Certain occupations, particularly health care workers (HCW) have the potential to be at increased risk of exposure to some vaccine-preventable diseases if they are not protected by immunity derived from past infection.

The Western Australian (WA) Health Care Worker (HCW) Immunisation policy defines the minimum immunisation standards for health service employers to adopt in their workplace to protect employees and patients from the potential threat of exposure to vaccine-preventable diseases.

The recommendations outlined in this policy support the recommendations outlined in:

- Australian Commission on Safety and Quality in Health Care. *Australian Guidelines for the Prevention and Control in Healthcare 2010*
- *Occupational Safety and Health Act 1986.*

This Operational Directive should be read in conjunction with these documents.

1. PURPOSE

The purpose of this Operational Directive is to advise public health services in Western Australia (WA) of their responsibility in:

- meeting their occupational safety and health obligations and their duty of care to employees, including health care workers (HCWs), and other health services employees (e.g. gardeners, engineers, laundry workers)

- providing a safe environment for all employees, including HCW, students and other users of the service

- reducing the potential risk for transmission of vaccine-preventable diseases (VPD)

- identifying, assessing and managing the risk within a risk control framework and any occupational safety and health (OSH) and human resource policies

- advising all employees, including HCW and other individuals, of their rights and responsibilities in relation to adhering to the recommended guidelines

- defining the roles and responsibilities of employees within the health service to determine risk category status

- having a defined management process for the placement of HCWs who remain non-immune through the failure to seroconvert, or have medical contraindications to vaccination or conscientiously object to vaccination

- ensuring that universities/institutions/organisations providing staff (students/locums/agency/contracted) to support their service provision are aware of this policy and the need to comply with the recommendations set out in this policy

- collating and reporting data on employee vaccination uptake, refusal, and incidence of VPD occurring in health service areas.

Definition

- Health care workers (HCW's) refers to doctors, nurses, allied health professionals, students on clinical practice, laboratory staff and mortuary attendants, clerical staff, volunteers, support staff such as cleaners, orderlies and other staff (including subclass 457 temporary visa holders) who may have contact with patients or with a patient’s blood or body substances as a result of their workplace activities.

2. POLICY

WA Area Health Services are required to implement this operational directive, which incorporates provision and duty of care recommendations for HCWs employed in their health service.

2.1 Legislation supporting this policy

WA Health Act 1911
WA Occupational Safety and Health Act 1984
WA Public Health Amendment Bill 2006
Commonwealth Government Privacy Act 2002
2.2 Guidelines supporting the policy


3. INTRODUCTION

Transmission of VPD in health care settings has the potential to cause serious illness and avoidable deaths in staff, patients and other users of the health care system. Australia’s peak medical advisory body, the National Health and Medical Research Council, through the *Australian Immunisation Handbook*, provides a national recommended standard for immunisation of health service employees, including HCWs.

Immunisation is a successful and cost-effective intervention for prevention of disease. Health care environments can pose a risk and have the potential for workers and patients to be exposed to VPD (i.e. diphtheria, pertussis, tetanus, influenza, measles, mumps, rubella, hepatitis B, and varicella) and, if infected, can transmit these diseases between non-immune persons. For information relating to tuberculosis screening for HCWs refer to *Tuberculosis and Health Care Workers OD 0342/11.*

The most recent edition of *The Australian Guidelines for the Control of Infection in Health care 2010* identifies occupational categories and provides detailed information on the disease risk categories and recommended vaccination for these categories, as outlined in Table 1. Staff vaccination programs should comply as much as possible with these recommendations, but it is acknowledged that some individual circumstances may require special consideration/advice before a vaccination is recommended and administered.
### Table 1: Determining risk categorisation for screening and immunisation

