



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Quality and Patient Safety Division



HCAI

Tús Áite do
Shábháilteacht 1 Othar
Patient Safety 1 First

INFECTION PREVENTION AND CONTROL FOR PRIMARY CARE IN IRELAND

A Guide for General Practice

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A Strategy for the Control of
Antimicrobial Resistance in Ireland



HCAI/AMR Healthcare Associated Infections and
Antimicrobial Resistance 2013

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Acknowledgments

The authors wish to sincerely thank all those who commented and for their helpful feedback on this document in particular,

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Disclaimer and Waiver of Liability

This document represents the opinion of the SARI Infection Prevention and Control Subcommittee, following a review of the scientific literature and an extensive consultation exercise.

Responsibility for the implementation of these guidelines rests with individual practice staff and practice managers. The guide does not however override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of individual patients in consultation with the patient and/or guardian or carer.

Whilst we accept that some aspects of the recommendations may be difficult to implement initially due to a lack of facilities or insufficient personnel, we strongly believe that these guidelines represent best practice. Where there are difficulties, these should be highlighted locally and elsewhere so that measures are taken to ensure implementation.

Whilst every effort has been made to ensure the accuracy of the information and material contained in this document, errors or omissions may occur in the content. We acknowledge that new evidence may emerge that may overtake some of these recommendations. The Subcommittee will endeavour to review and revise as and when appropriate.

Terms of Reference

1. To develop guidelines on Infection Prevention and Control in Irish General Practice.
2. A document will be produced that is user friendly and reflects the needs of general practice within the context of evidence based practice. It will reflect the current statutory requirements. This document will not cover nursing homes, community hospitals or other community settings. It relates to the working environment of general practitioners, practice nurses and other staff working in the practice setting.
3. To support the Infection Control Nurse developer in the production of this document.
4. To consult with the relevant stakeholders.

Key Messages

Patients are cared for in an environment that is safe and clean, and where the risk of them acquiring an infection is kept as low as possible. A person-centered approach is taken respecting the dignity, privacy and needs of individual patients. Every interaction in general practice should include a risk assessment of the potential for infection transmission.

Hand hygiene is one of the most important methods of preventing health-care associated infections (HCAI). **Alcohol based gel/foams/rubs are the preferred method for hand hygiene** when the hands are not soiled and are physically clean. They should be available at point of care. Adequate hand washing facilities, liquid soap, alcohol gel/foam/rub and disposable paper towel availability and education are the cornerstones for compliance with hand hygiene guidelines (Chapter 3)

Practices that use sterile medical devices must choose from the following 3 options

1. Use sterile single use devices, which will obviate the need for decontamination.
2. Have reusable devices sterilised by a certified Sterile Services Department (SSD).
3. Decontaminate and reprocess devices in the practice

The reprocessing of reusable invasive medical devices (RIMD's) should comply with the recommendations set out in the following: -

- Code of practice for decontamination of RIMD (HSE 2007).
- Irish Medicines Board (IMB) (2005) Guide: Manufacture of Medical Devices within Healthcare Institutions.
- Safe and Effective Use of Bench-top Steam Sterilisers, IMB SN2009 (04).
- Irish Medicines Board (IMB): Cleaning and decontamination of reusable medical devices IMB safety notice; SN2010 (11)
(Please refer to Appendix 7 and chapter 8)

The Quality and Patient Safety Directorate have identified the need to develop Standards and Recommended Practices for decontamination of RIMD in General Practice, this piece of work will be incorporated into the Directorate plan.

Practice staff should be offered vaccination if a risk assessment reveals that there is a risk to their health and safety due to their exposure to a biological agent for which effective immunisation is available. Healthcare workers who are at occupational risk of exposure to blood or bodily fluids or who perform exposure prone procedures must be immunised against hepatitis B. Staff should

be instructed in the safe handling and packaging of pathology specimens for transport (Chapter 2).

Standard Precautions break the chain of infection. They are a set of practices that **should be used in the care of all patients** regardless of whether they are known or suspected to be infected with a transmissible organism. Additional precautions known as Transmission Based Precautions are required where the patient is known or suspected of having a highly transmissible infection e.g. Contact Precautions for patient with *Clostridium difficile* (Chapter 1).

Personal Protective equipment (PPE) should be used after a risk assessment determines the risk of transmission of microorganisms to the patient and the risk of contamination of the healthcare workers skin or clothing by the patient's blood body fluid/secretions/excretions, contact with mucous membranes and non-intact skin. **Examples of PPE are gloves, aprons, respiratory mask.** (Chapter 4)

Safe handling use and disposal of sharps is essential to prevent injury/ transmission of disease to patients, healthcare workers and cleaning staff. **Each practice needs to have a policy in place for assessment and management of a needle stick injury.** Education of all practice staff in sharps injuries prevention and management is essential. (Chapter 7)

Safe injection practices recommend the use of one sterile needle and one sterile syringe a single time. **Single dose vials should be used wherever possible.** (Chapter 6)

The correct management of blood and bodily fluid spills is described for spots, splashes, small and large volume spills. **All practice staff need to be trained in the correct management of spills.** (Chapter 10)

Cleaning and/or decontamination after risk assessment of common pieces of medical equipment used in Irish general practice are detailed. (Chapter 8)

Cleaning and/or decontamination after risk assessment of the general practice environment are detailed. (Chapter 9)

Laundry from infected patients can be contaminated with microorganisms. **Disposable linen or paper towels are recommended.** A contracted laundry service compliant with current Irish legislation should be used for reusable linen. Linen should be changed between patients. (Chapter 11)

Health care risk waste is defined as hazardous or dangerous due to the risk of it being infectious or because it contains used sharp materials that could cause injury. **Current Irish legislation places the primary responsibility for waste and its disposal on the producer** i.e. general practitioner. Proper segregation, packaging, labeling, storage and transport of health care waste are outlined. The Segregation, Packaging and Storage Guidelines for Healthcare Risk Waste (DOHC, 2010) recommends a uniform system of segregation and

packaging in the provision of patient care in the Republic of Ireland. Education and training of staff in this area to prevent injury is essential (Chapter 1).

For practices considering refurbishment or new build please refer to the following documents for advice regarding infection prevention and control considerations: SARI, 2009, Infection Prevention and Control Building Guidelines for Acute Hospitals in Ireland. Health Building Note (HBN) 11-01: Facilities for Primary and Continuity Care Services.

