



Rapid Risk Assessment

National Training of Trainers for

C  **VID-19**

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Risk = likelihood and consequences



Definition and rationale for RRA

What is risk assessment?

A systematic process for gathering, assessing and documenting information to assign a level of risk

Why to conduct risk assessment?

- Characterize the risk (low-moderate-high-very high)
- Support and direct decision-making
- Implement appropriate and timely control measures
- Support effective operational and risk communication
- Improve preparedness

Risk assessment methods, tools and process



Methods & Tools for Rapid Risk Assessment

SMART goals: simple, measurable, achievable, relevant and time-bound

- Minimum number of methods for common understanding
- Simple but not simplistic
- Appropriate to the people undertaking the risk assessment
- Appropriate to the timeframe required for action
- Examples of methods/tools for acute public health events.

IPCS
INTERNATIONAL PROGRAMME ON CHEMICAL SAFETY
WHO
IPCS Harmonization Project

WHO Human Health Risk Assessment Toolkit: Chemical Hazards

Identifying Hazards
Assessing Exposure
Characterizing Hazards
Characterizing Risk

IOMC
INTERNATIONAL ORGANIZATION FOR THE MANAGEMENT OF CHEMICALS
A cooperative agreement among FAO, ILO, UNEP, WHO, WHO Bank and OECD

World Health Organization

FAO/WHO
guide for application of risk analysis principles and procedures during food safety emergencies

World Health Organization

Health Protection Agency

The Human Animal Infections and Risk Surveillance (HAIRS) Group
First Report 2004-2007

animalhealth **defra** **DH** Department of Health **FOOD STANDARDS AGENCY**

The Scottish Government **Veterinary Laboratories Agency** **Health Protection Scotland** **NHS** National Services Scotland

Rapid Risk Assessment of Acute Public Health Events

World Health Organization

Rapid Risk Assessment Process

- Assembling Risk Assessment team (multidisciplinary team)
- Formulating risk questions
- Undertaking Risk Assessment (components)
 1. Assess hazard/threat
 2. Assess exposure(s)
 3. Assess context (vulnerabilities and threat-specific factors that increase or decrease risk)
- Assigning level of risk.



Risk assessment components, risk matrix



Risk assessment components

Hazard/threat

- Hazard can be known or unknown
- If unknown, prioritise potential hazards (biological, chemical, physical and radionuclear hazards)

Exposure

- Number of people likely to have been exposed
- Number of people exposed likely to be affected

Context (capacity and control)

- Factors associated with social, health status, behaviour (population density and movement)
- Factors associated with health system (Surveillance, diagnosis, treatment)
- Context (political, conflict, economical)

Documented evidence



Risk Matrix

Likelihood	Consequences				
	Minimal	Minor	Moderate	Major	Severe
Almost certain	Common cold				
Highly likely					
Likely	COVID-19				
Unlikely	SARS				
Very unlikely					

Risk assessment – characterizing risk

	Risk level	Level of management to be undertaken
Green	Low	Manage through routine procedures.
Yellow	Moderate	Routine procedures may not be sufficient. Management responsibility must be specified; specific monitoring or procedures required.
Orange	High	Local capacity surpassed requiring next level of management, and perhaps government to assist. Establish command and control structure.
Red	Very high	Local capacity overwhelmed requiring highest level of management and government to assist (perhaps international). Activate Emergency Operations Centre (EOC).

Outputs of risk assessment



Risk statement and limitations of RRA

Risk statement

- Make a concise statement about the level of risk and give evidence-based reasons using key information on likelihood of the event occurring and the impact the event will have

Limitations

- Make a brief statement about limitations of the risk assessment
- These limitations should be documented as they will also assist in decisions and follow-up actions

Recommendations

- Communicate timely and regularly
- Acknowledge uncertainty
- Understand stakeholders' perceptions
- Translate science into non-expert language

Limitations and level of confidence

Incomplete information can lead to low confidence in the outcome

BUT

decisions for intervention still have to be made

- As data improves confidence increases
- At all stages of an event the most reliable data available should be used and key limitations should be documented
- This is a cyclical process

Examples of risk questions for India



In scenario of first cases and clusters

- What is the risk of infection for Indian citizens travelling in areas with/without ongoing community transmission?
- What is the risk of introduction of COVID-19 in state X?
- What is the risk of health care associated transmission?
- What is the risk of clusters associated with COVID-19 occurring in other states of India in the coming weeks?

In scenario of community transmission

- What is the risk associated with COVID-19 infection for people in state/city X?
- What is the risk of widespread and sustained transmission in India in the coming weeks?
- What is the risk for healthcare systems capacity in India in the coming weeks?
- What is the risk of severe impact on the Indian society?

Key messages

Risk assessment:

1. Supports defensible and proportional decision making, especially where information is limited and the level of uncertainty high
2. Is a continuous process – should occur many times during an event
3. Helps to predict, plan and understand what levels of risk to accept
4. Helps communicate levels of risk and rationale for decision making to a technical and wider audience



Thank you