<table>
<thead>
<tr>
<th>Category</th>
<th>Risk</th>
<th>Examples</th>
<th>Recommended Vaccines</th>
</tr>
</thead>
</table>
| A        | Direct contact with blood or body substances | Dentists, medical practitioners, nurses, allied health practitioners, health care students, laboratory staff, maintenance engineers who service equipment, sterilising service staff, cleaners, and staff responsible for the decontamination and disposal of contaminated materials. | Hepatitis B x 3 doses followed by serological confirmation of immunity  
Influenza yearly  
Pertussis, (dTpa) within last 10 years (and completed primary course DTPa for tetanus component)  
Measles, mumps, rubella (MMR) x 2 doses  
Varicella x 2 doses |
| B        | Indirect contact with blood and body substances | Catering staff and ward clerks. | Influenza yearly  
Pertussis (dTpa) within 10 years  
Measles, mumps rubella (MMR) x 2 doses,  
Varicella x 2 doses |
|          | Minimal patient contact | Administrative/Office clerical staff, gardening staff and kitchen staff. | Influenza yearly |
| Laboratory staff | May have additional vaccination requirements if they are working with, or may be exposed to, specific viral or bacterial organisms, e.g. anthrax, Q fever, anthrax, meningococcal C, poliomyelitis, Japanese encephalitis, typhoid, yellow fever | Laboratory staff | Laboratory staff should also receive the vaccines noted in category A |

Health care workers who work with remote Indigenous communities in WA, NT, and SA should receive vaccines that are recommended for all HCW plus hepatitis A vaccine

4. RESPONSIBILITY OF AREA HEALTH SERVICES

Health services must formulate a comprehensive immunisation strategy for their workforce that aims to ensure that all HCWs are made aware of the benefits of immunisation, the consequences to the HCW if they are not immunised, and the consequences for a patient who acquires a VPD while a hospital inpatient.

The extent of a workforce vaccination program for employees will depend on their risk category. Employees should be individually assessed using a risk category approach (see Table 1) as to the likelihood of close and/or direct (‘hands on’) patient contact, which can increase their risk of exposure to blood or body fluids. Consideration needs to be given to front-line staff (receptionist, volunteers) who may be exposed to aerosolised respiratory secretions (measles, varicella, pertussis and influenza), and to ensure that they are offered and immunised against VPDs, as recommended.

4.1 Funding for staff immunisation programs

It is the responsibility of the health services to allocate financial resources towards HCW vaccination, which includes the screening and vaccination of staff, as appropriate in accordance with the recommended standard outlined in the Australian Immunisation Handbook.

Health services must clearly articulate, prior to employment, those vaccines that will be provided by the health service and those vaccines that are recommended to the general public but are the responsibility of the worker to obtain.

4.3 Responsibility of employers towards health care workers

Employers should take all reasonable steps to ensure that HCWs are protected against vaccine-preventable diseases. Where HCWs may be at significant occupational risk of acquiring or transmitting a vaccine-preventable disease (e.g. direct patient care, conducting exposure-prone procedures), a comprehensive pre-employment immunisation screening program should be implemented and supported with an ongoing occupational vaccination program to ensure that VPD protection is maintained.

Employers of health care workers should:

- have a documented policy for the immunisation requirements for its health care workers
- be responsible for the implementation and maintenance of an effective education, screening and vaccination program as outlined in this document under “Screening and Vaccination Program”
- ensure that all employees are given adequate information, education and pre- and post-serology information to make valid decisions about screening and vaccination. This includes the consequences of screening results and the importance of reporting adverse events following immunisation
- make the screening and vaccination process available to existing staff as well as all new staff on commencing employment; and ensure there is a review process for each HCW within a month of employment
- inform all locum clinical personnel of the requirements of this policy directive, and the need to provide evidence (immune status or vaccination record) of protection against specific diseases
- be aware of their duty of care relating to the placement of HCWs who remain non-immune through failure to seroconvert, have medical contraindications to vaccination or conscientiously object
- periodically review the screening and vaccination status of existing staff
- ensure that nursing, medical locum and other relevant employment agencies only provide contract staff who have a documented screening and vaccination history consistent with these guidelines
- include in contracts with universities, academic institutions and HCW education providers a condition that students or trainees, prior to undertaking clinical placement as part of their course, must provide a written statement/evidence to the Chief Executive Officer/Executive Officer of the institution where the clinical placement is made, or delegate, confirming that the student has a documented screening and vaccination history consistent with the provision of these guidelines
- ensure that certified copies of the HCW’s vaccination and screening records are available on termination of employment or, on the HCWs written request, within a reasonable period of time
- maintain security and confidentiality of information about the infectious disease and vaccination status of HCWs. Records (electronic or paper-based) must be kept secure in accordance with the health service’s confidentiality/privacy policy and accessible to authorised personnel, when needed, 24 hours a day, 7 days per week to respond to confirmed VPD cases in staff or patients
- advise visiting medical officers (VMOs) of their obligation to ensure that they are immunised in accordance with this policy directive.

