

Occupational Health What Healthcare Workers should know

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Content

- Occupational Health functions
- Legislation and guidance
- Healthcare worker immunisation
- Prevention of exposures
- Blood borne viruses
- Management of occupational exposure
- Other occupational risks
- Health & wellbeing for workers

Occupational Health Functions

- Pre Placement Health Assessments
- Immunisation Screening
- OBE management
- Staff Contact Tracing e.g. TB, Meningitis, Mumps
- Liaise with Employee Assistance Programme
- Advice on Sickness Absence to manager/employee
 - Fitness for work
 - Reasonable accommodation

Occupational Health Functions

- Advice on occupational conditions E.g. Skin
- Health Surveillance
 - Night worker
 - Audiometry
 - Spirometry
 - VDU related Vision Screen

Legislation and Guidance



Available at www.emitoolkit.ie

Legislation and Guidance

- Safety Health & Welfare @ Work Act 2005
 - Employer duties
 - Employee duties
- Safety, Health and Welfare at Work (General Application) Regulations 2007 (S.I. No. 299 of 2007)
 - Use of work equipment – sharps boxes
- HSE Policy on the Prevention of Sharps Injuries

Legislation and Guidance

- Immunisation Guidelines of Ireland
- EMI (Emergency Management of Injuries) Guidelines, 2012 – www.emitoolkit.ie

HCW Immunisations



Available at www.emitoolkit.ie

Healthcare Workers Vaccination

Group 1 - This refers to those who have direct patient contact, both clinical and nonclinical staff.

- Medical, Nursing, and Allied Health Professionals
- Medical and Nursing Students
- Dentists and Dental Assistants
- Hospital Porters and Cleaners
- Ambulance Personnel
- Healthcare Assistants
- Other At Risk Health Care Personnel and Volunteers

Reference: Immunisation Guidelines of Ireland 2015

Immunisation Screen

- Hepatitis B vaccination
- BCG
- Varicella immunity
- MMR immunity



For workers carrying out Exposure Prone Procedures
Hep C or Hep B infection must be checked on an
Identified Validated Sample

Available at www.emitoolkit.ie

Hepatitis B Vaccination

- All HCWs are recommended to get hepatitis B vaccination if not previously vaccinated
- 3 vaccines 0, 1, 6 Months
- Anti-HBs levels checked 2 months later
- Once levels > 100miu/ml – immune to Hepatitis B infection
- **Know your status**

BCG

- BCG Scar check
- If no BCG scar or no documented evidence of having received BCG vaccination test, Or if high risk travel - Mantoux or quantiferon blood test is recommended
- Inadequate Mantoux response/negative quantiferon and aged <35 BCG offered (None available nationally)

Varicella

- Health-care workers without a definite history of chickenpox, proof of immunity or vaccination status, are screened for varicella antibody
- If non-immune, vaccination is offered

Measles, Mumps, Rubella

- Health-care workers should have serological proof of immunity (Born pre-1978) or evidence of having received 2 doses of MMR.
- If non-immune - 2 doses of MMR recommended & no follow-up testing required

Influenza Vaccination

- Healthcare workers are should be offered vaccination annually



Prevention of Exposure



Infection Prevention and Control

- Assume that every person is potentially infected or colonized with an organism that could be transmitted in the healthcare setting.
- Apply a set of work practices to blood, all body fluids (except sweat), mucous membranes and non intact skin including:

Use standard precautions

- hand hygiene
- use of personal protective equipment
- management of spillages of blood and body fluids
- appropriate patient placement
- management of sharps
- respiratory hygiene and cough etiquette
- management of waste
- management of laundry
- decontamination of reusable medical equipment
- decontamination of the environment.



PPE

Risk assess tasks – what is required?

- Gloves
- Eye protection, face shield
- Mask
- Plastic apron or disposable water proof barrier gown
- Is it appropriate? Is it available? Is there a policy?

Available at www.emitoolkit.ie

Sharps safety is your responsibility

DO ✓

- ✓ Do only use this sharps bin to get rid of your needles, syringes and lancets IMMEDIATELY after use.
- ✓ Do use the temporary closure on the lid after each use, as this prevents the contents spilling when not in use.
- ✓ Do close the lid of the bin to lock it once the container is filled to the dotted black line or, that you don't need any more.
- ✓ Do make sure that your name and date is written on label of the locked bin

Don't ✗

- ✗ Don't put your used needles, syringes and lancets in any other container
- ✗ Don't put the sharps bin out with general waste.
- ✗ Don't try to remove a needle or lancet from the sharps bin.
- ✗ Don't put any other waste in the sharps bin. It is only designed to take needles, syringes and lancets
- ✗ Don't force sharps into a full bin by pushing down with your hands.
- ✗ Don't fill the container past the dotted black fill line.

