INFORMATION FOR HEALTH CARE STUDENTS
RE: VACCINATIONS AND INFECTIOUS DISEASES

Adults as well as children need protection against infectious diseases. As Health Care Workers (HCW), we have a dual responsibility, to our patients and to ourselves, to ensure that we are fit and healthy to carry out our duties and that we do not infect others if we are incubating a preventable disease.

All HCWs should be vaccinated against the following diseases:

- Measles
- Mumps
- Rubella
- Diptheria
- Tetanus
- Polio
- Pertussis (Whopping Cough)
- Influenza
- Hepatitis A
- Hepatitis B (Proof of successful vaccination is required by the School. Screening for Hepatitis B prior to vaccination is encouraged, for the student’s information and protection.)
- Chicken Pox (Varicella)

Proof of the above immunisations will be required.

Other vaccines which may be indicated in specific circumstances include meningococcal vaccine and typhoid vaccine.

The availability of immunisations against common diseases and the prevalence of these diseases in our community is regularly reviewed by the School. Changes to the immunisation policy and requirements of the School may change from time to time as a result.

Blood Borne Infections

All HCWs have an ethical and legal duty to their patients to ensure that they do not place their patients at risk of infection.

Hepatitis B, human immunodeficiency virus (HIV) and Hepatitis C are blood borne viruses and all have been documented to have spread from HCWs to patients. HCWs are vulnerable to infection with HIV and Hepatitis C, for which no vaccines exist.

HCWs should check their immune and infectious disease status for these blood borne viruses if they are at
risk of infection as a result of their lifestyle or past exposure within the family, if they suffer a needlestick, contaminated sharps injury or splash of blood or body fluids on to mucous membranes (eg eye, mouth, nose) and before they perform exposure-prone procedures*. In the event of a significant exposure to infected blood or body fluid, it is important for the HCW to seek urgent advice as medication to reduce the risk of acquiring HIV infection must be considered and commenced quickly, ideally within 1-2 hours of the exposure. In the case of exposure to blood or body fluids containing the Hepatitis B virus, treatment within 48 hours of the exposure may be indicated.

Students infected with blood borne infections must take professional advice regarding the health and career implications of their condition. Students are encouraged to attend the University Health Services (UHS) which provides confidential advice to students during routine office hours (telephone: 3365 6212). Students should seek immediate advice from the UHS or the relevant hospital or School personnel (consult local protocol) in the event of a needlestick injury.

Appropriate vaccination and knowledge of your immune status will ensure that you are protected and your patients are not at risk.

Signature:  

Professor Louise Hickson  
Head  
School of Health and Rehabilitation Sciences  

Date: 12.2.10

* Invasive procedures include surgical entry into tissues, body cavities or organs, or repair of traumatic injury. ‘Exposure-prone procedure’ is considered to be a subset of ‘invasive procedure’. It is a term which usually is characterised by the potential for direct contact between the skin (usually finger or thumb) of the HCW and sharp surgical instruments, needles, or sharp tissues (spicules of bone or teeth) in body cavities or in poorly visualised or confined body sites (including the mouth).

In the broader sense, an exposure-prone procedure is considered to be any situation where there is a potentially high risk of transmission of blood borne disease from HCW to patient, or vice-versa, during medical or dental procedures.

University of Queensland policies (current as at May 2006):  www.uq.edu.au/hupp

2.30.10 First Aid Safety Guidelines
2.30.15 Immunisation
2.50.1 Working with Blood and Body Fluids
2.50.2 HIV policy and guidelines
DIPHTHERIA
Diphtheria is an acute bacterial infection. Primarily it affects the throat and upper airways, where the inflammation it causes produces a grey membrane that can obstruct breathing. The toxin produced by the diphtheria bacillus can damage the brain, nerves and heart muscle.