**Health care workers should:**

- take reasonable steps to be aware of their own past infectious disease and vaccination status to minimise the risk of transmitting infectious diseases to patients or other staff
- comply with the employer/training institutions’ screening, education and vaccination program. Where this is refused, the HCW must document their understanding of possible risks involved (i.e. to themselves and towards the patients they care for) in non-participation in the vaccination program, as outlined
- if non-immune, be aware of protective measures that should be utilised (e.g. personal protective equipment, safety needles) and understand their duty of care and obligation to their placement within the health care setting
- maintain their own personal records of all screening tests and vaccinations
- provide screening and vaccination records when requested by the employer
- report any medical contraindications to vaccines, and any adverse events following immunisation (AEFI) to their vaccination provider
- comply with the employer/training institutions’ occupational health, safety and welfare policies and procedures
- include risk management of potential transmission of VPD’s from non-immune, non-vaccinated staff to patients or vice versa.
4.5 Guidelines for planning staff vaccination programs

The *Australian Immunisation Handbook 9th Edition 2008* outlines the recommended steps involved in the planning and implementation of a vaccination program. Information includes the practical aspect of setting up an immunisation clinic, the consent process, cold chain standards, administration of vaccines, post-vaccination information, record keeping, management of anaphylaxis, and the reporting of adverse events to the State health department.

4.6 Who should immunise?

Vaccines are to be administered by registered doctors, registered nurses under medical direction, or by registered nurses (community/infection control/occupational health nurses working within the government health service) who have completed an accredited immunisation training program, as outlined in the *Vaccination Administration Code 2012*, and are therefore endorsed by WA Department of Health (DoH) to practice in accordance with *regulation 37B of the Poisons Regulation 1965* and criteria outlined in the *Vaccination Administration Code 2012*.

5. SCREENING

The most opportune time for promoting the importance of employee immunisation is during pre-employment communication. However, all existing staff should also be offered screening for immunity to VPDs, if not already done so. Pre-employment advertising of positions should include information about the importance of employees knowing their immune status against VPDs.

Pre-employment screening and immunisation requirements for prospective employees (includes health care workers) can be determined using the risk classification system noted in Table 1 that provides clear categories of risk to assess the employees risk of exposure to VPD’s, and the specific recommendations outlined in Table 2 for health care workers where exposure to blood and body fluids is likely to be significant. Work activities, rather than position title, must be considered on an individual basis when determining risk categorisation.

All employees should be assessed according to their work category and offered serological testing, screening and/or vaccination against specific VPDs before being allowed to work or gain experience in their health setting, in line with the NHMRC HCW immunisation recommendations. Employees should be advised on the outcome of their serological tests, including negative results.

The WA Department of Health stipulates in its contractual agreement with the tertiary institutions that HCW students undertaking clinical placements in health services shall provide to the institution, at appropriate time intervals, evidence of their immunisation/immune status against VPDs.

Health services should also be aware of their duty of care to those HCWs who remain non-immune through failure to seroconvert, or have medical contraindications (e.g. immuno-compromised due to disease or treatment, pregnancy), that prevents them being vaccinated. These HCWs may require specialist medical advice regarding their particular immunity requirements and should be referred accordingly, as outlined in section 4.3.

A pre-employment health assessment form can be obtained through the Health Corporate Network (NCN) pre-employment screening tool (N10-WA pre-employment health assessment form) [http://hcn-intranet.hdwa.health.wa.gov.au/portal/page](http://hcn-intranet.hdwa.health.wa.gov.au/portal/page), which specifically requests information about past medical conditions and vaccination against measles, rubella, mumps, chickenpox, hepatitis B, tuberculosis (TB), immune disorders and
skin conditions, prior exposure to TB (including working in high-risk settings and/or high-risk demographic background).

Pre-employment and exposure follow up tuberculin testing should be in accordance with the *Tuberculosis and Health Care Workers* OD 0342/11.