Audit tools are included to assess current practices and plan for future practice development and training. (Chapter1)

Introduction

The Infection Prevention and Control Subcommittee of the Community Antibiotic Stewardship Committee produced these guidelines as part of its remit under the Strategy for the Control of Antimicrobial Resistance in Ireland (SARI). The Irish College of General Practitioners (ICGP) collaborated in the production of these guidelines. The SARI committees have now been reformed under the title HCAI/AMR Healthcare Associated Infections and Antimicrobial Resistance

Healthcare-associated infections (HCAI) are infections that are acquired in healthcare facilities or as a result of healthcare interventions and are a major problem for patient safety.

HCAI's can lead to serious illness, prolonged hospital stays, long term disability and patient deaths. Public confidence relies on the general practice being seen as a safe place for patients to be treated. We need to reassure our patients that we are following best practice in order to minimise the risk of HCAI in Irish general practice.

The Health Information and Quality Authority (HIQA) is the independent statutory body with responsibility for developing and monitoring standards for health and social care services. The Authority has identified standards for the prevention and control of HCAI's as one of its priority areas in all healthcare settings. Patients should be cared for in an environment that is safe and clean, and where the risk of them acquiring an infection is kept as low as possible.

This document is in response to the HIQA standards and aims to highlight the relevant issues for infection prevention and control in Irish general practice. It does not cover all the HIQA Standards.

Hand hygiene is one of the most effective means of preventing HCAI's and should be a priority for implementation. Some guidelines will be easy to put into practice for example correct placement of sharps bin; others have cost implications, for example changing to disposable paper towels or use of single use items of equipment. Some of the recommendations may need to be built into future practice development plans, for example installing elbow operated taps.

Best practice in relation to sterilisation of reusable medical devices is a cause for concern in general practice and clear guidance has not been easily available in the past. The current Irish legislative standards and recommendations are outlined.

This document also highlights areas in need of further support and development to enable general practice to provide treatment and services to patients in a safe environment. Individual practices will be unable to implement best practice in this area without local and national investment in infrastructure and services. Practical support, single use medical devices, spill kits, central supply of approved cleaning and disinfectant agents, funding, education and dedicated infection prevention and control expertise for general practice are essential requirements for this to succeed.

This guideline has been formulated for all staff working in the General Practice setting. It aims to provide clear, concise guidance and policies on infection control. This guideline should be read in conjunction with all other relevant current standards, recommendations and legislative requirements and advice available in the Irish setting. To facilitate implementation of these recommendations flow charts, posters and audit tools are incorporated into this document.

Signed, 

Dr. Nuala O Connor, M.I.C.G.P.

Chair Infection Prevention and Control sub-committee

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CHAPTER 1

Preventing Transmission of Infection in the General Practice Setting

Potential sources of pathogens in general practice include bacteria, viruses, pathogenic fungi, protozoa, worms and prions. Every interaction in general practice should include a risk assessment of the potential for infection transmission.

The spread of infection can occur by direct and indirect contact

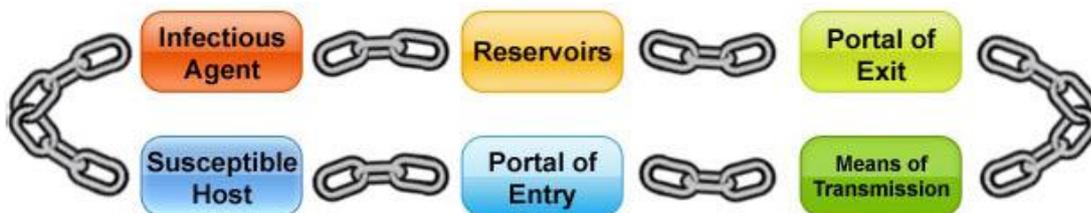
Direct contact:

Direct spread of infection occurs when one person infects the next; by person-to-person contact e.g., chicken pox, tuberculosis, sexually transmitted infections etc.

Indirect:

Indirect spread of infection is said to occur when an intermediate carrier is involved in the spread of pathogens e.g., the hands of a healthcare worker can become contaminated with infectious organisms from contact with a contaminated item of equipment; these may then be spread to a patient.

The chain of infection describes how infection is transmitted from one living thing to another. Transmission of infection can occur when the elements forming the "Chain of Infection" are present.



Source HPSC Standard Precautions 2009

These six elements are composed of:

1. **Infectious agent** e.g., bacteria, virus, prion: This can be **endogenous** (self-infection), which occurs when organisms which are harmless in one site, cause infection when transferred to another e.g., *E.coli* or **exogenous** (cross infection), which occurs when organisms are transferred from another source e.g. doctor, nurse, other patient or the environment.
2. **Reservoir:** A reservoir is a place where an infectious agent lives and grows (e.g., large intestine, blood, mouth).
3. **Portal of exit:** A portal of exit is any body opening that allows the infectious agent to leave (e.g. mouth, nose, rectum, and breaks in the skin).

4. **Means of transmission:** The means of transmission is how the infectious agent travels from the infected person to another person e.g., air, contact (*direct* e.g., hands of healthcare worker and *indirect* e.g., equipment).
5. **Portal of entry:** The portal of entry is any body opening that allows the infectious agent to enter (e.g. nose, mouth, eyes, a break in the skin)
6. **A susceptible host:** A susceptible host is a non infected person who could get infected.

Potential modes of transmission of infection in the general practice setting

Hands:

The hands of practice staff are the most important vehicles of cross-infection. The hands of patients can also carry microbes to other body sites, equipment and staff.

Equipment:

Items of equipment can become contaminated with an infective organism, which can subsequently be transmitted to another person, either directly, or via the hands of healthcare workers.

Inhalation:

Pathogens exhaled into the atmosphere by an infected person can be inhaled by and infect another person e.g., influenza.

Ingestion:

Infection can occur when organisms capable of infecting the gastrointestinal tract are ingested. This most commonly occurs by ingestion of contaminated food and water, or by faecal-oral spread e.g., Hepatitis A, *Salmonella*, and *Campylobacter*.

Standard Precautions

The purpose of Standard Precautions is to break the chain of infection.

