

Use and Value of Health and Safety Risk Matrices

A Risk Matrix is one part of risk management. It is a tool used to support the rating on an incident to determine the level of actions/controls required. It is often the initial assessment of the level of response to an adverse event or hazard. It can be used proactively and reactively. There are benefits to be gained from either approach.

A Risk Matrix is a method of evaluating the risks associated with hazards to determine which hazards need to be controlled first. Hazards with the highest risk that affect the most workers or patients should receive the greatest attention. A Risk Matrix assists the end user in the hazard assessment process and provides a guideline for the implementation of corrective action. It is important to remember that the Risk Assessment Procedure provides guidelines in the use of a Risk Matrix that identifies an expected timeframe in which corrective action should be implemented.

A Risk Matrix should be used in all safety related decisions as a guide to assist employers, employees and other team members in understanding the priority for corrective actions necessary within the department/unit/facility.

Key Messages:

1. Use of a Risk Matrix exists within occupational health and safety, patient safety as well as numerous other portfolios (e.g., Safety Assessment Code Matrix, Canadian Patient Safety Institute [CPSI] Incident Analysis Framework)
2. A Risk Matrix is only one component of a larger risk management process on the prevention of incidents of injury or harm in healthcare.
3. The main value of a Risk Matrix is to serve as a reasonable guide to gauge how quickly action is required and to assist the team on prioritizing the corrective actions. This is done all with intent to meet or achieve an industry standard.
4. Corrective actions should always be sustainable with the intent to eliminate, reduce or control for the hazard. Controls can occur at the source of the hazard, along the path between the hazard and the worker or patient, and also at the provider level.
5. Principles of Controls include:
 - a. Alignment with an industry Standard
 - b. Regional application to ensure sustainability of corrective actions
6. The Safety Management System standards include:
 - a. Does the organization have a process to assess the risk associated with activities they undertake?
 - b. Are activities prioritized according to risk?
 - c. Are adequate controls implemented?
 - d. Is the risk assessment reviewed when changes have been made to a process?
7. Review and communicate with all staff the internal processes for reporting a hazard and follow up.
8. Reverse side: sample of SASWH's Risk Matrix* that can be tailored as necessary.

*The final Risk Matrix was vetting and endorsed by Saskatchewan's regional health authorities' vice-presidents of Human Resources as well as partners within the various labour unions.

additional Safety Talks specific to Safety Management System (e.g., elements, Leading & Lagging Indicators) are available on www.saswh.ca

Safety Talk Discussion

Be Accountable: Choose safety - work safe - and go home injury free!

Safety Talk - Risk Matrices

Step (1) Severity (Potential)	
Category	Considerations
	Workplace Health and Safety
I	Workplace Fatality
II	Serious Injury to Workers (e.g.,) Lost time/permanent disability
III	Moderate Injury to Workers (e.g.,) Medical Treatment
IV	Minor impact to Workers (e.g.,) First Aid

Step (2) Probability	
Category	Definition
A	Possibility of Repeated Incidents (e.g., Daily, continuous or frequent)
B	Possibility of Occurring Sometime (e.g., once per week to once per month)
C	Possibility of Isolated Incidents (e.g., occurring a few times a year)
D	Not Likely to Occur (e.g., once per year)
E	Practically Impossible (e.g., highly unlikely, but remotely possible)

Step (3) Hazard Risk Ranking						
Severity	Probability					
	A	B	C	D	E	
I	1	2	5	6	10	10.5
II	3	4	7	11	15	
III	8	9	12	16	18	
IV	13	14	17	19	20	
Priority	Major		Moderate		Low Hazard	

3. Corrective Actions:

MAJOR	Black 1 – 5	Resolve within 24 hours	REQUIRED: A procedure, practice, training, PPE MAY REQUIRE: A policy, other certification
MODERATE	Grey 6 – 10	Resolve within 1 week	REQUIRED: A practice, training, PPE MAY REQUIRE: A policy, procedure, other certification
LOW	White 10.5 - 20	Resolve within 1 month	REQUIRED: A practice, training MAY REQUIRE: A policy, procedure, PPE, other certification

Note of Recognition: SASWH's Risk Matrix was collaboratively built. Contributing members include representatives from the Ministry of Health, Ministry of Labour Relations and Workplace Safety, Saskatchewan Workers' Compensation Board and the RHAs.