5.1 **Laboratory staff**

Laboratories pose special risks because of the equipment used (e.g. centrifuges), and the possibility of exposure to high concentrations of microorganisms generated by culture procedures. An additional risk to laboratory staff occurs in the handling of human blood and tissues and they should be vaccinated accordingly. These workers may need to seek additional specialist medical advice regarding their particular immunisation requirements.

5.2 **Minimal patient contact**

Other occupational groups employed such as gardening and administrative staff, and volunteers, that have no direct patient contact, have no greater exposure risk to infectious diseases than that of the general public. These employees do not need to be included in vaccination programs or other programs aimed at protecting category A and B staff.

### Table 2: Vaccine preventable diseases and recommended proof of immunity

<table>
<thead>
<tr>
<th>Disease</th>
<th>Minimum acceptable evidence of immunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pertussis</td>
<td>One documented dose of adult diphtheria, tetanus and pertussis (dTpa) vaccine in the last 10 years</td>
</tr>
<tr>
<td><strong>Hepatitis B</strong></td>
<td>Documented evidence of a completed, age appropriate course of hepatitis B vaccine, including documented evidence of post-vaccination hepatitis B surface antibody (anti-HBs) (&gt; or = to 10mIU/mL) on serology; or Presence of anti-HBs For those who have completed a course of hepatitis B vaccine but have no documented evidence of conversion or demonstrated levels &lt;10 mIU/mL of anti-HBs should be followed up in accordance with the recommendations in the Handbook</td>
</tr>
<tr>
<td>Influenza</td>
<td>Documented evidence of influenza vaccination during the current flu season</td>
</tr>
<tr>
<td>Measles, Mumps, Rubella</td>
<td>Documented evidence of 2 measles, mumps and rubella vaccinations at least 1 month apart; or Born before 1966 (measles only); or Presence of measles, mumps and rubella antibody (IgG) on serology.</td>
</tr>
<tr>
<td>Varicella</td>
<td>Documented evidence of 2 varicella vaccinations at least 1 month apart, or Presence of varicella antibody (IgG) on serology;</td>
</tr>
<tr>
<td><strong>Hepatitis A</strong></td>
<td>Documented evidence of completed age appropriate course of hepatitis A vaccine for HCWs working in remote aboriginal communities in WA, (confirmation of immunity post-vaccination is not required); or Presence of hepatitis antibody (IgG) on serology.</td>
</tr>
</tbody>
</table>

6. CONSENT PROCESS FOR VACCINATION

Employees should be given appropriate information that:

- describes the recommended consent process
- includes benefits of vaccination
- explains screening tests required. If screening tests are conducted, information should include advice to the employee about any proposed action likely to be taken in response to screening results
- explains the necessity to have serology undertaken following specific vaccine courses e.g. hepatitis B
- discusses specific circumstances, or any conditions that precludes vaccination e.g. pregnancy, allergies
- reassures the employee about the health service policy in relation to employee screening result confidentiality.

6.1 Post-vaccination information

Post vaccination information should include information on the course of action an employee should take (on-line reporting of adverse reaction www.wavss.health.wa should they experience an adverse reaction to the vaccine).

6.2 Employee refusal of vaccination

Health care facilities should advise HCWs of the potential consequences if they refuse reasonable requests for immunisation. Such advice and refusal to comply should be documented.

Vaccine refusal, contraindication to vaccination and vaccine non-response may be managed by ensuring appropriate work placements, work adjustments and work restrictions.

Duties may be modified if a HCW has a confirmed infection e.g. a blood–borne virus that may directly affect the risk of transmission of infection during exposure-prone procedures.

This risk is determined at the local facility level in consultation with an expert and the recommended action will depend on the speciality of care provided in that health care facility, in accordance with the Policy for Health Care Workers With a Blood Borne Virus Infection OD 0092/07 or amended version.

6.3 Determining a vaccination history

All category A HCWs (see Table 1) are required to provide evidence of serological immunity or vaccination history. Acceptable evidence of vaccination includes a written record of vaccination signed by the provider. This does not include a statutory declaration. If proof of vaccination is not available, vaccination must be provided or serology tests must be conducted to prove immunity.

