HEPATITIS B a blood borne viral infection. It is an important cause of serious liver disease, including acute and chronic hepatitis, cirrhosis and primary liver cancer. To infect a person, the virus must enter the bloodstream. This can happen in several ways, such as through:
Sexual activity /Injection or injuries with contaminated needles or other sharp instruments (parenteral or percutaneous transmission)
Splashes of blood or other body fluids onto broken skin or into the eye or mucous membranes /Bite from an infected person
The **Hepatitis B Vaccine** is offered to Healthcare Workers because of their greater risk of contracting Hepatitis B in their occupation, e.g. needlestick injuries or blood splashes as described above. Hepatitis B vaccines currently available, produce immunity in about 80 – 90% of those vaccinated. The remainder are classed as non-responders. This is an important point as non-responders will not have acquired any protection against Hepatitis B from the vaccine.
Will the vaccine protect me against other blood borne viruses such as the HIV virus and the Hepatitis C Virus ?The answer to this question is No. You must still follow safe work practices in the workplace to prevent exposure to these viruses. You must also still report **ALL** incidences of blood or body fluid exposure in the workplace.
Persons at risk Frontline health-care workers (both clinical and non-clinical), whose work may expose them to blood-borne virus infection are considered to be at risk of contracting Hepatitis B.
Procedure All staff who will have clinical contact with patients with unclear history of vaccination will be required to undergo blood testing to confirm their status and offered the vaccination (hepatitis B) and follow up as appropriate. Those who have no history of vaccination will be offered the vaccination (hepatitis B) and follow up as appropriate.
Vaccination schedule: Primary Immunisation 3 doses of Hepatitis B Vaccine.
Exposure-prone procedures (EPPs) are those invasive procedures where there is a risk that injury to the worker may result in the exposure of the patient's open tissues to the blood of the worker.

Procedure As of **7th July 2008**, all staff starting a new post in the health services where they might be required to be involved in an exposure prone procedure will have to provide evidence via the Occupational Health Service that they were immune to and not infectious for Hepatitis B and not infectious for Hepatitis C. Unless such a statement exists a potential member of staff will not be employed in a post which would include EPPs. All **existing staff** involved in EPPs must by 1st May 2009 have a statement from the Occupational Health Service that they were non-infectious for and immune to Hepatitis B. If this statement is not available they will not be allowed to perform EPPs.

MMR (Measles, Mumps, Rubella)

Mumps is an acute viral disease with symptoms developing 12- 25 days after an exposure. Symptoms include fever, head ache, swelling of the glands in the cheeks and jaw. Mumps can also cause serious complications such as viral meningitis, hearing loss, inflammation of the testes. Mumps during pregnancy can cause problems for the developing baby.
Rubella is a mild disease characterised by a rash and enlargements of lymphatic glands. The diagnosis can be confirmed by a blood test. Maternal rubella infection in pregnancy may result in major defects of the foetus. If rubella is contracted during the first four months of pregnancy, there is a very considerable risk that the child will be born with some congenital defects; these most commonly involve the heart, the eyes and the ears. Rubella can also cause complication for patients who are immunosuppressed.
Measles is an acute viral illness which is extremely infectious. Clinical features include conjunctivitis, bronchiolitis, with a rash developing 10 days after an exposure. Measles can also cause serious complication for people who are immunosuppressed.
Persons at risk All healthcare workers are considered to be at risk of Measles, Mumps and Rubella. It is advised that all health care personnel both male & female should know if they are immune or not to measles, mumps and rubella. It is extremely important for those working in the clinical environment to be protected. A blood test can confirm if you are protected or not.

Procedure All staff who will have clinical contact with patients with no/unclear history of vaccination will be requested to undergo blood testing to confirm their status and offered the vaccination (MMR) and follow up as appropriate. A history of Measles/Mumps/Rubella infection cannot be accepted without serological evidence. Where exposure occurs in a susceptible HCW, advice should be sought from Occupational Health on further management and possible exclusion form the workplace. **Vaccination schedule:** Primary Immunisation two doses of Measles, Mumps and Rubella (MMR) Vaccine. Pregnancy should be avoided for three months after MMR Immunisation
Varicella (Chickenpox) is a common viral infection caused by the Varicella Zoster Virus (VZV). The virus causes two distinct clinical syndromes: **chickenpox** (Varicella Zoster) and **shingles** (Herpes Zoster).
Varicella Zoster is an acute highly infectious disease that is spread directly by personal contact or droplet spread. Primary infection in childhood is usually mild, but in adults and the immunosuppressed, severe infection can occur.
Persons at risk All healthcare workers are at risk of Varicella.
Procedure All healthcare workers who have clinical contact with patients will be requested to undergo blood testing (Vz antibody) to confirm their status and offered the vaccination and follow up as appropriate. All health care personnel should have their immunity confirmed by having a blood test. A history of chickenpox is not always reliable. It is particularly important for staff in clinical areas to be protected. Personnel who do not know their immunity should avoid exposure to chickenpox or shingles until results of their blood test is know. Hospital personnel can pass on the infection to patients, and patients may pass on infection to hospital personnel. Where exposure occurs in a susceptible HCW, advice should be sought from Occupational Health on further management and possible temporary exclusion form the workplace.
Vaccination schedule: Primary Immunisation two doses of Varicella –Zoster Virus Vaccine 8 weeks apart.
BCG - Tuberculosis (TB) Tuberculosis is a bacterial infection caused by tubercle bacillus. It is spread by the airborne route. The organism may infect any part

