INFECTIOUS DISEASES POLICY,
SCHOOL OF MEDICINE 2016/2017

This policy refers to students participating in the following programmes;

- Medicine (MB BCh BAO)
- BSc Radiography
- BSc Biomedical, Health and Life Sciences Students
Page of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background to the policy</td>
<td>3</td>
</tr>
<tr>
<td>Screening and Vaccination</td>
<td>4</td>
</tr>
<tr>
<td>Blood Borne Viruses</td>
<td>6</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>10</td>
</tr>
<tr>
<td>Students working overseas</td>
<td>12</td>
</tr>
<tr>
<td>Biomedical, Health &amp; Life Science Students Only</td>
<td>15</td>
</tr>
</tbody>
</table>
Background to the policy

Students and practitioners in the health care professions have always faced the possibility of exposure to infectious diseases such as HIV, viral hepatitis and TB. In addition, all those caring for patients have a responsibility to protect them from healthcare-associated infections. While the absolute risks of acquisition of serious infections are small, the increasing efficiency of preventive measures such as post-exposure prophylaxis, preventative and therapeutic vaccination and new therapies for previously chronic infections has highlighted the importance of detection and prevention of serious infections for students participating in patient contact.

This policy, developed by the UCD School of Medicine Infectious Diseases Committee outlines guidelines, requirements and guidance developed by the UCD School of Medicine to protect both students and patients against serious infections including HIV, viral hepatitis, Tuberculosis and other common viral diseases. In addition, the policy provides guidance for students travelling overseas to areas where potentially chronic, common and sometimes serious infections are endemic. All students affiliated with the School of Medicine should study these guidelines and ensure adherence to the requirements outlined in this policy.

Students have a responsibility to protect the interests of the public and to inform the School of Medicine of any form of physical, mental or other ill-health that could seriously affect competence and responsibility to patients.

Compliance with this policy is compulsory and will be an essential requirement of at least one module within relevant degree courses. Students who fail to comply with the requirements for vaccination outlined within this policy will not be able to gain credit for these modules and may be prevented from progressing or completing their degree.

Costs associated with any screening or vaccination will be borne by the student. A list of full costs associated with each relevant procedure is available on the Student Health Service website (http://www.ucd.ie/stuhealth/).

Prior to admission to the UCD School of Medicine, Medicine and Radiography students must satisfy the School that:

- They agree to appropriate screening tests as outlined in this document
- They agree to provide relevant, accurate and comprehensive proof of previous vaccination where necessary and to subsequent vaccination if required
- They agree to the Student Health Service providing details to the UCD School of Medicine on the compliance of individual students with this policy.
- They agree to the UCD School of Medicine providing evidence of compliance with the requirements outlined in this policy to affiliated clinical practice sites when requested.
- They will sign a Student Acknowledgement form regarding compliance and adherence to the School’s policy.

This policy deals with four broad categories; vaccination, blood borne virus infections, tuberculosis and students travelling overseas.
Screening and Vaccination

This section outlines requirements and guidance for students in relation to screening and vaccination of common infections, many of which are covered within national vaccine programmes. Requirements and guidance for screening for blood borne viruses and tuberculosis will be included in the relevant later sections of this policy.

Students must attend the UCD Student health Service for screening blood tests for Hepatitis B, Hepatitis C and varicella zoster (VZV). In addition, based on required documents provided to the Student health Service (as set out within this policy) students may be required to undergo additional screening tests, as outlined within the relevant sections.

Measles, Mumps and Rubella
1. Students must provide evidence of having received two doses of MMR.
2. Students who cannot provide evidence of having received two doses of MMR will be required to receive a booster dose of MMR, either administered through UCD Student Health Service or other recognised centre in Ireland.
3. Where students choose to undergo vaccination through a centre other than UCD Student Health Service, they will be required to present official documentary proof of vaccination.
4. Students without any prior vaccination will be required to receive two doses of MMR, given at least one month apart, unless otherwise contra-indicated.