TB screening assessment should be in accordance with the Tuberculosis and Health Care Workers OD 0342/11.
6.4 Responsibility of health care worker/student/volunteer/visiting staff

HCWs are responsible for knowing:

- the risks associated with contracting a VPD in the workplace
- the risks of exposing others in their workplace who may be vulnerable (patients/visitors) to such diseases
- where they can review their immunisation status and access immunisation
- their serological status against VPDs (employers should ensure they receive a copy of screening result)
- the importance of completing their vaccination course and knowing the course of action that will be taken with unimmunised staff in the event of VPD occurring in the workplace
- the requirements of this policy, or acknowledge in writing that they do not consent to assessment, screening and vaccination in accordance with this policy. They should engage with their employer to discuss future work options.

7. COLLATING AND ANALYSING DATA

Health service providers are required under this policy to provide HCW vaccination programs that include pre-vaccination screening, vaccination, and maintain a data collection system that records and retains details of HCWs immune status including:

- names and work details of all HCWs (includes community and hospital-based employees)
- prior history of VPD (e.g. screening details, proof of immunity e.g. antibody titre and IgG, test results)
- record of immunisations consented/administered/refused
- vaccine brand, batch number
- the process followed to gain consent if given on site
- post vaccination information given (if given on site), and
- updating the record when relevant events occur
- service site where vaccine given
- adverse events following immunisation.

7.1 Vaccination status of contracted staff

Pre-employment screening principles and immunisation should also apply to work experience students, agency staff who are likely to be involved in providing direct patient care but remain the responsibility of the university or contracting organisation. The Communicable Disease Control Directorate (CDCD) will consult and assist universities and health care agencies in the development of protocols promoting HCW immunisation and maintaining a data-base for HCW immunisation status.

8. PERSONAL RECORD

All HCWs should be provided with a personal record of their screening test result and any vaccination administered to them. Adult immunisation records can be obtained from the central store via the Department of Health on-line ordering system [http://www.dohpackcentre.com.au/doh/](http://www.dohpackcentre.com.au/doh/)
9. ONGOING SCREENING OF EMPLOYEES ENGAGED IN EXPOSURE-PRONE PROCEDURES

For ongoing management and screening of employees engaged in exposure-prone procedures, refer to the policy for health care workers with blood borne virus infections OD 0092/07 http://www.health.wa.gov.au/circularsnew/circular.cfm?circ_id=12335. This document will be revised in 2012 and will supersede OD0092/07.

10. ANNUAL INFLUENZA VACCINATION PROGRAM

HCWs require influenza vaccine on a yearly basis to maintain ongoing protection against the influenza virus. HCWs, if infected, can also spread the highly infectious influenza virus to patients in their care and colleagues. All health services should plan and implement an influenza vaccination campaign across their services in March/April each year to ensure optimum time for all staff to gain/boost their immunity against influenza. Refer to infection prevention and control of influenza-like illness in Western Australian health care facilities OD 0294/10 http://www.health.wa.gov.au/circularsnew/circular.cfm?Circ_ID=12742 and Influenza Vaccination for Pregnant Women OD 0363/12 http://www.health.wa.gov.au/circularsnew/circular.cfm?Circ_ID=12857 and Adult Influenza and Pneumococcal Immunisation Program - 2009 OD 0231/09 http://www.health.wa.gov.au/circularsnew/circular.cfm?Circ_ID=12569.

11. WORK RESTRICTIONS AND MANAGEMENT OF UNPROTECTED/UNSCREENED STAFF

The following actions are recommended for the management of unprotected/unscreened staff:

- a risk assessment is to be undertaken for each HCW who declines immunisation. This should include an assessment (as per risk category in Table 1) of the HCW’s role (work activities) and the area that they work within, and the population cared for in that area.
- all HCWs declining immunisation should be managed in the same way regardless of their reason for declining immunisation.
- a record of the HCW’s immunisation refusal should be recorded in their individual files and in the unit database to enable a “Flag” alert in the event of a VPD being identified.
- flexibility in HCW work arrangements may be required when deciding how to manage non-immune HCWs.
- a review panel of experts may be convened to determine a course of action for the unimmunised HCW if they currently engage in exposure prone-procedures.
- duties may be modified if a HCW has a confirmed infection that may increase the risk of transmission of infection during exposure-prone procedures. This should be done in consultation with an expert physician. Refer to Australian Government National Health and Medical Research Council. Australian Guidelines for the Prevention and Control of Infection in Healthcare, 2010. http://www.nhmrc.gov.au/node/30290
- non-immune staff should be advised to be informed of, and follow the recommendations outlined in the Standard and Additional Infection Control Precautions OD 2039/06.

