AUSTRALIAN COMMISSION
ON **SAFETY** AND **QUALITY** IN **HEALTH CARE**

Workforce immunisation risk matrix

This document provides guidance on identifying workforce immunisation risks and the use of the Workforce Immunisation Risk Matrix, including scenario-based examples. This document should be read in conjunction with the National Safety and Quality Health Service (NSQHS) Standards, Preventing and controlling Infections standard, Action 3.15 Workforce screening and immunisation.

Action 3.15 Workforce screening and immunisation requires health service organisations have a risk-based vaccine-preventable diseases screening and immunisation policy and program that:
- Is consistent with the current edition of the Australian Immunisation Handbook
- Is consistent with jurisdictional requirements for vaccine-preventable diseases, and
- Addresses specific risks to the workforce and patients.

A risk-based vaccine-preventable diseases screening and immunisation policy and program is intended to protect members of the workforce and patients from vaccine-preventable diseases.

Risk Matrix

The Workforce Immunisation Risk Matrix supports health service organisations to identify, evaluate and address risks that are relevant to the scope of the role of the members of the workforce. The risks for vaccine-preventable diseases may differ between work groups or departments within the same organisation. For further guidance, refer to:
- The Australian Guidelines for the Prevention and Control of Infection in Healthcare
- The current edition of the Australian Immunisation Handbook
- State and territory policies, procedures and guidelines related to vaccine-preventable diseases and infections.

Workforce immunisation risk factors

Each of the following risk factors need to be considered when assessing risk for workforce immunisation:
- Can all members of the workforce provide history/evidence of vaccination or immunity to specific vaccine-preventable diseases/infections?
- Does the health service organisation have processes/services available to assess and screen members of the workforce for their vaccination/immunisation status, such as a serology service?
- Are there processes in place that protect members of the workforce from exposure to vaccine preventable-diseases and infections? For example, an infection prevention and control program that includes access to vaccination and training for the workforce on when, and how to use standard and transmission-based precautions to reduce the risk of disease transmission within the health service organisation.

Table 1: Workforce Immunisation Risk Matrix

	Workforce immunity/vaccination status & access to workforce screening		
	• **All** members of the workforce have up-to-date records of their immune status/ vaccination history available **AND** • A workforce screening/ vaccination program* is in place	• Up-to-date immune status/ vaccination records are **NOT** available for all members of the workforce **AND** • A workforce screening/ vaccination program* is in place	• Up-to-date immune status/ vaccination records are **NOT** available for all members of the workforce **AND** • A workforce screening/ vaccination program* is **NOT** in place
No increased risk of exposure to disease or infection associated with working in the health service organisation	Low	Medium	High
Members of the workforce have a risk of exposure to vaccine-preventable disease due to the nature of their role	Medium	High	Very high
Hospital-based outbreak of vaccine-preventable disease (no evidence of community transmission)	Medium	High	Very high
Community-wide outbreak of a vaccine-preventable disease	High	Very high	Very high
Disease with no available vaccine	Very high	Very high	Very high

(Left axis label: Risk of disease exposure)

Low risk	Risk is managed by routine procedures. There is minimal risk of harm or injury from the risk
Medium risk	Risk is managed by specific monitoring or audit procedures. There is potential for harm or injury from the risk.
High risk	There is a serious risk that must be addressed immediately. Consequences to individuals and the organisation are high due to a high potential for harm or injury.
Very high risk	There is a serious risk that must be addressed immediately. The magnitude of the consequences to the individual and organisation of an event, should it occur, are considered very high with potentially significant harm or injury.

*Vaccination programs should include catch-up vaccination, such as annual influenza vaccination.

How to use the risk matrix:

A risk matrix is a qualitative tool used to assess the risk of an event and the consequences associated with the event. This risk matrix table will generate one risk rating, either low, medium, high or very high, to describe the level of risk to members of the workforce and the organisation from vaccine-preventable diseases and infections. The following points should be considered when implementing this risk matrix.