Varicella Zoster (Chicken pox)
1. Students will be tested for the presence of immunity to Varicella Zoster virus.
2. Non-immune students will need vaccination against VZV through the programme carried out by the UCD Student Health Service or other recognised centre in Ireland. Vaccination via Student Health will incur an additional cost to the initial Healthcare screening fee.

Hepatitis B
Students with previous Hepatitis B vaccines are required to provide all available documentation of vaccinations to the UCD Student Health Service.

1. Students with demonstrated non-immunity to hepatitis B are required to undergo vaccination for hepatitis B through the UCD Student Health Service, including follow-up serology for evidence of immunity.

Students who show evidence of Hepatitis B infectivity may be admitted to the School of Medicine & Medical Science degree programmes but may be restricted from participation in certain exposure-prone activities. Infectivity will be assessed in accordance with the Department of Health and Children’s current guidelines in relation to infectivity in healthcare workers http://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/chapter4.pdf

Influenza
The UCD School of Medicine recommends that all students receive annual seasonal flu vaccination. For students attending clinical sites, vaccination schemes are usually in place for staff and students. Otherwise, advice on where to receive seasonal flu vaccination can be provided from UCD Student Health Service (http://www.ucd.ie/stuhealth/).
Other Vaccinations
The UCD School of Medicine recommends that students be vaccinated against other common vaccine preventable diseases such as pertussis, diptheria, tetanus and hepatitis A. Normally many of these vaccinations will have been included within an individual’s childhood vaccination schedule. Where this is not the case, advice on appropriate screening and where to receive these vaccinations can be provided from UCD Student Health Service (http://www.ucd.ie/stuhealth/).
**Blood Borne Viruses**

This policy addresses requirements for UCD medical students in relation to HIV, hepatitis B and hepatitis C and should be used in conjunction with the policy on vaccination. The School of Medicine aims to provide full support to enable those with blood borne virus infections to complete their medical training in a safe and supportive environment, while maintaining patient safety. This policy offers guidance to help fulfil these aims.

**Human Immunodeficiency Virus (HIV)**

**Background:**
HIV is a chronic viral infection that can be transmitted through exposure to infected body fluids. Exposure risk can be dramatically reduced by effective treatment of the infected individual using antiretroviral therapy. In addition, for those not infected with HIV who experience a significant transmission risk event (such as a needle stick injury), risk of transmission can be further reduced with the use of post-exposure prophylaxis (PEP).

The School of Medicine aims to provide a safe environment for both students and patients and this policy outlines specific guidance on how students can limit the impact of HIV infection while pursuing their studies.

**Pre-requisite:**
- All students are required to know their HIV status
- Students will be required to complete a declaration stating that they are aware of their HIV status prior to engaging in any patient contact
- Students may be required to produce proof of their HIV status

**Screening:**
- Students must know their HIV status prior to engaging in any patient contact
- HIV screening is available through the Student Health Service but students may avail of screening through any clinical service of their choice
- Screening must be performed using a recognized third/fourth generation antibody/antigen test

**Limitations on practice:**
- Any student who knows their HIV status as positive will be required to liaise, in confidence, with the School of Medicine Infectious Diseases specialists (Dr Paddy Mallon paddy.mallon@ucd.ie or Dr Eoin Feeney eoin.feeney@ucd.ie)
- The School of Medicine Infectious Diseases specialists will assist and support students living with HIV to complete their studies in a safe and supportive environment
- Under certain circumstances, students living with HIV may be prevented from participating in procedures where there is a significant risk of HIV transmission. Any students living with HIV infection will be advised of any restrictions on activities by the Infectious Diseases specialists
- Under certain circumstances, this may necessitate discussion between the Infectious Diseases Specialists and the coordinators of particular modules in order to ensure that this policy can be implemented appropriately
Vaccination:
There are currently no effective HIV vaccines available.

Transmission risk events:
- Where a student believes they have been at significant risk for transmission of HIV infection, either through events related directly to their studies or independent to their studies, they should seek medical advice immediately
- Confidential advice on post-exposure prophylaxis (PEP) is available from the School of Medicine Infectious Diseases Specialists (Dr Paddy Mallon paddy.mallon@ucd.ie or Dr Eoin Feeney eoin.feeney@ucd.ie)

Hepatitis C
Background:
Hepatitis C is a chronic viral infection that can be transmitted through exposure to infected fluids. Hepatitis C infection is a treatable disease with high cure rates achievable.