Standard Precautions are a set of practices that should be used in the care and treatment of **all patients**, regardless of whether they are known or suspected to be infected with a transmissible organism. Standard Precautions apply when there is the potential for contact with:

- ✓ Blood (including dried blood)
- ✓ Body fluids and secretions (except sweat)
- ✓ Non-intact skin
- ✓ Mucous membranes

Implementation of **Standard Precautions** is vital in the prevention of transmission of infection to patients and staff.

Standard Precautions

- ✓ Hand hygiene
- ✓ Use of personal protective equipment (PPE)
- ✓ Respiratory hygiene and cough etiquette
- ✓ Appropriate patient placement
- ✓ Safe injection practices
- ✓ Management of sharps
- ✓ Management of needle stick injuries/contamination incident
- ✓ Decontamination of reusable medical equipment
- ✓ Decontamination of the environment
- ✓ Management of spillages of blood and body fluids
- ✓ Management of laundry
- ✓ Management of waste

The resources necessary to implement Standard Precautions include:

- Training in infection prevention and control for staff (at induction and regular updates).
- Equipment (e.g., personal protective equipment (PPE see chapter 4), cleaning equipment).
- Infrastructure (a sufficient number of dedicated hand wash sinks).
- Adequate supplies of necessary consumables (alcohol hand rubs/gels, liquid soap, paper towels, waste bins/bags and sharps containers).

Transmission Based Precautions for Patients with Transmissible Infections.

While the implementation of Standard Precautions can minimise the transmission of infection within the general practice setting, some patients suspected or known to be colonized with transmissible infections require additional precautions know as Transmission Based Precautions. Standard Precautions must be applied in addition to Transmission Based Precautions.

In cases where patients are, for example, kept spatially separated or are asked to wear masks to prevent the spread of infection, it is important that this is managed in a manner that is person-centered is taken respecting the dignity privacy and needs of individual patients. Good infection prevention and control practices should not compromise other aspects of high quality healthcare

Transmission Based Precautions are Contact, Droplet and Airborne Precautions.

Contact Precautions:

Should be used for infections that can be transmitted by direct contact with the patient e.g. *Clostridium difficile*, norovirus (winter vomiting bug). Patients who present with diarrhoea may have an infectious origin. When examining such patients Contact Precautions should be adhered to, to prevent you and your clothes, equipment getting contaminated.

- Wear a disposable plastic apron and gloves for all interactions that may involve direct contact with the patient.
- Wear gloves if there is a risk of exposure to blood, body fluids, secretions or excretions.
- Perform hand hygiene after patient contact/removal of gloves.

Droplet Precautions:

- Should be used for infections such as influenza and meningococcal meningitis which can be transmitted by droplets that are generated by the patient during coughing, sneezing, talking, or while performing cough-inducing procedures, e.g., sputum induction, administration of aerosolised medications, airway suctioning and during treatment of lesions/abscesses when aerosolisation of drainage fluid is anticipated.
- Wear a disposable plastic apron, gloves and surgical facemask for all interactions that may involve direct contact with the patient and within close proximity (i.e 3 feet/1 meter) from the patient wear surgical face mask.
- Wear gloves if there is a risk of exposure to blood, body fluids, secretions or excretions.
- Perform hand hygiene after patient contact/removal of gloves.
- Respirator masks (FFP2/3) masks maybe required for specific suspected or confirmed infections during aerosol generating procedures such as above procedures for influenza.

<http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/Infectioncontroladvice/File,3628,en.pdf>

Airborne Precautions:

Should be used for infections that can be transmitted by very small respiratory particles that remain suspended in the air e.g. infective pulmonary or laryngeal TB.

- Wear a disposable plastic apron, gloves and respirator mask (FFP2/3) for all interactions with the patient.
- Wear gloves if there is a risk of exposure to blood, body fluids, secretions or excretions
- Perform hand hygiene after patient contact/removal of gloves.

Respirator masks (FFP2/3) are designed to filter the air before it is inhaled by the person wearing the mask. Correct wearing of the respirator mask is essential

FFP3 masks are recommended for aerosol generating procedures for all patients with a suspected or confirmed airborne infection and for routine care of patients with Multi-drug resistant TB and extremely drug resistant TB.

FFP3 masks are recommended for routine care of patients with known or suspected pulmonary or laryngeal TB where MDR-TB or XDR-TB is not suspected.

- * *If a patient who is suspected or known to have an infection that is transmitted through the airborne route is waiting in a communal area, they should be asked to wear a surgical mask as this will reduce the risk of transmission to others³³.*

Recommended Measures for Patients that Require Transmission Based Precautions

- Patient placement. If possible, symptomatic patients who present a risk of droplet transmission e.g., influenza, or airborne transmission e.g., TB should be placed in a dedicated waiting area, away from other patients. If a dedicated waiting area is not available then these patients should be placed at least one meter away from other patients if possible.
- Consider provision of a surgical mask for patients requiring droplet and airborne precautions to wear while in the practice.
- Have appropriate PPE readily available for any practice staff that require it.
- Once the patient leaves, clean and decontaminate equipment and the environment as appropriate (refer to decontamination guideline).

CHAPTER 2

Practice Staff Immunisation

Immunisation is one of the most effective health-care interventions. Under the Safety, Health and Welfare at Work (Biological Agents) (Amendment) Regulations, 1998⁷⁴, any employer of employees who are in contact with, or at risk of being exposed to, a biological agent as a result of work must complete a risk assessment to determine which, if any, vaccinations are recommended for workers. A biological agent is a **bacterium, virus, prion** or **fungus** that has the ability to adversely affect human health.

Schedule 5 of the Biological agent's regulations states:

- If the risk assessment reveals that there is a risk to the health and safety of employees due to their exposure to a biological agent for which effective vaccines are available, the employer should offer them vaccination.
- Vaccination should be carried out in accordance with guidelines issued by the employing authority and employees should be informed of the benefits and drawbacks of both vaccination and non-vaccination.
- A vaccination certificate may be drawn up which should be made available to the employee in question and, on request, to the authority.

Vaccination should ideally take place before employment. Routine review of general immunisation status may also be appropriate.

Immunisation must be seen as just **one part** of a wider policy to prevent transmission of infection to health-care workers (HCW) and their patients. Immunisation should never be considered as a substitute for good infection prevention and control practices.

