MONASH University
Medicine, Nursing and Health Sciences

Immunisation and Infection Risk Management Plan

A copy of documented evidence of each student's vaccine history along with serology (blood test) results are required to determine the infection risk, immunisation requirements and management plan in accordance with the Victorian *Immunisation for Health Care Workers* standards.

1. Diphtheria, Tetanus, and Pertussis (Whooping Cough)

Following a primary course of vaccination as a child a documented booster, between 12 and 17 years of age, using the adolescent/adult formulation dTpa, is essential for maintaining immunity to pertussis through the adolescent period and into early adulthood. By the age of 17 years, young adults should have received 5 doses of a pertussis-containing vaccine

In Australia, Diptheria, Tetanus and Pertussis would normally have been given as part of the triple antigen course in early childhood and then boosted with Diphtheria and Tetanus (prior to 2004) or as combined Diphtheria Tetanus and Pertussis (Boostrix) around secondary school years 9 or 10 (ie approx 15 years of age) since 2004.

As some students are part of the "phasing in" of this program it will assist vaccination planning if students are able to define which vaccination was administered in secondary school.

- If you received both the early childhood immunisation and the adolescent booster, of Diphtheria, Tetanus and Pertussis, (Boostrix / Adacel) no further boosting is required now.
- If you received your childhood course (triple antigen) but failed to have a booster in secondary school, the booster should be given at this stage.
- If you did not receive the early childhood course, it is very important that you have a primary immunisation course of 3 injections, at not less than two-month intervals.

If there is sufficient doubt as to the timing of pertussis, tetanus and/or diphtheria boosters, this should be discussed with the medical practitioner during your consultation.

2. Polio

Health Care Workers (HCW's) and Health Science students are recommended to have a booster of Polio Vaccination at 10 yearly intervals. A primary course of immunisation is recommended if not done in early childhood. Immunisation status should be reviewed and vaccination recommended for students returning to or doing elective periods in countries where polio is endemic.

3. Measles, Mumps and Rubella

i) Measles and Mumps

A combined measles and mumps vaccine had been part of the childhood immunisation schedule in Australia until the Measles Mumps Rubella (MMR) vaccine replaced it in 1989. It remains a very important vaccine as outbreaks of these infections continue to occur in this country. Adult infections with either may be associated with serious complications.

If you have not had this vaccine in infancy or since, the importance of having it now must be emphasised. A minimum of two documented doses, a minimum of one month apart, is required – blood tests are unreliable in determining protective levels.

ii) Rubella

All Australian females would have had access to this vaccine in year 6 or 7 of their schooling until replaced by MMR in 1989. It is currently recommended that males be immunised as well, and this should be carried out using MMR vaccine. A minimum of two documented doses, a minimum of one month apart, is required – blood tests are unhelpful

If past infection or vaccination has occurred without being documented or without your knowledge, vaccination now will not be harmful.

4. Tuberculosis

Contact with active, open tuberculosis (TB) is quite likely to occur during the course of current training. Many changes are occurring in the epidemiology and biology of this disease locally, nationally and internationally, and appropriate screening prevention and management strategies for Health Science students and other health care workers have been widely discussed. Information may be obtained at: http://www.health.vic.gov.au/ideas/diseases/tb_mgmt_guide.htm

In 2002, the Victorian Department of Human Services (DHS) published updated guidelines for the management, control and prevention of tuberculosis. This includes a section outlining current recommendations in relation to screening and immunisation of all health care workers, including students in relevant disciplines. These guidelines were developed by a widely representative panel of experts and the faculty will follow these in relation to all students. The aims of the strategies being implemented are to:

(i) address the faculty's obligation to minimise the risk of TB to all students;

(ii) identify any students who may be infected with TB and initiate appropriate care.

The faculty recommendations are based on current guidelines provided by DHS *Management, prevention and control of tuberculosis: Guidelines for health care providers 2002-2005* as they pertain to all health care workers. To best comprehend these guidelines, students need to understand the nature of the Quantiferon Gold Assay (tuberculosis specific blood test) Mantoux test (Tuberculosis Skin Test) and tuberculosis (BCG) vaccination:

(i) The Quantiferon Gold Assay is a blood test it can be used to detect latent TB infection in patients who have been vaccinated with BCG or have a positive Mantoux test. It can also be used when a Mantoux test is contraindicated

(ii) the Mantoux test is a simple skin test used to establish the existence or otherwise of immunity to TB. This is equivalent to serological blood tests used, for instance, to determine immunity to specific viral infections;

(iii) BCG is an actual vaccination which is administered to the skin of the upper arm and leaves a small round scar thereon. Some students will have had this vaccination in their earlier years, but others may not.

A Mantoux test will be offered by way of a screening test to all students who have not received a BCG vaccination*.* The purpose of this is to:

(i) promptly identify students who may be infected with TB;

(ii) prevent those infected with TB from progressing to TB disease;

(iii) establish a baseline for reference if further Mantoux testing is required (eg. following exposure to a patient with TB);

(iv) provide an information base which may be used to determine the TB immunity and infection status of Health Science students at the time of entry into the faculty.

