

Ideally, HCWs should be screened at pre-employment to determine vaccines required and immunisation offered. If not before employment, this should be within the first few weeks of employment. The exception to this is the Influenza vaccine, which is offered annually between the months of March and May.

Some HCWs, such as microbiology laboratory workers, have a higher risk of exposure to certain VPD micro-organisms than other HCWs, and they should be vaccinated accordingly (Refer NHMRC Immunisation Guidelines 8th Edition 2004, Pages 99-104).

VACCINATION PROGRAMS

HSPs are responsible for and should provide HCWs with screening, testing, and maintaining a vaccination service at pre-employment and to existing staff. This includes establishing and maintaining a database for recording the following:

- prior history of VPD;
- prior vaccination records;
- vaccinations, antibody and test results, e.g. Mantoux test;
- proof of immunity;
- vaccine brand name, batch number and date given; and
- record of vaccines consented or refused.

Maintaining Database Confidentiality

HSPs must ensure database information is secure and accessible by authorised personnel when needed, 24 hours a day, 7 days a week.

Administration of vaccines

A nominated doctor within the Health Service must be responsible for overseeing staff immunisation programs as per the *Poison's Act 1964* and Regulations 1965.

HCWs should be given appropriate information, and pre and post test counselling, to enable them to make informed decisions about screening and vaccination. Information should include advising the HCW about the recommended proposed action taken in response to screening results, reporting adverse events, and the need to be tested for seroconversion after receiving hepatitis B vaccination.

HSPs should ensure that medical locum, external staffing agencies and universities are requested to check the immunisation status of the staff/students they engage to work in the various health settings, in line with NHMRC HCW immunisation recommendations.

HSPs should also be aware of their Duty of Care to those HCWs, who remain non-immune through failure to seroconvert, have medical contraindications to vaccines or conscientiously object.

HSPs should provide HCWs with copies of their immunisation screening and vaccination record on termination of their employment.

Administration of BCG vaccine or Mantoux testing should only be undertaken by a doctor or nurse with appropriate training and experience.

Funding and Ordering HCWs Vaccines

It is the responsibility of the HSP to fund HCWs vaccines in accordance with the NHMRC Immunisation Guidelines (8th Edition 2004, Pages 99-104) regarding recommended risk category, with the exception of:

- Purified Protein Derivative (PPD) for Mantoux testing and Bacille Calmette-Guerin (BCG) vaccine, which are funded by the Commonwealth Department of Health and Ageing (DOHA) through the Western Australian Department of Health, Communicable Diseases Control Directorate for HCWs.

Ordering of Vaccines

Vaccines should be ordered direct from the pharmaceutical company, with the exception of PPD and Mantoux testing, which is ordered through CSL (**telephone (08) 9328 7322**).

Personal Record

All HCWs should be provided with a personal record of their screening test result and vaccination given. Adult Immunisation Record Cards can be obtained from the hospital or by phoning the **Department of Health Information Line on 1300 135 030**.

Proof of Vaccination

A sighted vaccination record is proof of vaccination. Alternatively, staff should have sighted HCWs test results to ascertain their immune status.

Informed Consent

Consent must be obtained and recorded for each HCWs screening test or vaccination. Verbal consent is sufficient. If a recommended screening test or vaccination is refused by a HCW, then this refusal must be recorded on the HCWs record and employer's vaccination database.

Risk Categorisation

The following categorisation of risk is offered as a guide to determining the risk status of HCWs.

Category A — Direct contact with blood or body substances

This category includes all persons who have physical contact with or potential exposure to blood or body substances. Examples include dentists, medical practitioners, nurses, allied health practitioners, health care students, health care assistants, emergency personal (fire, ambulance and volunteer first aid workers), maintenance engineers who service health equipment, mortuary technicians, central sterile supply staff, and cleaning staff responsible for decontamination and disposal of contaminated materials.

Category B — Indirect contact with blood or body substances

This category includes workers in patient areas who rarely have direct contact with blood or body substances. These employees may be exposed to infections spread by droplets, such as measles, rubella and influenza, but are unlikely to be at risk from blood-borne diseases. Examples include catering staff and ward clerks.

Category C — Laboratory staff

Laboratories pose special risks because of the equipment used (centrifuges), and the possibility of exposure to high concentrations of micro-organisms generated by culture procedures. An additional risk to laboratory staff occurs in the handling of human blood and tissues.

Category D — Minimal patient contact

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

RECOMMENDED VACCINATIONS

Pertussis (Whooping Cough)

Who is eligible?

- HCWs who work with young infants (e.g. maternity, nursery staff) and paediatric patients on a routine basis.
- HCWs directly involved in patient care, embalming or the handling of human tissue.
- Recent diphtheria or tetanus vaccination is not a contraindication to DTPA vaccination.

Documentation

Record 1 dose of acellular pertussis vaccine using DTPA, vaccine registered for adults over 10 years who have completed their primary course of diphtheria tetanus vaccine.