The employer should introduce reasonable measures to minimize the risk of employees acquiring or spreading infection. In addition to GPs and Practice Nurses, administrative and cleaning staff may be exposed to communicable diseases and / or blood / bodily fluid exposure, and therefore should be vaccinated as appropriate.

Decisions about vaccinations recommended should be based on the duties of the individual rather than on job title alone.

Recommended immunisation for staff whose work may expose them to blood borne virus infection and other infectious diseases.

Infectious disease	Recommendations
Hepatitis B	<ul style="list-style-type: none"> ➤ Staff should be offered Hepatitis B vaccination if not previously vaccinated. ➤ Staff should have anti-HBs levels checked if previously vaccinated against Hepatitis B and response not known
BCG (Bacillus Calmette Guerin)	<ul style="list-style-type: none"> ➤ Staff should have pre-employment base line Mantoux tuberculin testing performed if there is no BCG scar present, or no documented evidence of having received BCG vaccination. ➤ If there is an inadequate Mantoux response (defined as skin induration less than 5mm in diameter) then the staff member should be referred to their public health clinic or occupational health department, where BCG should be offered. ➤ Any staff member who has been in close contact with a case of smear-positive tuberculosis should be assessed by an occupational health department.
Varicella	<ul style="list-style-type: none"> ➤ Staff without a definite history of chickenpox, proof of immunity or vaccination status, should be routinely screened for VZV IgG. ➤ In addition HCWs from outside Ireland and Western Europe are less likely to be immune. Vaccination should be offered to all non immune staff. ➤ Post-vaccination serological testing is not recommended. Where exposure occurs in a susceptible member of staff, advice should be sought.
Influenza	<ul style="list-style-type: none"> ➤ Staff members should be offered vaccination against influenza on an annual basis each autumn.
Measles, mumps, rubella	<ul style="list-style-type: none"> ➤ Health-care workers should have serological proof of immunity or evidence of having received two doses of MMR. Those who are non-immune should receive two doses of MMR. Post-vaccination testing is not recommended. ➤ Where exposure occurs in a susceptible staff member, advice should be sought from Occupational Health on further management and possible exclusion from the workplace⁷¹.

Occupational blood exposure (i.e. risk of HCW contracting blood borne virus (BBV).

Occupational blood or body fluid exposure presents the risk of acquiring hepatitis B, hepatitis C or HIV¹. In practice, **all staff** (whether they are new employees, currently in post, locums, temporary workers or supernumerary workers) **who**

are at risk through contact with blood or body fluids should be immunised against HBV, unless immunity to HBV as a result of natural infection or previous immunisation has been established, or the vaccine is contraindicated.

There is at present no vaccine to prevent HCV or HIV. Avoiding occupational exposure is the primary way to prevent transmission of HBV, HCV and HIV. Immunisation, safe handling of sharps and post exposure prophylaxis are key elements in preventing infection with these pathogens and essential components of maintaining workforce safety.

Occupational Transmission of Blood Borne Viruses (i.e. risk to patient from infected HCW)

The definition of Exposure Prone Procedure (EPP) is outlined in the Prevention of Transmission of Blood Borne Disease in the Health Care Setting http://www.dohc.ie/publications/transmission_of_blood_borne_diseases_2006.html, as follows:

"An exposure prone procedure is a procedure where there is a risk that injury to the healthcare worker may result in exposure of the patient's open tissues to the blood of the worker.

They have been more precisely defined as procedures which involve surgical entry into tissues, cavities or organs or repair of major traumatic injuries, vaginal or Caesarian deliveries or other obstetric procedures during which sharp instruments are used; the manipulation, cutting or removal of any oral or perioral tissues including tooth structure, during which bleeding may occur. EPPs include situations where the worker's hands (whether gloved or not) may be in contact with sharp instruments, needle tips or sharp tissues (spicules of bone or teeth) inside a patient's open body cavity, wound or confined anatomical space, where the hands or finger tips may not be completely visible at all times. EPPs would not usually include giving injections, taking blood, setting up IV lines, minor surface suturing, the incision of abscesses or uncomplicated endoscopies."

Exposure Prone Procedures are Not Commonly Performed in General Practice.

Staff who may perform EPPs should be checked for hepatitis B (including HBsAg and anti-HBc) and hepatitis C virus. Expert advice should be sought for infected staff. There is at present no vaccine to prevent HCV or HIV. Practice staff infected with HCV must not carry out EPPs until the risk has been assessed. In addition, a health-care worker known to be infected with HIV must not perform EPPs.

CHAPTER 3

Hand Hygiene

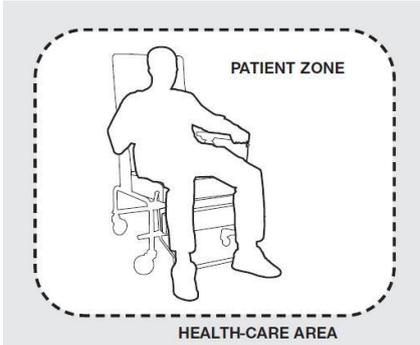
Healthcare-associated infections (HCAI) are infections that are acquired in healthcare facilities or as a result of healthcare interventions and are a major problem for patient safety. Hand hygiene is one of the most effective means of preventing HCAs.

In 2005 SARI (Strategy for the Control of Antimicrobial Resistance in Ireland) published "Guidelines for Hand Hygiene in Irish Health Care Settings". These guidelines are applicable to **all** health care settings within the Republic of Ireland ⁷⁸.

The hands of HCWs may become contaminated during contact with the wounds, mucous membranes or secretions of a patient, and also following contact with intact skin and during 'clean activities' e.g., taking a patient's pulse. Increased frequency of hand hygiene has been associated with decreased transmission of pathogens.