Immunisation would normally have been given as part of the triple antigen in early childhood and then as combined Diphtheria and Tetanus (ADT) around year 9 or 10. If triple antigen was never given, it is very important that you have a primary immunisation course of 3 injections, at not less than 2 month intervals. If you had your childhood course (triple antigen) but missed out on a booster in secondary school, this booster should be given now.

So long as you have had your primary immunisation and the follow up two boosters no further immunisation is required.

Requirement: Confirmation that a complete vaccination schedule has been followed

TETANUS
Tetanus occurs when the tetanus bacillus grows in a contaminated wound and produces a toxin that causes severe, painful muscle spasms, which can be fatal. It can affect people of any age.

Immunisation would normally have been given as part of the triple antigen in early childhood and then as combined Diphtheria & Tetanus (ADT) around year 9 or 10. If triple antigen was never given, it is very important that you have a primary immunisation course of 3 injections, at not less than 2 month intervals. If you had your childhood course (triple antigen) but missed out on a booster in secondary school, this booster should be given now.

Routine booster doses are no longer recommended. Studies have shown that immunity is long lasting after a complete vaccination schedule has been followed. A Tetanus booster is recommended at 50 years unless a booster vaccination has been given within 10 years. You are however, strongly advised to seek medical guidance after sustaining a dirty wound, as a Tetanus booster may be necessary.

Requirement: Confirmation that a complete vaccination schedule has been followed

POLIOMYELITIS
Poliomyelitis is caused by a virus which invades the body through the bowel. Symptoms range from a mild headache to meningitis and paralysis. In the last 40 years, polio has almost been eliminated in Australia.

The initial program for this vaccine is similar to that for Diphtheria and Tetanus. Again, if you have never had this vaccine, a primary immunisation course should be undertaken using 3 doses of the oral vaccine (Sabin) at 8 week intervals.

If you had your childhood course which is generally administered with the triple antigen, but missed on a booster in secondary school, or if you are uncertain of when your last booster was given, this booster should be given now.

If there is sufficient doubt as to the timing of a booster you should have one now.

Requirement: Confirmation that a complete vaccination schedule has been followed

MEASLES
Measles is an acute viral disease which is highly infectious from the onset of first symptoms until four days after the rash appears. One in 15 children with measles suffers some sort of complication (commonly middle ear inflammation or pneumonia) and one in 50 needs admission to hospital. Although measles is much less common since immunisation became available, it still causes more deaths than diphtheria, tetanus, whooping cough and polio combined.

A combined measles and mumps vaccine had been part of the childhood immunisation schedule in Australia until replaced a few years ago by the MMR (Measles, Mumps, Rubella) vaccine. This remains a very important vaccine as outbreaks of these infections continue to occur in this country. Adult infections with measles may be associated with serious complications.
If you have not been immunised against measles in infancy and at 10-16 years of age, or since, we emphasise the importance of having it now. A past history of measles provides unreliable immunity. All students who have not had previous vaccination against measles are required to have a single dose of MMR now.

**Requirement: Vaccination as above**

**MUMPS**

Mumps, a viral infection, mainly affects children aged five to nine, though about 15% of cases occur in adolescents or adults. Up to 15% of all mumps cases develop mild meningitis but permanent effects on the nervous system are rare. One-fifth of males who catch mumps after puberty will develop inflammation of the testis, but sterility is rare. Deafness is another rare but serious complication.

As with measles immunisation the combined measles and mumps vaccine has been replaced by the MMR (Measles, Mumps, Rubella) vaccine. Previous infection with mumps is not a contraindication to vaccination now. If you have not been immunised against mumps in infancy and at 10-16 years of age, or since, we require that a vaccination against mumps by a single dose of MMR be done now.

**Requirement: Vaccination as above**

**RUBELLA**

Rubella, also known as German Measles, is a viral illness causing mild symptoms that are often so fleeting that the infection is not recognised. Complications affecting the nervous system and blood occur rarely. The main worry with rubella is that if a mother is infected during the first half of pregnancy, the virus can cause serious defects in the foetus. Vaccination of schoolgirls commenced in Australia in 1971 and this has markedly reduced the number of babies born with defects due to rubella. All females should have had access to this vaccine in grade 6 or 7 of their schooling.