Measles—Mumps—Rubella

Who is eligible?

- MMR vaccine should be offered and given to all HCWs born after 1966 with patient contact.
- HCWs, without proof of serological immunity or vaccination, should be offered two doses of MMR vaccine at a minimum monthly interval.
- Persons born prior to 1966 are considered immune to measles, but should not be refused measles-mumps-rubella (MMR) vaccination, if requested.
- In general, pregnant or immunosuppressed HCWs should not be vaccinated with live vaccines, including MMR.
- If unsure of immunity or immunisation status, offer immunisation.

Documentation

- Record serological immunity or at least two doses of MMR vaccine given after the age of 12 months. Doses should be given at least one month apart. HCWs who did not complete primary MMR courses should be given their second dose in line with NHMRC recommendations.

Varicella (chickenpox)

Who is eligible?

- HCWs working in paediatric and maternity wards.
- Offer serological screening to HCWs who have no definitive history of chickenpox or shingles. About 50% of this group will be non-immune or have no evidence of vaccination. If non-immune, offer two doses of varicella vaccine a minimum of one month apart.

Documentation

- Document results of testing.

Vaccine Side effects

- A small percentage of healthy vaccinees (< 5%) will develop a rash after the vaccine. These vaccinees should be excluded from contact with high-risk patients (e.g. neonates and immunosuppressed patients), until all the rash vesicles have crusted.
- In general, pregnant or immunosuppressed HCWs should not be vaccinated with live vaccines, including varicella.

Documentation

- Record history of clinical chickenpox or shingles, or two doses of varicella vaccine given a minimum of one month apart. A history of chickenpox or shingles is highly predictive (> 90%) of immunity to varicella.

Hepatitis B

Who is eligible?

- All HCWs who provide direct patient care.
- Offer a course of 3 doses of vaccine, with an interval of 1-2 months between the first and second dose, and a third dose 2-5 months after the second dose to all HCWs; emphasise that it is essential for all staff in categories A and C.
- Offer serological testing four weeks after the third dose of vaccine. If a protective anti-HBs antibody level (i.e. ≥ 10 mIU/mL) is not reached following the third dose of vaccine, HBsAg carriage should be investigated.
- HCWs who do not have adequate anti-HBs antibody levels after three doses of vaccine should be offered further doses of vaccine. These can be given as either a fourth double dose or a further 3 doses at monthly intervals, with further testing 4 weeks later. Persistent non-responders should be informed about the need for hepatitis B immunoglobulin (HBIG) within 72 hours of parenteral exposure to hepatitis B.
- Booster doses of hepatitis B vaccine are no longer recommended for those persons who have an adequate antibody response after the primary course as there is good evidence that a primary course provides long lasting protection.

Documentation

- Record immunity or non-serological conversion to hepatitis B.

Hepatitis A

Who is eligible?

- Medical and nursing staff and other health care workers who work in paediatric wards, intensive care units and emergency departments that provide for substantial populations of Aboriginal and Torres Strait Islander children, and nursing and medical staff on rural and remote Indigenous communities.

Documentation

- Record 2 doses, with the second dose given a minimum of 6 months after the 1st dose.

Influenza

Who is eligible?

- Influenza vaccine should be offered to all HCWs in direct care of patients before winter each year.

Documentation

- Record one dose given in March – May each year.

Tuberculosis

- BCG vaccination is not recommended for HCWs in Western Australia. However; HCWs should be screened for tuberculosis according to Operational Circular 1828/04, Tuberculosis and Health Care Workers, <http://intranet.health.wa.gov.au/circular/op/op182804.pdf>.

Laboratory personnel

- Laboratory personnel who frequently handle specific infectious agents on a routine basis should be immunised as appropriate (e.g. hepatitis A, *N. Meningitidis*, Typhoid, Q fever, Australian bat lyssavirus (ABL) or rabies, Yellow fever, Japanese encephalitis, Anthrax, Plague).

HCW Exposure to VPD in the workplace

- HCWs, who in the course of their work, become exposed to a suspected or confirmed VPD, should reassess their immune status with their infection control nurse to determine if vaccination is required.

REFERENCES

1. Infection Control Guidelines for the Prevention of Transmission of Infectious Diseases in the Health Care Setting. Communicable Diseases Network Australia. Australian Government Publishing Services 1996, <http://www.health.gov.au/internet/wcms/publishing.nsf/>.
2. Infection Control Guidelines for the Prevention of Transmission of Infectious Diseases in the Health Care Setting. Communicable Diseases Network Australia. Australian Government Publishing Services 2004, <http://www.health.gov.au/internet/wcms/publishing.nsf/>.
3. The Australian Immunisation Handbook 8th Edition, National Health and Medical Research Council. Australian Government Publishing Services 2003, <http://immunise.health.gov.au/handbook.htm>.

NOTE: The NHMRC Australian Immunisation Handbook 9th Edition is in draft and available. Once this document is endorsed, information in the new edition will precede the 8th edition.

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