Blood Borne Viruses



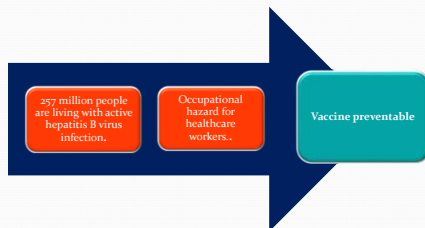
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Bloodborne Virus

- Hepatitis B Virus (HBV)
- Hepatitis C Virus (HCV)
- Human Immunodeficiency Virus (HIV)

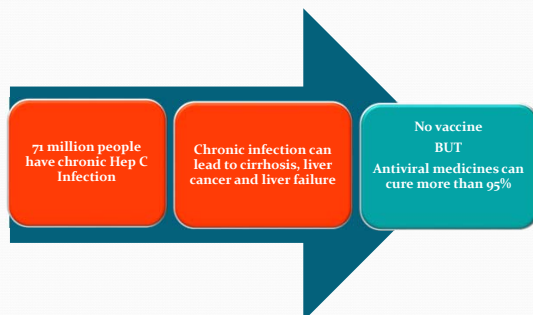
Hepatitis B infection

Hepatitis B is a viral infection that attacks the liver and can cause both acute and chronic disease.

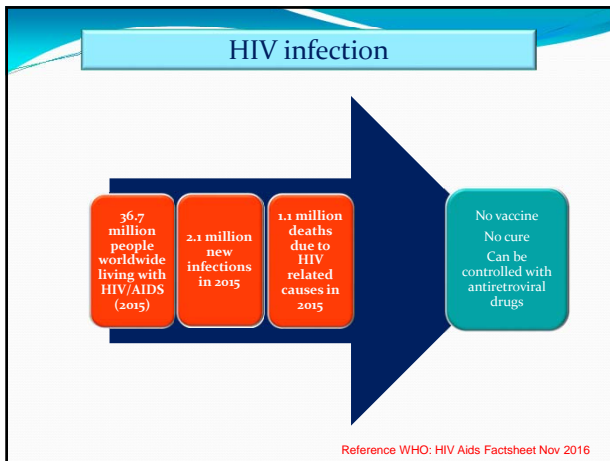


Reference WHO: Hepatitis B Factsheet 2017

HCV infection



Reference WHO: Hepatitis C Factsheet 2017



AIDS

(acquired immune deficiency syndrome)

- Disease of the Immune System
- Caused by HIV Virus
- Opportunistic infections by Bacteria, viruses fungi, parasites (normally controlled by a healthy immune system)
- More susceptible to cancer (Kaposi's Sarcoma)
- Malignant cancers most common cause of death.

Occupational Blood borne Virus exposure

Definition

An exposure that might place a HCW at risk of BBV (Blood Borne Virus)

- **Percutaneous:** puncture, abrasion or laceration caused by needle or other sharp device
- **Muco-cutaneous:** contact of mucous membrane or non-intact skin with blood or potentially infectious body fluid (blood splash to eye/mouth non intact skin)

Occupational Blood borne Virus exposure risk

Factors which increase the risk of transmission.

- Hollow needle
- Large bore needle
- Deep injury to recipient
- Equipment used directly in artery/vein
- High viral load in Source Patient
- Personal Protective Equipment (PPE) not used gloves/goggles



What are the risks ?



Occupational Transmission Risk

Hepatitis B

- 30% chance of contracting Hepatitis B from HBV positive source only if you have
 - Never been vaccinated
 - Non responder
 - Poor responder
- Antibody level >100mIU/ml + fully covered
- Know your Status

Occupational Transmission Risk

Hepatitis C

- 1.8% chance of contracting Hepatitis C from HCV positive source
- Increased risk if high viral load and co-infection with HIV

Occupational Transmission Risk

HIV

- 0.3% chance of contracting HIV from a HIV positive source
- Increased risk if high viral load
- Prophylaxis treatment available – report and follow-up immediately

Management of Occupational Exposure to BBV



Standardised guidelines on the management of occupational and non occupational injuries

such as needle sticks, bites, sexual exposures etc

- where there is a risk of exposure to bloodborne viruses
- based on best available evidence and expert opinion

- Have a procedure in place!!



First Aid & Risk Assessment



First Aid

Needle stick injury

- Encourage the area to bleed
- Irrigate the area thoroughly
- Dry the area
- Cover with a waterproof dressing
- REPORT THE INJURY

Do not suck the wound, use a nail brush, or harsh disinfectants

First aid

Exposure to mucous membrane or conjunctiva

- Immediately irrigate the area with running water
- If wearing contact lens irrigate the area before and after removal of contact lens
- Report the exposure to manager and (if available) Occ Health

Bite – (where the skin is broken)

- Irrigate the area thoroughly
- Cover the area
- Report the injury

Risk assess an Occupational BBV Exposure (OBE)

Is exposure significant???