The WHO 4 & 5 Moments for Hand Hygiene (2009 and 2012) recommends that hand hygiene is carried out when there is a perceived or actual risk of a micro-organism transmission from one surface to another on the hands.

http://www.who.int/gpsc/5may/hh_guide.pdf

Definitions for Moments for Hand Hygiene in GP Settings	
<p>Patient Zone</p>  <p>The diagram shows a person sitting in a chair within a 'HEALTH-CARE AREA'. A dashed line encloses the person and their immediate surroundings, labeled as the 'PATIENT ZONE'.</p>	<p>In the acute setting the patient zone is defined as including the patient and some surfaces/items in his/her surrounds that are temporarily and exclusively dedicated to him/her. This area becomes contaminated by the patients own microbiological flora.</p> <p>In the GP setting the patient him/her self is considered the patient zone as the space and equipment used is not exclusively dedicated to the patient for any prolonged time.</p>
<p>Healthcare Zone</p>	<p>All surfaces outside the patient zone. This area is expected to be contaminated by a wider variety of mico-organisms.</p>
<p>Critical Sites</p>	<p>Sites within the patient zone which are associated with a higher risk of infection e.g. medical devices or risk of exposure to body fluids i.e. taking blood sample.</p>
<p>Point of Care</p>	<p>Exactly where the care action takes place and is</p>

	defined as the place where three elements come together; the patient, the healthcare worker, and the care or treatment involving the patient.
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Moments for Hand Hygiene	
<p>4 Moments for Hand Hygiene</p> <ol style="list-style-type: none"> 1. Before Touching A Patient 2. Before Clean/Aseptic Procedure 3. After Contact with Body Fluids 4. After Touching A Patient 	
<p>In outpatient settings Moment five after touching the patients surrounds only applies where the patient is placed for a certain amount of time in a dedicated space with dedicated equipment e.g. when carrying out wound care/minor procedure . In this case the surfaces and items in the patients surrounds will become contaminated.</p>	
<p>5 Moments for Hand Hygiene</p> <ol style="list-style-type: none"> 1. Before Touching A Patient 2. Before Clean/Aseptic Procedure 3. After Contact with Body Fluids 4. After Touching A Patient 5. After Touching The Patients Surrounds 	<p>WHO 5 Moments for Hand hygiene ; minor operative procedures</p>

Refer to Appendix 1 for 4 and 5 Moment Posters for General Practice

Hand hygiene should also be performed in a range of other situations e.g

- Before and after each work shift
- When the hands are visibly contaminated
- Before putting on and after removing PPE
- Before eating and drinking food
- After handling waste
- After cleaning clinical areas

Hand Hygiene can be carried out in 3 ways

- 1.** Use an alcohol hand rub foam / gel
- 2.** Wash with plain liquid soap
- 3.** Wash with an antiseptic hand wash

Alcohol based hand rub gel / foams are the preferred method for hand hygiene when the hands are not soiled and are physically clean.

There are 2 situations where alcohol hand rub alone is not sufficient:

- After contact with a patient with known or suspected diarrhea (e.g. *Clostridium Difficile* or Norovirus.)
- Where hands are visibly soiled.

In these instances hand wash with antiseptic soap or plain soap followed by use of an alcohol rub is recommended.

Alcohol-based Hand Rub, Gels/Foam:

Alcohol-based hand rubs are very effective antimicrobial agents. They are the preferred method for hand hygiene when the hands are **not** soiled and are physically clean. They should be applied to hands for a minimum of 15 seconds-20-30 seconds WHO, using an adequate volume to completely wet the hands. Alcohol based products containing 70% -60-75% alcohol and an emollient, are less damaging to the skin than soaps or antimicrobial detergents. Repeated use of an alcohol hand rub can lead to an excessive build of emollient on the hands; this should be removed by periodic washing with soap and water. Alcohol hand rubs can be used for hand decontamination where accesses to hand wash facilities are not adequate.

Alcohol-based hand rubs should not be used after caring for patients known or suspected to have infection with *C. difficile* or norovirus. In these instances, handwashing with antiseptic soap or with plain soap followed by use of an alcohol rub is recommended.

Alcohol Hand Rub Technique

Effective decontamination of the hands using alcohol hand rub involves a series of steps and should take at least 15 seconds- 20-30 WHO

- Hands should be free of dirt and organic material (alcohol is ineffective in the presence of dirt).
- Dispense as per manufactures instructions the required number of shots of alcohol-based rub/gel into the palm of the hands to adequately cover hands.
- Use the SARI 7 step technique (Appendix 3).
- Each step is repeated enough times to ensure the alcohol-based rub/gel come into contact with all surfaces of the hands and wrist without the product drying out.

Steps

1. Rub your hands together (palm to palm).
2. Rub right palm over the back of the left hand up to wrist level and do the same with the other hand.
3. With the right hand over the back of the left hand rub fingers (interlaced

with other hand). Repeat the process with the other hand.

4. Rub palm to palm with fingers interlaced.
 5. Rub thumbs of each hand separately using a rotating movement.
 6. Rub the tips of the fingers and thumb of your left hand in a circular pattern in your right palm. Then, do the same with the tips of the fingers of your right hand in your left palm.
 7. To clean the wrists rotate your right hand around your left wrist and then do the same with your left hand around your right wrist.
- * *Continue rubbing the hands until the solution has evaporated and hands are completely dry.*
 - * **Refer to Appendix 3 for Alcohol Hand Rub Technique.**
 - * **Note:** Alcohol is flammable and must be allowed to dry completely to prevent accidental burn

Hand Washing Technique

Effective hand washing technique steps involve a sequence of events and should take

At least 15 seconds: SARI recommends minimum 15 seconds WHO 40-60 seconds for entire procedure

- Wet hands and wrists under running water.
- Dispense liquid soap (enough to form lather) into a cupped hand.
- The hand wash solution must come into contact with all surfaces of the hands using the SARI 6 step technique (Appendix 2).
- Each step is repeated 5 times.

Steps

1. Rub your hands together (palm to palm).
 2. Rub right palm over the back of the left hand up to wrist level 5 times and do the same with the other hand.
 3. With the right hand over the back of the left hand rub fingers 5 times (interlaced with other hand). Repeat the process with the other hand.
 4. Rub palm to palm with fingers interlaced.
 5. Wash thumbs of each hand separately using a rotating movement.
 6. Rub the tips of the fingers and thumb of your left hand in a circular pattern in your right palm. Then, do the same with the tips of the fingers of your right hand in your left palm:
- To clean the wrists rotate your right hand around your left wrist and then do the same with your left hand around your right wrist.
 - Rinse hands and wrists under running water to remove all traces of soap. Water should run from the tips of the fingers down to prevent contamination.
 - Turn off taps using wrists or elbows. If household taps, use a paper towel.
 - Pat dry each hand from your fingertips down to your wrists using a fresh paper towel for each hand.
 - Open bin using foot pedal to avoid contaminating washed hands and discard paper towel in waste bin.