12. ANALYSIS OF IMMUNISATION PROGRAM

The immunisation/immune status of employees requires ongoing monitoring to identify those employees/HCWs that require further screening and/or booster doses of vaccine. Ongoing monitoring of the program will allow health services to have a clear overview of
their protective status against VPD and enable identification and response to issues that may impact on preventing transmission of VPD in the workplace.

A annual review and report of the immunisation status of employees should be conducted and presented to health service executive each year for their information and to gain support for ongoing funding. In addition, a copy of the annual HCW immunisation review should be forwarded to CDCD preferably in July each year to coincide with the end of the yearly influenza immunisation program.

13. PROMOTIONAL AND ADVERTISING OF THE HCW IMMUNISATION PROGRAM

Immunisation resource material is available through:

- the Commonwealth Government provides a range of promotional immunisation material on their [web site](http://www.immunise.gov.au).
- individual pharmaceutical companies provide a range of immunisation resource material supporting their vaccines.
- WA Department of Health also provides some immunisation resource material to support the national immunisation program vaccines [http://www.public.health.wa.gov.au/](http://www.public.health.wa.gov.au/).

14. ORDERING VACCINES

Procedure for ordering vaccines and reporting a cold chain breach is as follows:

- HCW vaccines need to be ordered by health care service pharmacies directly through pharmaceutical companies.
- purified protein derivative (PPD) and mantoux testing should be ordered direct from the pharmaceutical company (e.g. Sanofi-pasteur); telephone number 1800 829 468.
- for immunisation of patients eligible for vaccines funded under the National Immunisation program, vaccines can now be ordered via the online vaccine ordering system at [http://colors.csldirect.com.au](http://colors.csldirect.com.au). When placing a vaccine order, complete all the requested details including the centre ID number allocated to your organisation. If unsure of this information, contact CDCD vaccines administration officer by telephone (08) 9388 4843.

Public Health Units in Western Australia

<table>
<thead>
<tr>
<th>Public Health Unit</th>
<th>Telephone/Fax No.</th>
<th>Public Health Unit</th>
<th>Telephone/Fax No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Metropolitan (Perth)</td>
<td>Tel: 9380 7700 Fax: 9380 7719</td>
<td>Midwest (Geraldton)</td>
<td>Tel: 9956 1985 Fax: 9956 1991</td>
</tr>
<tr>
<td>South Metropolitan (Perth)</td>
<td>Tel: 9431 0200 Fax: 9431 0223</td>
<td>Kimberley (Broome)</td>
<td>Tel: 9194 1630 Fax: 9194 1631</td>
</tr>
<tr>
<td>Great Southern (Albany)</td>
<td>Tel: 9842 7500 Fax: 9842 2643</td>
<td>Goldfields (Kalgoorlie)</td>
<td>Tel: 9080 8200 Fax: 9080 8201</td>
</tr>
<tr>
<td>Southwest (Bunbury)</td>
<td>Tel: 9781 2350 Fax: 9781 2382</td>
<td>Wheatbelt (Northam)</td>
<td>Tel: 9622 4320 Fax: 9622 4342</td>
</tr>
<tr>
<td>Midwest (Carnarvon)</td>
<td>Tel: 9941 0515 Fax: 9941 0520</td>
<td>Pilbara (Port Hedland)</td>
<td>Tel: 9158 9222 Fax: 9158 9253</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public Health Unit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hedland Health Campus</td>
<td>Tel: 9174 1000</td>
</tr>
</tbody>
</table>
15. **Acknowledgements:**

WA Department of Health would like to thank all the WA, HS staff who contributed to this document, and the NSW, QLD and South Australia Department of Health staff for sharing their immunisation policy material with WA DoH.

16. **References:**