of the body; however, the majority of the cases involve the respiratory system.All staff should have a pre-employment baseline Mantoux tuberculin testing performed if there is no BCG scar present or no documentary evidence of having received BCG vaccination. There are specific guidelines to be followed, which will result in some staff requiring skin test and BCG vaccine.

Persons at risk. All staff that has contact with patients, laboratory workers who handle specimens that may contain tuberculosis and mortuary workers may be at risk

Procedure All new employees will be asked to supply information concerning their BCG Vaccination status and the presence of a BCG Scar. Currently the presence of a BCG Scar or documented proof of a BCG vaccination is regarded as evidence of likely immunity to TB. All staff assessed as being at risk are those with no history of BCG vaccination or no scar. These will be referred for pre-employment base-line Mantoux tuberculin testing to Public health. If there is an inadequate Mantoux response (defined as skin induration less than 5 mm in diameter) then the health-care worker will be offered the BCG vaccine. It is uncommon for staff in employment in health care settings to acquire TB but if there is a confirmed patient with TB, the Infection Control Team/ Public Health will notify Occupational Health that a confirmed case of pulmonary TB has been identified. The Manager will then be requested to provide Occupational Health with a written list of all staff members who have had close or casual contact with the patient over the period clinically indicated. Any health care worker who has been in close contact with a case of smear positive tuberculosis should be referred to the Occupational Health. Occupational Health will check the records of these staff members for TB immune status and record the potential exposure and contact those as necessary

Hepatitis A is a viral disease that attacks the liver and may cause jaundice. The most common routes of infection are orally, through person to person contact or through contamination of food and water supplies. There is increased risk of infection through the faecal oral route where there is close personal contact e.g. among children and the mentally handicapped and anywhere there may be overcrowding and poor hygiene standards.

Persons at risk Hepatitis A immunisation may be occasionally advisable in paediatric hospital staff, workers who culture hepatitis A, or during local outbreaks of hepatitis A, or those workers in contact with raw faecal material e.g sewage workers.

Procedure Decisions regarding vaccination will be made by the Occupational Health Physician based on the risk assessment.

Vaccination schedule: Primary Immunisation 2 doses of Hepatitis A Vaccine.

Influenza is a respiratory illness associated with infection by Influenza Virus. Symptoms include headache, fever, cough, sore throat, aching muscles and joints. There is a wide spectrum of illness ranging from minor symptoms through to pneumonia and death.. Studies have shown that vaccination of staff with flu vaccine offers protection against death from Influenza among patients with whom the staff work. Therefore, staff who have the flu vaccine are helping to protect themselves and their patients. Influenza vaccination of health-care workers is especially important for reducing transmission of influenza viruses to patients with high-risk conditions in hospital and other health-care settings and for protecting the health-care workforce during the influenza season.

Persons at risk All staff are at risk of Influenza. Staff dealing directly with patients (both clinical and non-clinical) are encouraged to avail of the flu vaccine every year.

Procedure Each autumn all HCW's are offered an Influenza Vaccination. **Vaccination schedule**: One dose of Vaccine given on an annual basis each autumn.

OTHER infectious diseases or organisms Scientists dealing with human body fluids e.g Medical laboratory technicians and research scientists may also be considered for immunisations for Polio, Diphtheria. Those working in higher risk settings (e.g. reference laboratories or infectious disease units) should also be considered for immunisation against organisms e.g Japanese B encephalitis, cholera, meningococcal ACW Y, typhoid and rabies. Decision regarding other vaccination will be made by the OHP Physician based on the risk assessment completed by the manager.

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Occupational Health Department

HSE West

(Limerick, Clare & Tipperary North)

Advise to Healthcare workers regarding Immunisations and Infectious diseases in the healthcare setting

For more information contact your Occupational Health Department

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