Refer to Appendix 2 for Poster on SARI Hand Washing Technique.

Hand Hygiene Facilities

Compliance with hand hygiene is influenced by the availability of good hand hygiene facilities.

- Clinical hand wash sinks are required in all areas where clinical activities are performed.
- Clinical hand wash sinks should be dedicated for hand hygiene only
- The hand hygiene sink(s) should meet the standard HTM 64 Sanitary assemblies (2006) * i.e., no plugs or overflows, the water jet should not

flow directly into the plughole, taps should be hands free and sinks should employ mixer taps to allow regulation of water temperature.

- All sinks should be fitted with a washable back splash with all joints completely sealed.
- Adequate amounts of liquid soap, alcohol hand rub and antiseptic hand wash (if/when required) should be available.
- Alcohol hand rub should be available at the point of care. Optimal concentration of alcohol 60-75% and products with emollients are recognised as superior.
- Liquid hand hygiene products should be stored in closed containers and never topped up.
- The use of good quality disposable paper towels and hand lotions are recommended.
- Air dryers are not recommended.
- Inappropriate items should not be stored at handwash sinks.
- Waste bins should be hands free (e.g., foot operated).
- Hand hygiene posters should be available at each sink and in close proximity to alcohol hand rub dispensers.(appendix 2,3,4 printable posters)
- Access to handwash sink should **not** be obstructed.
- Promote hand hygiene for all staff and patients using signage in all areas of the Practice.

**Health Protection Surveillance Centre (2011) Hand Hygiene Observation Audit Standard Operating Procedure <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/Handwashing/AuditTools/File,12660,en.PDF>*

Specific community tool in development suggested audit for general practice in appendices.

Hand Hygiene Preparation

- Nails should be kept short and cut smoothly.
- Nail varnish, and/or false nails should not be worn.
- All wrist and hand jewellery/watches (except plain wedding bands) should be removed.
- Sleeves should be rolled up to the elbow.
- Cover any abrasions with a waterproof dressing.
- Healthcare workers with damaged skin on the hands eg. Weeping dermatitis should not carry out direct patient care and should seek occupational health advice.

The 2005 "**Guidelines for Hand Hygiene in Irish Health Care Settings**" apply to all healthcare facilities including the community setting. They state that:

- ✓ Mandatory attendance (at least two yearly) at hand hygiene education and practice is required for all HCWs involved in clinical areas.
- ✓ Audit of compliance with hand hygiene guidelines and hand hygiene facilities is required in all healthcare settings.

General Care of Hands

- Cover cuts with an impermeable waterproof dressing.
- Wet hands before applying soap
- Use preparations containing emollients
- Always rinse hands and pat dry thoroughly
- Apply emollient hand cream or barrier cream regularly
- Communal jars/tubes of hand cream should not be used as the contents may become contaminated.
- Seek professional advice for sensitivity/allergy to disposable gloves and skin problems.

Hand Hygiene for Patients

Patients should clean their hands regularly. Posters and patient information leaflets are available to download from the HPSC web site below.

<http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/Handwashing/Factsheets/File,12597,en.pdf>

CHAPTER 4

Personal Protective Equipment

Personal protective equipment (PPE) refers to a range of barriers and respirators used alone or in combination to protect mucous membranes, airways, skin, and clothing from contact with infectious agents⁷⁵. The selection of protective equipment required depends on an assessment of the risk of transmission of microorganisms to the patient, and the risk of contamination of the healthcare practitioner's clothing and skin by patients' blood, body fluids, secretions or excretions⁶⁰.

Practice staff should make a risk assessment of the planned procedure/action and select PPE, depending on:-

- 1. The nature of the procedure**
- 2. The risk of exposure to blood, body fluids, mucous membranes and non intact skin**
- 3. The risk of contamination.**

Types of protective clothing available	
Gloves	<p>Should be worn for:-</p> <ol style="list-style-type: none">1. Invasive procedures2. Contact with sterile sites3. Contact with non-intact skin/mucous membranes4. All actions that have been assessed as carrying a risk of exposure to blood, body fluids, secretions/excretions, or to sharps or contaminated instruments (including handling of laboratory specimens)*. <ul style="list-style-type: none">➤ Gloves are single use items and should conform to European Community Standards.➤ Gloves should be changed between different treatment activities for the same patient.➤ Sensitivity to natural rubber latex in patients/carers should be documented, and alternatives to natural rubber latex gloves must be available. Nitrile gloves are a good alternative for latex sensitive individuals.➤ Glove use does not remove the need to comply with hand hygiene. Hands should be cleaned prior to putting on gloves and hand hygiene (handwashing/alcohol hand rub) must be performed immediately after glove removal.➤ Handwashing with soap and water is advised when gloves are removed because of a tear or a puncture and the staff member has had contact with blood or another body fluid; this situation is considered to be equivalent to a direct

	<p>exposure to blood or another body fluid.</p> <ul style="list-style-type: none"> ➤ Gloves should be disposed of into the appropriate waste stream. <p>Non Sterile Gloves Should be used when hands may come into contact with body fluids or equipment contaminated with body fluids, or touching mucous membranes for example handling specimens.</p> <p>Sterile Gloves Should be used when the hand is likely to come into contact with normally sterile areas or during the introduction of an invasive device or during any surgical procedure.</p>
<p>Types of Protective Clothing Available</p>	
<p>Disposable plastic aprons</p>	<p>Should be worn</p> <ol style="list-style-type: none"> 1. When there is a risk that clothing may be exposed to blood, body fluids, secretions or excretions, with the exception of sweat. <p>Plastic aprons should be worn as single-use items and then discarded into the appropriate waste stream.</p>
<p>Full-body fluid-repellent gowns</p>	<p>Should be worn</p> <ol style="list-style-type: none"> 1. Where there is a risk of extensive splashing of blood, body fluids, secretions or excretions, with the exception of sweat, onto the skin or clothing of healthcare practitioners.
<p>Face masks (surgical) and eye protection (visor/goggles)</p>	<p>Should be worn</p> <ol style="list-style-type: none"> 1. Where there is a risk of blood, body fluids, secretions or excretions splashing into the face and eyes.
<p>Respiratory protective equipment</p>	<p>Should be worn</p> <ol style="list-style-type: none"> 1. Surgical masks should be worn by practice staff where there is a risk of droplet transmission. 2. A particulate filter mask (respirator) FFP2/3 should be worn by practice staff where there is a risk of airborne transmission (when clinically indicated). <p><i>Refer to transmission based precautions –airborne/droplet precautions guideline for further information</i></p>