A Quantiferon Gold Assay specific for previous TB exposure will be offered as a screening test for all students who have been vaccinated with BCG (most International students)

Using the guidelines, some students with positive Quantiferon Gold or Mantoux tests will be referred for further investigation and management. Those with negative tests will **not** be offered BCG immunisation at this time. (This policy is in accordance with DHS guidelines.)

Following exposure to active TB at any time during training, appropriate advice regarding any necessary further steps, particularly in relation to repeat testing, should be sought either from an appropriate consultant in the environment where this occurs or an appropriate senior faculty staff member.

Students may review the DHS guidelines at the following address:

http://www.health.vic.gov.au/ideas/diseases/tb_mgmt_guide.htm

5. Chicken Pox (Varicella), shingles (Varicella-zoster)

Although a history of Chickenpox is strongly predictive of prior infection, serological screening (a blood test), confirming protective antibodies is required of all Health Science students.

All non-immune Health Science students should be vaccinated with Varicella vaccine. Two doses of vaccine at least one month apart are required for adults. Prior to vaccination, it is important to avoid, if possible, contact with patients (or others) with chicken pox or shingles. This is to protect individual students as well as patients. In adults in particular, this infection may be severe and any individual whose immune system is at all compromised is at significant risk from the illness. As there are many such patients in our hospitals, all health care workers must be aware that they are at risk of transmitting the disease to them. This may occur at any time after the worker has had contact with the virus, through to the time when all skin sores have dried up. However, this is unlikely to occur if you have had immunisation or past infection with the virus.

A small percentage of people vaccinated (<5 per cent) will develop a rash after the vaccine. These people, and only these, should be reassigned to duties that require no patient contact or placed on sick leave for the duration of the rash.

6. Hepatitis A

Occupational exposure to Hepatitis A can ocurr. The risk of acquiring Hepatitis A is higher when working with patients from Indigenous Communities, as well as working in Paediatric Wards, Emergency and Intensive Care units or attending patients in Rural and Remote Indigenous Communities

It is recommended that all non immune Health Science students should be vaccinated with Hepatitis A Vaccine. This is a course of 2 vaccinations spaced 6 to 12 months apart to provide long term immunity to Hepatitis A disease.

7. Hepatitis B

Immunisation against Hepatitis B is an important aim for all health care workers in the community. School based vaccination has been part of the Australian Vaccination Schedule since 1998

An initial primary course of three vaccinations is required for children and adults and a two dose regime for adolescents aged between 11 and 15 years.

Testing prior to vaccination is appropriate if you have documented evidence of completing a previous course of vaccinations. If recently completed then the response to this vaccination course should be checked 4 – 6 weeks after the final dose. **Evidence of seroconversion (presence of adequate antibodies) must be provided.** If no antibody can be demonstrated, immunity has not developed and a further dose will be required in accordance with the Australian Immunisation Handbook current guidelines..

Students who are found to be carriers of the Hepatitis B virus will be counselled by the medical practitioner and may be referred to appropriate specialist care. It is important at this time to address the implications of this infection, not only for your own health, but for patients with whom you will have contact during the course and beyond and for your long term clinical practice, in the public hospital system or elsewhere.

8. Hepatitis C

Hepatitis C is another virus contracted and transmitted through blood and/or body substances (BAB) contact. You will be tested for this virus and counselling offered in the same manner as for Hepatitis B. If appropriate you may be referred to specialist care.

9. Human Immunodeficiency Virus (HIV/AIDS)

HIV infection carries health risks and implications, shared in part with Hepatitis B and C infections. Issues relating to this infection will be discussed in your course prior to attending clinical placements and at your initial consultation with the medical practitioner. For MBBS students, testing and further counselling is provided. Further referral will be offered if appropriate. See Medical Practitioners Board of Victoria policy http://medicalboardvic.org.au/pdf/InfectDisease03.pdf

10. Haemophilus Influenzae

In recent years vaccination against Haemophilus type B infection has been offered as a routine childhood vaccination in Australia. However, although you will not have been previously vaccinated, this is not appropriate in adults and will therefore not be offered to you.

11. Influenza

Influenza vaccination is highly recommended for all Health Science students each year. Some placement providers will not accept students without documented evidence of current seasonal vaccination.

12. Meningococcus

The risk of acquiring meningococcal infection in the Australian health care setting is considered low. In recent years vaccination against Meningitis C infection has been offered as a routine vaccination in Australia.

Serogroup C Meningococci have also been associated with small clusters of meningococcal cases in schools, universities and nightclubs in Australia over the past 10 years (P 214 Australian Immunisation Handbook 9th Edition). Those living in communal settings are at increased risk.

There are other types of Meningococcal Vaccination that may be recommended for specific electives during the course that involve high risk areas. This may include some Australian and overseas locations. Students may choose to be vaccinated.

13. Pneumococcus

Pneumococcal vaccination will not be routinely recommended for students unless they are identified as a person with an underlying medical reason which requires vaccination.

Faculty of Medicine, Nursing and Health Sciences
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References

Immunisation for Health Care Workers (Victorian Dept of Human Services):
http://www.health.vic.gov.au/__data/assets/pdf_file/0004/88042/Revised_October2007_HCW_Immunisation.pdf

National Immunisation Program Schedule:
http://immunise.health.gov.au/internet/immunise/publishing.nsf/Content/nips2

The Australian Immunisation Handbook 9th Edition
http://www.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook-home