It is currently recommended that males be immunised as well and that this should be carried out using the MMR (Measles, Mumps, Rubella) vaccine.

A past history of rubella is very unreliable. Students, both male and female, are therefore required to have the vaccine now, if they have not been previously vaccinated. If past infection has occurred, with or without your knowledge, vaccination now will not be harmful.

**Requirement: Vaccination as above**

**INFLUENZA**

Influenza or 'flu' is caused by the highly infectious influenza virus. Influenza can cause fever, runny nose, sneezing, sore throat and general feelings of weakness. It is not the same as the 'common cold' and can last up to ten days. If a person's natural healing system is suppressed, they may develop complications such as pneumonia which will require antibiotic treatment and possibly hospitalisation. Influenza spreads easily. Just being around someone who is coughing or sneezing is enough to contract the virus. Peak season for flu is winter and a flu outbreak occurs most years.

Vaccinations are required every year as immunity only lasts 12 months. The best time to be vaccinated is in autumn. As winter is peak flu season, a vaccination in autumn (March to May) will give you the two weeks needed to develop an immunity and provide maximum protection at four - six weeks after immunisation."

**Requirement: Vaccination as above**

**HEPATITIS A**

Hepatitis literally means inflammation of the liver. Hepatitis A, often called infectious hepatitis, is caused by a virus. It can be passed on via contaminated water, food, eating utensils, close bodily contact with persons incubating the virus or oral/anal sex. The incubation ranges from two to seven weeks. The majority of cases last from one to three weeks with complete recovery and no long term liver damage. People remain infectious for around three to four weeks.

A long term (10 year) immunisation against Hepatitis A is now available. This is a killed viral vaccine. Previously gamma globulin was used to provide passive protection for those temporarily at increased risk of contact with Hepatitis A.

The primary vaccination course consists of an initial dose followed by a booster one year later. The development of protective antibodies is seen in the vast majority of persons after the first dose. The booster produces much higher levels of antibodies that persist for up to 10 years. Now that a vaccine is available, it is recommended for health care professionals, particularly
those involved in direct physical care of patients, especially young children or the mentally handicapped. Since students are at risk of contact with infected persons during some fieldwork placements, the School of Health and Rehabilitation Sciences requires all students be immunised.

**Requirement: Vaccination as above**

**HEPATITIS B**

Hepatitis B, also an inflammation of the liver, is transmitted via contact with infected blood, sharing needles or sexual contact with infected people. It is possible for a baby to contact Hepatitis B from its mother at birth.

Full immunisation has been available for this particular form of hepatitis for a number of years. Three vaccinations are required, at intervals of 0, 1 and 6 months. You may wish to check your Hepatitis B antigen and/or antibody status prior to immunisation, but no harm will occur if you are immunised whilst either of these is positive. It would only result in unnecessary immunisation taking place.

Those who recover completely from an attack of Hepatitis B still have a 5-10% chance of remaining a carrier and capable of infecting others. This has serious implications for those intending to be a health care worker. A student who is a carrier of Hepatitis B antigens should seek counsel from the respective Head of Division before commencing studies or as soon as the condition is discovered. Please note that it is not the policy of the Faculty of Health Sciences to exclude students on the basis of infectious conditions. A high level of protection persists in people who have developed an antibody response due to the immune system’s “memory”.

Routine booster doses of Hepatitis B vaccine are no longer recommended for the vast majority of people including those who are potentially exposed through their work. Staff or students potentially exposed to Hepatitis B at work are strongly advised to have a blood test approximately three months after the completion of the three-dose vaccination course. This is to ensure that protective antibodies have been produced in response to the vaccination. Further doses of vaccine may be necessary to produce the desired immune response in a small percentage of persons who have not produced antibodies. Some people with impaired immune function or serious chronic disease may require booster doses.