- Assessment of injury is carried out by Occupational Health (if you have one) or Emergency Department
- Injured healthcare workers should not manage an OBE themselves. Another appropriate professional should take over responsibility

Significant injuries

A significant exposure involves a **high risk material** and a **significant injury**

High risk materials

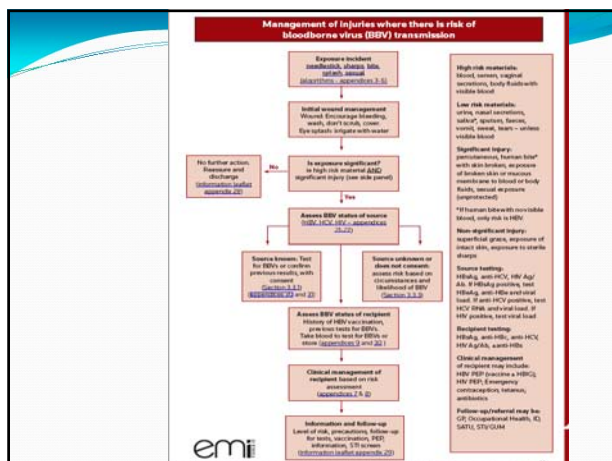
- Blood
- Body fluids contaminated with visible blood

Significant injuries

- Needle stick injuries
- Exposure to mucous membrane/conjunctiva
- Exposure to broken skin
- A bite which breaks the skin (visible blood)

Non significant injuries

- A graze
- No break to the skin
- Intact skin exposed to blood or body fluids
- Exposure to sterile or uncontaminated equipment or sharps



Management of Recipient

Report, Report, Report

- Know where to go - Policy
- Link with specialist disciplines
- Liaise with source patient Consultant or GP responsible for risk assessing, obtaining consent and testing source patient BBV status
- Link with recipient until discharge



Known source patient

- **Report, Report, Report**
- Source Patient is tested to determine their BBV status. (Consultant/ G.P.)- bloods sent urgently to National Virus Reference Lab
- Significant exposure – Managing dept (OH/ED) will offer appropriate follow up i.e. Vaccine/ PEP/ immunoglobulin/ onward referrals to Infectious Disease Specialist
- Non significant exposure Managing Dept will offer reassurance and discharge

Unknown source patient

Report, Report, Report

If source unknown

- Careful risk assessment (Unit manager)
- Post Exposure Prophylaxis is unlikely to be justified in majority of these cases
- BBV testing is offered at
 - 6 weeks
 - 3months

Post Exposure Prophylaxis (PEP)

- A preventive medical treatment started immediately after exposure , in order to prevent infection and the development of disease.
- Hep B - Ideally given within 48 hours, not later than 7 days
- Hep C – None available
- HIV - Ideally within 1 hour of exposure but must be within 72 hours of significant exposure

Other Occupational Risks



Available at www.emitoolkit.ie

Transmission of infection

- TB
- Measles, Mumps, Rubella, Varicella (Chicken Pox)
- Influenza

- Get vaccinated
- Put isolation precautions in place
- Observe for symptoms

Available at www.emitoolkit.ie

Contact Tracing

- **Contact tracing** is the identification and diagnosis of people who may have come into **contact** with an infected person. Example Tuberculosis, Mumps, Meningitis

- Managed by
 - Infection Control
 - Public Health
 - Occupational Health

Available at www.emitoolkit.ie

Skin care

- Practice good skin care
 - Apply waterproof dressings to cuts and abrasions
 - Properly rinse and dry hands after washing
 - Use barrier creams frequently
 - Get skin rashes checked out and treated appropriately

Available at www.emitoolkit.ie

Be Health & Safety Aware

- Report hazards that may cause injury or illness to your manager
- Complete incident report
- Don't ignore – not someone else's job!!

(Safety Health & Welfare @ Work Act 2005 – Duties of the employee)

Available at www.emitoolkit.ie

Health & Wellbeing



Available at www.emitoolkit.ie

Infection Prevention and Control

- DO NOT attend duty with known or suspected infection that may be transmissible without getting appropriate advice. For example
 - Flu - Most healthy adults may be able to infect other people beginning 1 day before symptoms develop and up to 5 to 7 days after becoming sick
 - Norovirus – People are contagious from the moment they begin feeling ill to at least 3 days after recovery and sometimes longer
- Practice proper hand washing techniques and cough etiquette – adhere to **Standard precautions**

Pregnancy Risk Assessment

The Pregnancy at Work Regulations apply from the time an employee informs you that she is pregnant, has recently given birth or is breastfeeding