The School of Medicine aims to provide a safe environment for both students and patients and this policy outlines specific guidance on how students can limit the impact of hepatitis C infection while pursuing their studies.

Pre-requisite and Screening:
- All students are required to undergo testing for hepatitis C prior to patient contact

Screening:
1. Screening for hepatitis C is available through the Student Health Service

Limitations on practice
2. Any student who knows their hepatitis C status as positive is required to liaise, in confidence, with the School of Medicine Infectious Diseases specialists (Dr Paddy Mallon paddy.mallon@ucd.ie or Dr Eoin Feeney eoin.feeney@ucd.ie).
3. The School of Medicine Infectious Diseases specialists will assist and support students living with hepatitis C to complete their studies in a safe and supportive environment, including offering advice and assistance on treatment for hepatitis C
4. Under certain circumstances, students living with hepatitis C may be prevented from participating in procedures where there is a significant risk of HIV transmission. Any students living with hepatitis C infection will be advised of any restrictions on activities by the Infectious Diseases specialists
5. Under certain circumstances, this may necessitate discussion between the Infectious Diseases Specialists and the coordinators of particular modules in order to ensure that this policy can be implemented appropriately

Vaccination
- There are currently no effective hepatitis C vaccines available.

Transmission risk events:
• Where a student believes they have been at significant risk for transmission of hepatitis C infection, either through events related directly to their studies or independent to their studies, they should seek medical advice immediately.

• Confidential advice on post-exposure screening and follow-up is available from the School of Medicine Infectious Diseases Specialists (Dr Paddy Mallon paddy.mallon@ucd.ie or Dr Eoin Feehey eoin.feeney@ucd.ie).

**Hepatitis B**

**Background:**
Hepatitis B is a chronic viral infection that can be transmitted through close personal contact and exposure to infected fluids. Hepatitis B infection is a treatable disease with various degrees of infectivity. Infectivity can be reduced using antiviral medications.

The School of Medicine aims to provide a safe environment for both students and patients and this policy outlines specific guidance on how students can limit the impact of hepatitis B infection while pursuing their studies.

**Pre-requisite**
• All students are required to know their hepatitis B status and to provide, where appropriate, evidence of prior vaccination or testing

**Screening and vaccination:**
• Students will be required to fulfill all obligations as outlined in the policy on Screening and Vaccination outlined above, including to undergo screening and, if necessary, vaccination for hepatitis B prior to engaging in any patient contact (see Screening and Vaccination section above)
• Screening and vaccination for hepatitis B is available through the Student Health Service

**Limitations on practice**
• Any student with active hepatitis B infection (sAg status positive) is required to liaise, in confidence, with the School of Medicine Infectious Diseases specialists (Dr Paddy Mallon paddy.mallon@ucd.ie or Dr Eoin Feehey eoin.feeney@ucd.ie).
• The School of Medicine Infectious Diseases specialists will assist and support students living with active hepatitis B to complete their studies in a safe and supportive environment, including offering advice and assistance on treatment for hepatitis B
• Under certain circumstances, students living with active hepatitis B may be prevented from participating in procedures where there is a significant risk of hepatitis B transmission. Any students living with hepatitis B infection will be advised of any restrictions on activities by the Infectious Diseases specialists
• Under certain circumstances, this may necessitate discussion between the Infectious Diseases Specialists and the coordinators of particular modules in order to ensure that this policy can be implemented appropriately

**Vaccination**
• Hepatitis B is a vaccine preventable condition and students are required to fulfill all obligations as outlined in the policy on Screening and Vaccination outlined above.

