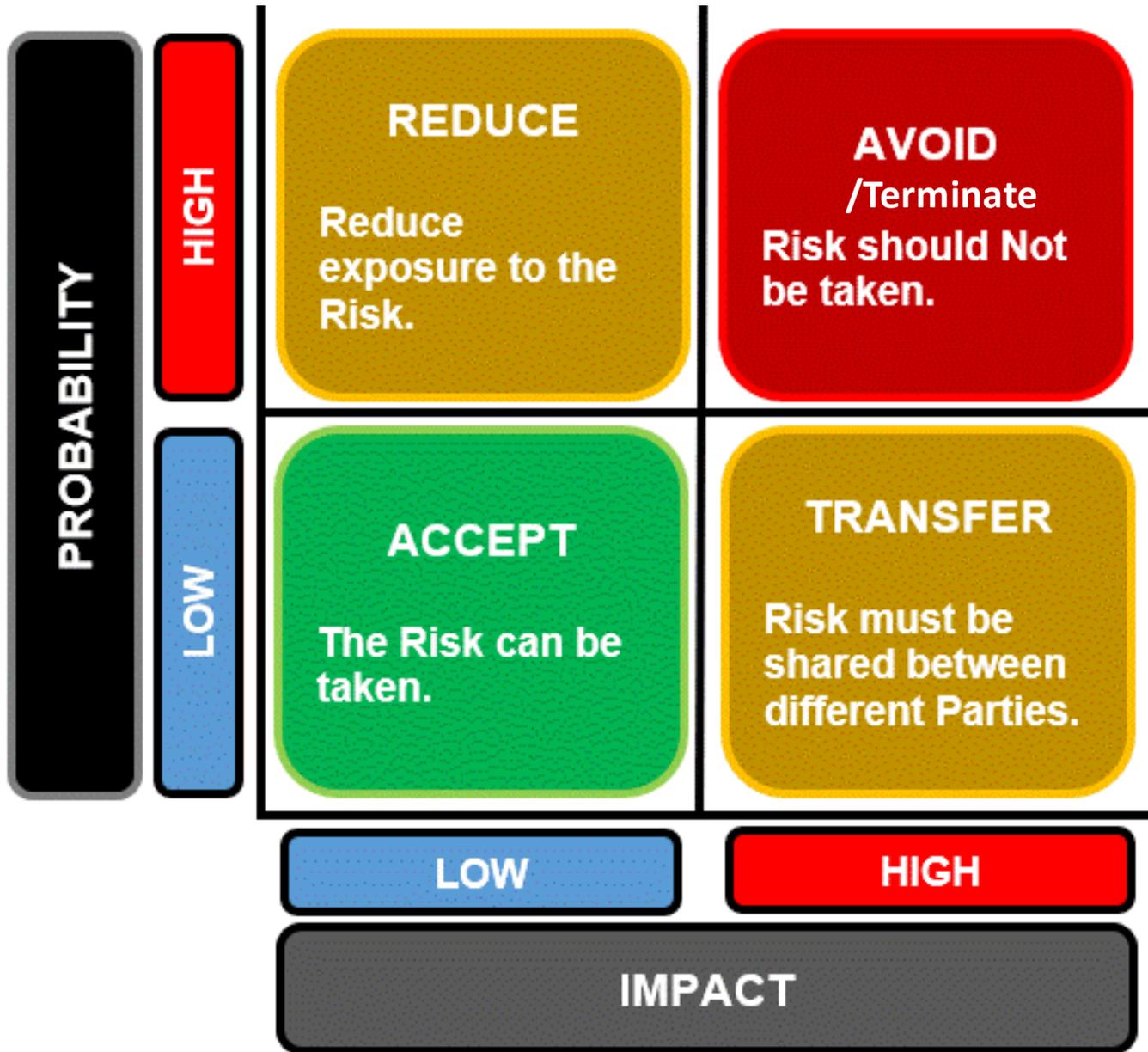
- **Risk Transfer** – shifting all or part of the financial burden associated with risks to another party (an insurance provider or a contractual partner). The most common way is by insurance. #
- **Risk Retention** – making decision that the risk rating is at an acceptable level or as unavoidable consequence or that the cost of the risk management outweighs the benefit. **(Accept it)**

This option may also be suitable in situations where the level of the risk is so low that specific risk management is not appropriate within available resources or when a *residual risk* remains after other management options have been done or when no management option is available.

No further action is taken to treat the risk. However, ongoing monitoring is recommended.



Residual Risk: Residual risk is the risk that remains after we apply controls. It's not always feasible to eliminate all the risks. Instead, we take steps to reduce the risk to an acceptable level. The risk that's left is residual risk. $\text{Residual Risk} = \text{Total Risk} - \text{Controls}$



- https://survey.charteredaccountantsanz.com/risk_management/small-firms/context.aspx
- https://pdfs.semanticscholar.org/d57e/c1af8951cf441643fccfbea7c28807cfa5cd.pdf?_gl=1*1ucq4og*_ga*ODAxNzUzNzkxLjE2ODM2NTcxODU.*_ga_H7P4ZT52H5*MTY4NDY2MDU2OC4yLjAuMTY4NDY2MDC0MS42MC4wLjA.

**“ If you fail to
prepare, you
prepare to fail ”**