Removing PPE

To reduce contamination of clothes/hands/environment

- When removing gloves do so with a technique that avoids contamination of the hands and the environment. Remove until both gloves are inside out, then discard into the appropriate waste stream.
- The outer, "contaminated" side of the apron/gown is turned inward and rolled into a bundle before discarding into the appropriate waste stream.
- Remove mask by breaking the ties (do not touch the front of the mask).
- Discard all PPE into the appropriate waste stream.
- PPE that is blood stained or contaminated with body fluids should be placed into the healthcare risk waste stream.
- PPE that is not blood stained or contaminated with body fluid may be placed into the domestic/non-healthcare risk waste stream.

Always perform hand hygiene after PPE is removed

All laboratory specimens have the potential to contain substances that are infectious. Sometimes this potential is unknown but equally there are times when it may be known. The main principle of safety in this regard is to package and label all specimens in such a manner so that they present no threat to those sending, transporting or receiving them. All patient specimens should be treated as potentially hazardous and handled accordingly. Ensure packaging used is compliant with receiving laboratory's requirements. **Staff should be instructed in the safe handling and packaging of pathology specimens for transport.**

CHAPTER 5

Respiratory Hygiene and Cough Etiquette

Respiratory hygiene/cough etiquette should be instituted when patients present with signs or symptoms of a respiratory infection (e.g., cough, fever, congestion, rhinorrhoea or increased sputum production). Standard precautions ([see chapter one](#)) should be applied to all patients.

The main elements of respiratory hygiene/cough etiquette include: -

1. Education of practice staff, patients, and visitors.
2. Posters signs (in language(s) appropriate to the population served) with instructions to patients and accompanying family members or friends.
3. Patients should be advised to
 - Cover the mouth/nose with a disposable single use tissue when coughing.
 - . Dispose of the tissue in the nearest bin after use.
 - Carry out hand hygiene after contact with respiratory secretions.
4. In addition where there is a risk e.g. corona virus, TB Transmission Based Precautions are advocated in addition to Standard Precautions.
5. Consider using surgical masks on the coughing person, when tolerated and appropriate. Spatial separation, ideally at least 1 meter between persons with respiratory infections in common waiting areas, where possible ⁷⁵.

The HPSC advise that during periods of increased prevalence of respiratory infections in the community, offer masks to coughing patients and other symptomatic persons (e.g., persons who accompany ill patients) upon entry into the facility and encourage them to maintain spatial separation, ideally a distance of at least 3 feet, from others in common waiting areas.

<http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/Infectioncontroladvice/File,3628,en.pdf>

<http://www.hpsc.ie/hpsc/A-Z/Respiratory/CoronavirusInfections/Guidance/File,14097,en.pdf>

N.B. In cases where patients are, for example, kept spatially separated or are asked to wear masks to reduce the spread of infection, it is important that this is managed in a manner that is person-centered and considers the non-healthcare needs of the patient as well as the needs of other patients.

Recommended Measures for Patients Presenting with Influenza Like Illness (ILI): -

- Ensure adequate supplies of tissues, waste bins and hand hygiene (hand wash/alcohol hand rub) facilities are available in waiting areas.
- Keep surgical masks, eye protection and a hand hygiene agent on hand for the receptionist staff to use if necessary.

- Provide a dedicated waiting area for symptomatic patients, where possible.
- Offer a surgical mask to coughing patients and symptomatic accompanying persons.
- Encourage respiratory hygiene and cough etiquette using patient information leaflets and posters ²⁹ (Appendix 4).
- Maintain a spatial separation where possible of at least one metre from others in common waiting areas.
- Wear a surgical mask and eye protection (if required) when in direct contact with the patient. Consider gloves and gown/apron if soiling of the hands or clothing is likely ³³.
- After consultation and when the patient has left, clean and decontaminate all surfaces, furniture, door handles and equipment used to examine the patient (see decontamination guideline for further information).

Surgical Masks

Surgical masks should be worn by practice staff where there is a risk of droplet transmission e.g. corona virus, influenza.

- Masks should be fitted correctly to be effective.
- Replace the mask if it becomes wet or soiled.
- Remove mask by pulling on the strings – do not touch the front of the mask, as this is likely to be heavily contaminated.
- Dispose of the mask into the healthcare risk waste stream.
- Perform hand hygiene after mask is removed.

Respirator (FFP2/FFP3) masks -see chapter 1 for advice on when you need to consider use of these.

<http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/Infectioncontroladvice/File,3628,en.pdf>

CHAPTER 6

Safe Injection Practices

All healthcare workers should follow safe injection practices in any situation where injections are given ⁵. All staff who administer injections should be aware of the importance of safe injection practices ³⁰. **A key recommendation is that providers should use one sterile needle and one sterile syringe only a single time.**

Preparation of Injections

- All injections should be prepared in a clean area.
- This area must not be used for disposing of used needles and syringes, handling blood samples, or any material contaminated with blood or body fluids
- An aseptic technique must be used when drawing up injections.
- Needles, syringes and cannulae are sterile, single use items; they must not be reused for another patient, or to access a medication or solution that might be used for a subsequent patient.

Single Dose Vials

- Use single dose vials wherever possible.
- Do not use single dose vials for multiple patients.
- Do not combine leftover medication from different vials for later use.

Multiple Dose Vials

- Multiple dose vials should only be used when absolutely necessary (i.e., where there is no alternative).
- Restrict wherever possible the use of multiple dose vials to a single patient. Label vial with patient name and date opened.
- Discard if sterility is compromised or questionable.
- Use a sterile syringe and needle every time a medication vial is accessed, even if it to obtain a second dose for the same patient.

Some examples of **unsafe injection practices** which could arise in a general practice setting include:

1. Reusing a needle or syringe to give medicine to more than one patient ⁷⁵.
2. Reusing a needle or syringe to withdraw medicine from a vial that is used for more than one patient e.g. depot psychiatric medication, vaccines or local anesthetic.