Transmission risk events:
• Where a student believes they have been at significant risk for transmission of hepatitis B infection, either through events related directly to their studies or independent to their studies, they should seek medical advice immediately.
• Confidential advice on post-exposure screening and follow-up is available from the School of Medicine Infectious Diseases Specialists (Dr Paddy Mallon paddy.mallon@ucd.ie or Dr Eoin Feeney eoin.feeney@ucd.ie).
Tuberculosis

Background
It is estimated that one third of the world’s population may be latently infected with Mycobacterium tuberculosis. This is usually diagnosed through a positive skin test to TB antigens, i.e. a Mantoux or PPD test. The test is placed intradermally, and induration is read 48-72 hours later. The criteria for a positive skin test depends on the background of the individual;

- >5mm if HIV positive, recent TB contact, immunosuppression or transplant, or radiological findings consistent with old TB
- >10mm if from a high-prevalence country, injecting drug user, health care workers, residents of and employees of high risk institutions, clinical conditions which put individual at high risk, children <4, or children and adolescents exposed to TB
- >15mm if no TB risk factors

Skin testing can be falsely positive in the setting of recent non-tuberculous mycobacterial infection or recent Bacille Calmette-Guerin (BCG) vaccination, or with misreading the area of induration. False negatives can occur in immunosuppression, malnutrition, or with poor operator technique (i.e. subcutaneous injection in error, or errors in reading the induration).

Interferon-gamma release assays (IGRA) are increasingly used instead of skin testing. IGRA measure cell-mediated immune response to specific MTB antigens. They require a single blood draw and do not require a follow-up visit to be read. However, they are more expensive, and results can be affected by laboratory / assay error and in certain conditions associated with immunosuppression.

Latent TB infection (LTBI) is associated with a lifetime risk of approximately 10% of TB reactivation. Treatment of LTBI can reduce this risk by approximately 60-75%.

Vaccination
The BCG vaccine is a live attenuated strain Mycobacterium bovis developed as a preventative vaccine for Mycobacterium tuberculosis in the early 20th century. It has few local and systemic side-effects. BCG remains a component of childhood vaccinations in most of Ireland. BCG vaccination of healthcare workers is not routinely undertaken in Canada, the US, Australia and New Zealand. The protective benefit from BCG in protecting adults and health-care workers is debated. Although BCG remains a recommended vaccination in Ireland for TST-negative healthcare workers under the age of 35, the World Health Organisation has recommended that only adults likely to be frequently exposed to multidrug resistant MTB should be vaccinated. Indeed, BCG vaccination may have implications for future TST testing in those coming from / returning to areas without BCG vaccination.

Recommendations:
1. In light of WHO recommendations, a debatable efficacy in adult populations, and implications for future TST testing for students, UCD School of Medicine no longer recommends BCG vaccinations for students.
2. At enrolment all students should present documentation of any previous Mantoux test / PPD / IGRA performed within the previous 12 months. If they do not, students will be required to undergo a TST or IGRA test performed within the Student Health Service.

3. Indeterminate IGRAs will be interpreted in the Student Health Service and a repeat test or a TST may be recommended as a requirement.

4. Those with a positive Mantoux / PPD / IGRA (or persistently indeterminate IGRAs) should be referred to the Infectious Diseases Clinics at the Mater Misericordiae University Hospital or St. Vincent’s University Hospital for further assessment (including CXR) and clearance to participate in activities involving patient contact.

5. LTBI does not preclude patient contact and participation in clinical rotations; however students should be aware of the risk of LTBI reactivation, the associated symptoms of active TB, and should present for urgent assessment should they become symptomatic.

6. Students determined to have active pulmonary TB will not be permitted to participate in patient contact and participation in clinical rotations until cleared by one of the above clinics.
Students working overseas

The School of Medicine recognises the valuable experience gained by students working overseas during their studies and encourages students to familiarise themselves with the following guidance aimed at reducing the risk from infection during travel overseas.

Briefing Meetings for Students Travelling Overseas
The UCD Infectious Diseases Consultants (Dr Paddy Mallon [paddy.mallon@ucd.ie] and Dr Eoin Feeley [eoin.feeley@ucd.ie]) host annual briefing meetings on prevention of travel-related infections for those students undertaking electives / working overseas to areas of high prevalence of blood-borne virus (BBV) and other travel-related infections.