All students who have been previously vaccinated are requested to provide evidence of anti-HBs antibody level >10IU/ml following vaccination.

**Requirement: Vaccination as above plus post-vaccination pathology report as proof of immunity**

**CHICKENPOX**

Chicken pox is caused by the virus *Herpes varicella*. The first symptoms are one or two days of headache, malaise and fever. Shortly after, tell-tale raised patches appear which are soon capped with small fluid-filled blisters. Fever and tiredness usually last for four or five days. The chicken pox is infectious until all the blisters are covered with dry crusts and no new blisters form. While chicken pox in children is a relatively benign disease, it can put people at risk of developing shingles later in life.

Chicken pox is highly infectious to persons with no immunity to this virus. “Varilrix” (a live attenuated varicella) vaccine is now licensed and available in Australia.

If you have had chicken pox, you should have developed an immunity and there is little risk of re-infection. If you have never had chicken pox or are unsure, you can have a blood test to determine your previous exposure to chicken pox (varicella) VZIgG. If you have no immunity then you are required to be immunised accordingly.

**Requirement: Vaccination or post-vaccination pathology report as proof of immunity**

**PERTUSSIS**

Pertussis (Whooping cough) is caused by highly contagious bacteria that are spread by respiratory droplets. The characteristic symptoms are severe coughing spasms followed by gagging or vomiting. Sometimes the person may gasp for air causing a ‘whooping’ cough. The cough may last for months. Epidemics of whooping cough occur in Australia every three to four years. Adults and adolescents are at particular risk of contracting whooping cough and can pass the disease on to babies too young to be immunised.

The whooping cough (pertussis) vaccine is combined together with diphtheria, tetanus and inactivated poliomyelitis vaccine (DTPa-IPV) and is provided free for:

- all babies at 2, 4 and 6 months of age; and
- a booster at 4 years of age.
The protection provided by childhood vaccination gradually reduces over time, leaving adolescents and adults potentially at risk of catching the disease. An adult-adolescent whooping cough vaccine, combined with diphtheria and tetanus vaccine (dTpa), is now available.

If you did not have a single booster dose of dTpa in yr 10 at School as part of a school based vaccination program you should do so now.

**TUBERCULOSIS**

Qld health requires all students to undergo the Mantoux test. The Mantoux test is *not* a vaccine. It is a simple skin test used to establish whether you have any of your own immunity to tuberculosis.

As of 2009, Qld Health are providing an on-campus screening service in the Therapies Building. Appointments will be arranged early in Semester 1.

The University of Queensland Health Service does not carry out Mantoux testing. Expert advice is also available from the Queensland Department of Health. Telephone 3896 3955.

**Requirement: All students to have the Mantoux test to establish immunity.**

**WHERE YOU CAN RECEIVE YOUR IMMUNISATIONS**

You may visit your usual medical practitioner, a medical practitioner near where you live or the University Health Service.

**The University of Queensland Health Service**

The University Health Service is located in the Gordon Greenwood Building, Union Road, St Lucia. Immunisations must be ordered by a doctor so you must first make an appointment with one of the Health Service Medical Officers. Appointments can be made by telephoning 3365 6210 or visiting the Health Service. The hours that the Health Service are available for immunisation purposes are 8.30 am to 12.00 and 1.30 pm - 4.30 pm (general office hours in the teaching period are 8 am - 5 pm).

**Cost**

The University Health Service bulk-bills Medicare so there is no cost to students for a visit to one of the doctors. The Medicare Card must be brought to the Health Service when seeing a doctor. Once ordered by a doctor, the immunisations are usually given by one of the Health Service nursing staff. One immunisation can usually be given immediately following the visit to the doctor with additional ones scheduled as appropriate.

Persons are responsible for the cost of the vaccine used for immunisations. This must be paid for at the time of immunisation. Payment can be cash or cheque; no credit cards are accepted. Information regarding the cost for these vaccines is available from University Health Service – 3365 6212 – Gordon Greenwood Building (32), Union Road, UQ.