- It is recommended that a risk assessment is completed at an organisational level first. This risk matrix can also be applied at a department/ward level if required.
- When performing a risk assessment, select the statements that best describe the current situation in the health service organisation or department from the options under the heading *Workforce immunity/vaccination status & access to workforce screening* and the heading *Risk of disease exposure* to identify the risk level.
- At the time of completing the risk assessment, the incidence of vaccine-preventable diseases in the community, including outbreaks and seasonal epidemics, should be considered, along with any outbreaks of vaccine-preventable diseases within the health service organisation. This means that the risk rating may increase if a health service organisation is responding to changing circumstances either within or external to the organisation for a period of time. Health service organisations may need to repeat the risk assessment at a later date to see if the risk has decreased once the outbreak or epidemic has resolved.
- Once the risk rating has been identified (Low, Medium, High, Very high), the health service organisation should develop an action plan to prioritise strategies and identify resources to address vaccine-preventable disease risks to members of the workforce. The timeframe for implementing the action plan should be determined with consideration of the risk rating. Health service organisations can repeat the risk assessment to evaluate whether the implementation of the action plan have reduced the risk rating for the health service organisation.
- An action plan is a tool that can assist the health service organisations prioritise and manage gaps in safety and quality programs. The action plan should consider timeframes for action, who will be responsible for implementing actions and how the outcomes of these actions will be evaluated (e.g. has the risk been reduced or managed, does the health service organisation meet the requirements for Action 3.15). Guidance on action plans and monitoring for the NSQHS Standards can be found on the [Commission's website](#). Examples of action plans may also be sourced from jurisdictional or local safety and quality resources.
- When applying the risk matrix at a ward or department level, the context of the work environment and staff roles or duties should be considered for the risk assessment. For example, the risk of exposure to a vaccine-preventable disease by members of the workforce who work in an emergency department, or pathology laboratory would be different to members of the workforce who work in an office-based setting.
- Some staff may, due to the nature of their role, move between clinical and non-clinical departments (for example, engineering staff or medical records staff). For these staff it is advisable to assess their level of risk in the area where there is the highest potential for exposure to vaccine- preventable diseases.

Example scenarios of how to use the risk matrix

The following scenarios should be read in conjunction with Table 1.

Facility level application of the risk matrix

Scenario 1: All members of the workforce in a large tertiary referral hospital can provide up-to-date evidence of their immune/vaccination status and the organisation has a workforce screening and vaccination program that can assess staff for their immunisation status. Members of the workforce at this hospital have a risk of exposure to vaccine- preventable diseases due to the nature of their roles throughout the facility. The risk rating is Medium for this hospital.

Scenario 2: Up-to-date immune/vaccination status records are not available for all members of the workforce in a rehabilitation hospital, but a workforce screening and vaccination program is in place. At the present time, there is a hospital-based outbreak of pertussis (which is vaccine-preventable), but there is no evidence of community transmission. The risk rating is High for the rehabilitation hospital. This hospital will need to consider how to protect the members of the workforce from the pertussis outbreak and if the current screening and vaccination program includes a pertussis vaccination.

Department level application of the risk matrix

Scenario 3: Immune/vaccination status records for members of the engineering department within a small suburban hospital are out of date, and there is no workforce screening or vaccination program in place. Members of the engineering department have a risk of exposure to vaccine-preventable diseases due to the nature of their role, as they work throughout the whole hospital in clinical and non-clinical settings. The risk rating for the engineering department is Very high. The risk rating for the whole hospital will need to be assessed to see if other members of the workforce have up-to-date immune/vaccination records. This hospital will need to consider how to improve the immune/vaccination status of the members of the workforce and how members of the workforce can show evidence of current vaccinations or immunity.

Additional guidance on workforce vaccination and screening can be sourced from states and territory health departments and the Australian Immunisation Handbook.

This resource will be reviewed and updated in line with any changes to the NSQHS Standards and the evidence base.

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