It is a requirement of those students planning overseas electives to areas of high prevalence of BBV to attend these sessions if they wish to avail of the post-exposure prophylaxis (PEP) programme. Details of the dates / locations of these meetings can be provided through direct contact (by email) with the UCD Infectious Diseases Consultants.

Vaccinations
It is the student’s responsibility to be aware of and organise relevant vaccinations pertinent to the destination of travel overseas.

It is recommended that students maintain up-to-date vaccinations according to the relevant policies within UCD School of Medicine as well as seeking advice on additional, relevant vaccinations according to their proposed destinations. Guidance on relevant vaccinations is available from the Travel Clinic in the UCD Student Health Service. Additional, frequently updated information on infections and outbreaks is available from http://www.cdc.gov/travel and http://wwwnc.cdc.gov/travel/yellowbook/2014/chapter-3-infectious-diseases-related-to-travel/travel-vaccines-and-malaria-information-by-country.

Malaria Prophylaxis
Malaria infection can be life-threatening, and is largely avoidable by the use of malaria prophylaxis and mosquito bite protection. A list of malaria-endemic countries and areas is available at http://www.cdc.gov/malaria/map

Students should take the necessary precautions to avoid mosquito bites (see section on Mosquito Bite Protection below). Effective chemoprophylaxis against malaria is an essential component when travelling to malaria-endemic areas. Guidance on the most appropriate malaria chemoprophylaxis is available from the Travel Clinic in the UCD Student Health Service.

Traveller’s Diarrhoea
Traveller’s diarrhoea (TD) is a very common clinical syndrome that affects as many as 70% of all travellers. It is usually caused by Enterotoxigenic E. coli, Campylobacter, Shigella or Salmonella species, or viral infections. Most episodes of TD self-resolve. The mainstay of treatment is oral rehydration therapy. Students may also carry a course of antibiotics to use if symptoms of fever are present, of if blood, pus or mucous are visible in the stool. Details of relevant antibiotics are available from both the Travel Clinic in the UCD Student Health Service and from the briefing
meetings for Students Travelling Overseas. If symptoms persist despite rehydration therapy or fevers persist, medical advice should be sought without delay.

**Avoiding BBV exposure and use of Post-exposure Prophylaxis (PEP)**

The ID service at the Mater Misericordiae University Hospital provides a 5-day PEP starter pack for use in Transmission Risk Events (see section on Blood Borne Viruses) to students travelling to countries with a high HIV prevalence provided they attend the relevant briefing meetings for Students Travelling Overseas prior to travel (see above).

Advice on how to avoid BBV exposure, risk assessment after exposure and appropriate use of PEP is outlined in the briefing meetings for Students Travelling Overseas.

**Travel insurance**

It is strongly recommended that students have adequate travel insurance purchased to cover significant illnesses abroad and the need for medical evacuation if required.

**Recommended pre-travel checklist**

1. Ensure all medications are purchased PRE-TRAVEL
2. Insect repellent
3. Oral rehydration sachets
4. Antibiotic for traveller’s diarrhoea
5. Contact details for UCD Infectious Diseases Consultants at MMUH / SVUH
6. Malaria prophylaxis (where appropriate)
7. Mosquito net (where appropriate)
8. Post-exposure prophylaxis for HIV (where appropriate)

**Guidance to avoid infections during travel**

**Food and drink**

It is recommended that students take precautions to prevent food and waterborne illnesses. Meat should be cooked through. Fruit and vegetables should be peeled, or washed. Students should avoid uncooked vegetables, salads, unpasteurized milk and milk products, and unpasteurized fruit juices where possible. In areas where water may be contaminated bottled water or boiled water should be used. Ice in drinks should be avoided unless made from bottled / boiled water.

**Water exposure**

Freshwater areas can be a source of infection. Rivers and lakes can be contaminated by sewage and faecal matter from humans and animals. Schistosomiasis is a common freshwater pathogen in many lakes and rivers in Africa and South America (including Lake Malawi, Lake Victoria, and the Zambezi and Nile rivers). Students should avoid swimming or diving in these waters, or showering using untreated waters derived from known contaminated lakes or waterways.