- Pregnancy Risk assessments are completed by local management
- Risk identified may require restrictions – E.g. manual handling
- Medical input may be necessary
- See http://www.hsa.ie/eng/Publications_and_Forms/Publications/Safety_and_Health_Management/Section_6_Pregnancy_at_Work.pdf

Stress Management

- Lifestyle
 - Exercise
 - Diet
 - Work/Life Balance
 - Communicate with friends and family
- Discuss issues – manager, Occ Health, Family, GP

Flu Vaccine



Available at www.emtoolkit.ie

Types of Influenza Virus

Influenza A - Subtypes based on the two proteins on the surface of the virus
Haemagglutinin (H)
Neuraminidase (N)

Influenza B No subtypes...strains and lineages

Influenza C Cause a mild respiratory illness and are not thought to cause epidemics.

Antigenic Shift and Drift



Flu outbreak

Consequences to flu outbreak in a healthcare facility

- Effect on vulnerable patients
- Staff shortages due to sick leave
- Reduced ward access – Healthcare services, Public etc
- Procedures cancelled
- Increased workload from extra hygiene requirements
- Increased surveillance of patients/staff for flu symptoms
- 'Influenza outbreaks in hospitals and long-term care facilities have been attributed to low influenza vaccination coverage among health care personnel.'
(<http://www.cdc.gov/flu/professionals/infectioncontrol/ltc-facility-guidance.htm>)

Influenza Vaccination

- *'Healthcare workers are an important priority group for influenza vaccination. Vaccination of the health care worker not only protects the individual, but also maintains health care services during influenza epidemics and protects vulnerable patients'*

(WHO Strategic Advisory Group of Experts 2012 recommendations)

Why HCWs

- HCWs have an additional exposure risk for influenza compared to the general population
- Elderly and At-Risk patients may not get sufficient protection from the vaccine themselves.
- Anyone with flu can be infectious from 1 day before to 3 – 5 days after onset of symptoms. I.e. you can pass on flu or the flu virus to somebody you care for even before you know that you are sick.
- Vaccination of HCW is likely to reduce morbidity and or mortality in patients

Common Myths

Q 1: "The flu vaccine can give me the flu"

Fact: Influenza vaccine only contains dead virus and cannot give you influenza.

Q 2: "The flu vaccine does not work"

Fact: For most influenza seasons the vaccine provides good protection for 70-90% of people who get it. For the remainder it can reduce the severity of illness and make complications from influenza less likely.

Common Myths

Q 3: "Side effects from the vaccine are worse than getting the flu"

Fact: Most people do not get any side effects from the vaccine. Side effects, when they do occur, are usually minor and only last for one or two days, unlike influenza where symptoms are often severe and can last up to seven days.

Common Myths

Q 4: "I am not at risk of getting the flu"

Fact : If you work in a health care environment you may be up to 10 times more likely to get influenza, compared to other people in the community.

Q 5: "The flu is not a serious disease"

Fact: Complications from influenza can be life threatening and include pneumonia, encephalopathy and worsening of chronic medical conditions (eg asthma, congestive heart failure, diabetes). Even without complications influenza can be a debilitating infection.

Principles of Vaccination

Flu vaccines cause antibodies to develop in the body about two weeks after vaccination. These antibodies provide protection against infection with the viruses that are in the vaccine.

Side Effects

- Soreness, redness, and/or swelling from the shot.
- Headache.
- Sweating
- Muscle and Joint pain

- Reactions usually disappear within 1-2 days

National Peer Vaccination

- Led by Public Health
- Training through Office Nursing and Midwifery Development – Dates have been issued to DONs/DPHNs
- National Guidance
- National Consent
- 2 yearly training
 - **Medicine protocol annually – to be read and signed**

- Pre requisites – NMBI registration, BLS and anaphylaxis

Example of Programme outcome – % vaccinated

- Total vaccinated(CHO 9)
 - 2014/15 – 17%; (N=626)
 - 2015/16 – 26%; (N=1026)
 - 2016/17 – 29%; (N=1074)
- Total vaccinated (Connolly)
 - 2014/15 – 30%; (N=362)
 - 2015/16 – 32%; (N=389)
 - 2016/17 – 35%; (N=459)

Non HSE services

- HSE CNME will provide training.
- However the service needs to develop their own medication protocols and provide governance and reporting systems to support.
- <https://hse.ie/eng/about/Who/ONMSD/eductraining/CentresofNursingMidwiferyEduc/>

Available at www.emitoolkit.ie

What can you do.....

- Support Peer Vaccination in your services
- Allocate time for training and for flu clinics
- Enable ad hoc vaccinations to be built into day
- Challenge 'the Myths'

Any questions??