**Exposure to blood borne viruses**

Hepatitis B and C virus, and HIV are blood-borne viruses that can be transmitted by exposure in an occupational or non-occupational setting.
While travelling students should try and minimize their potential for exposure to these agents by use of universal precautions (including gloves and goggles where appropriate), safe handling of sharps and contaminated material and avoidance of exposure-borne procedures.

Students should familiarise themselves with the policy on Blood Borne Viruses, including relevant information on screening and vaccination in addition to the sections on Transmission Risk Events. If a student feels they have had a significant exposure from body fluids of an individual suspected or known to be HIV positive they should follow the relevant guidance, start PEP immediately and contact the UCD Infectious Diseases Consultants immediately to assess risk and, if appropriate, arrange return travel to Dublin for formal assessment and management. A list of exposures and relevant risk associated with specific body fluids is available from UCD Student Health Services (http://www.ucd.ie/stuhealth/). All care to those with a significant Transmission Risk event will be provided on a confidential basis within either MMUH or SVUH.

**Mosquito protection**
Students should maximize attempts to prevent mosquito-bites. These will help prevent not only malaria, but other mosquito-borne infections such as Dengue, Chikungunya fever, Yellow Fever and Japanese Encephalitis.

These measures include
- Long sleeve clothing and pants, socks, particularly at dusk and dawn when mosquito activity is at its highest
- Bed nets (treated with insect repellent if possible) in rooms without screens or air-conditioning
- Insect repellents (containing a high percentage (≥35%) DEET)
- Guidance on DEET can be obtained from the Travel Clinic in the UCD Student health Service

**Animal bites**
It is recommended that students avoid contact with feral animals. Animal bites should be washed in soapy water and, depending on the animal antibiotic prophylaxis is usually warranted. Where there are concerns about an animal bite, students should contact the UCD Infectious Diseases Consultants for appropriate advice.

**Sexual contacts**
Students are advised to practice safe-sex measures, including the use of barrier methods of contraception to prevent the acquisition of sexually-transmitted infections including chlamydia, gonorrhoea, syphilis and HIV.

**Post travel**
It is recommended that students who become unwell, even after one year after returning from travel (particularly with fever), present for early assessment (to the UCD Student Health Service, their general practitioner, a Travel / Infectious Diseases clinic or even to the hospital Emergency Department if appropriate).
Biomedical, Health & Life Science Students Only

As students participating in the BSc Biomedical, Health and Life Sciences programme may be in contact with human material during the course of their studies (e.g. blood or tissue samples as part of laboratory research projects) the School of Medicine recommends that all students are appropriately vaccinated against transmissible infections and also have baseline serology available for blood borne virus infections in case of unintentional exposure during the course of their studies.

Screening and Vaccination
Prior to admission to the School of Medicine, all students entering the BSc Biomedical, Health and Life Sciences programme must meet the criteria for screening and vaccination for hepatitis B and Varicella zoster (chicken pox) as set out in the Screening and Vaccination section of this policy. Students should also undergo screening for hepatitis C as set out in the Blood Borne Viruses section in this policy.

HIV
In addition, all students must satisfy the following pre-requisite criteria for HIV prior to admission to the BSc Biomedical, Health and Life Sciences programme:
• All students are required to know their HIV status
• Students will be required to complete a declaration stating that they are aware of their HIV status prior to admission to the BSc Biomedical Health and Life Sciences programme
• Students may be required to produce proof of their HIV status

Transmission risk events
Students should familiarise themselves with the guidance on transmission risk events outlined in the Blood Borne Viruses section of this policy and, in the event of an unintentional exposure to human tissue or blood (needle-stick injury or equivalent), should immediately contact their supervisor and follow the guidelines on Transmission Risk Events for each of the Blood Borne Viruses specified in conjunction with advice from the School of Medicine Infectious Diseases Specialists.

Students are required to complete attached Student Acknowledgement Form to confirm their understanding of University and School Policy.