3. Using multiple dose vials for the same patient for longer than the manufacturer recommends once seal is broken e.g., depot psychiatric medication, vaccines or local anesthetic.
4. Using fluid infusion and administration sets (i.e., intravenous bags, tubing and connectors) for more than one patient.
5. Blood glucose monitors & insulin pens are single patient use items. Finger-stick retractable lancet devices are recommended and are also single patient use items.

Both the needle and syringe must be disposed of into a sharps container immediately after use. It is not safe for healthcare providers to change the needle and reuse the syringe. This practice has been associated with the transmission of blood borne viruses, such as Hepatitis C, Hepatitis B, and HIV ⁵.

For additional information see:

<http://www.cdc.gov/HAI/pdfs/guidelines/standatds-of-ambulatory-care-7-2011.pdf>

CHAPTER 7

Management of Sharps and Sharps Injury/Contamination Incident

Each practice should have a policy in place that outlines the risk assessment, management and advice to staff following needle stick injury and blood and body fluid exposure. Education of all practice staff on sharp injuries, their significance, prevention and management is essential.

All health-care workers (whether they are new employees, currently in post, locums, temporary workers or supernumerary workers) who are at occupational risk of exposure to blood or body fluids or blood-contaminated environments, and all those who perform exposure-prone procedures **must be immunised against HBV**, unless immunity to HBV as a result of natural infection or previous immunisation has been established or the vaccine is contraindicated ¹⁵.

Sharps are defined as 'anything that can penetrate the skin'.

Sharps Include:

- ✓ Needles
- ✓ Scalpels
- ✓ Stitch cutters
- ✓ Glass ampoules/vials
- ✓ Lancets
- ✓ Broken glass

The safe handling, use and disposal of sharps, is essential to prevent injury/transmission of disease to patients, healthcare workers and cleaning staff ^{6,75}.

A Sharps Injury/Contamination Incident Includes:

- ✓ Penetration of the skin by a needle or other sharp that may contain blood e.g., needlestick injury.
- ✓ Contamination of broken skin with blood.
- ✓ Splashes of blood/body fluids onto mucous membranes (e.g., mouth/eyes).
- ✓ Swallowing a person's blood.
- ✓ Human scratches/bites (where blood is drawn).

Prevention of Sharps Injury

- ✓ Non-sterile disposable latex or nitrile (if allergic to latex) gloves should be worn.
- ✓ Consider needle free system when possible*.
- ✓ Get help if patient is uncooperative.
- ✓ Sharps must not be passed directly from hand to hand (a sharps tray with integral sharps bin maybe used).
- ✓ Needles must not be bent, broken or recapped.
- ✓ Each person using a sharp must dispose of it him/herself
- ✓ as one unit into the appropriate puncture resistant sharps box, conforming to UN number (UN3291 or UN2814).
- ✓ Sharps containers should not be filled above the mark indicating they are full- sealed when at the fill line and dispose of in an appropriate manner.
- ✓ Do not attempt to retrieve items from a sharps box
- ✓ Temporary closures should be used when the sharps box is not in use.
- ✓ Sharps containers should be located in a safe position, stored out of reach of clients, visitors and children.
- ✓ Sharps boxes should not be placed on the floor, windowsills or above shoulder height (mobile stands and attachment brackets are available commercially).
- ✓ Sharps boxes should be signed at assembly, closure and disposal.
- ✓ Sharps boxes should be disposed of by a licensed authority in accordance with national guidelines.
- ✓ All staff (both clinical and non clinical) must be educated about the safe use/disposal of sharps.

** European directive line 2010/32/EU (to be implemented by each member state by May 2013) provides a legislative framework for the agreement on the prevention of sharps injuries in hospitals and the healthcare sector. Health-care institutions should apprise themselves of developments in safety devices, e.g. needle-less technology.*

Healthcare workers should always assess the risk of exposure to blood, body fluids, non-intact skin and mucous membranes associated with the care they provide before undertaking a particular task. When a risk of exposure to blood, body fluids etc is identified, appropriate personal protective equipment (PPE) should be put on before the task is started.

Examples of Risk and PPE Required

Tasks associated with risk of blood/body fluid exposure	PPE
Venepuncture	Disposable gloves Consider plastic apron
Wound dressing/irrigation or minor surgical procedures	Disposable gloves Consider mask/visor/plastic apron

The EMI toolkit – Emergency Management of Injuries 2012 outlines in detail the procedures to be followed and include patient management forms for general practice, information leaflets for source and recipient of injuries, legal advice, section on community acquired needlestick injuries CANSI. GPs should consider using this resource to compile an individualised toolkit for their practice. <http://www.hpsc.ie/hpsc/A-Z/EMIToolkit/>

Immediate Procedure in the event of a sharps injury/contamination incident/injury

Needle Stick/Sharps Injury

- Encourage bleeding of the wound under running water.
- Do not suck the wound.
- Wash the wound thoroughly with soap under running water for 2-3 minutes.
- Cover the area with a waterproof dressing or bandage.
- Dispose of sharp carefully into the appropriate puncture resistant sharps box.

Mucocutaneous Exposure

- Wash the affected area with copious amounts of water.

Eye Exposure

- Irrigate the affected eye with copious amounts of saline or water (before and after removal of contact lenses, if applicable).

Next Steps - Need to decide if the exposure was significant or not?

- This will depend on the type of material involved e.g blood stained or not and the type of injury sustained e.g skin break or not
- Report to GP/practice manager /designated lead for injuries /contamination incident.
- Complete patient management form -see Appendix 8
- Identify the source person if possible.
- Document details of the inoculation incident.
- Seek advice as to whether post exposure prophylaxis is required

If exposure is deemed significant then you have 2 Patients to consider The source and the recipient.

Post Exposure Prophylaxis –Key Points

Occupational blood exposure presents the risk of acquiring Hepatitis B, Hepatitis C or HIV.

- Each practice should have a policy which outlines how/where post exposure prophylaxis is dealt with e.g. Emergency Department.

- A risk assessment will be carried out including the risk status of the source patient and a blood sample may be taken from the source patient.
- Decisions regarding the need for post-exposure prophylaxis should be taken immediately, within 1-4 hours in the case of HIV exposure (regarding possible use of antiviral therapy) and within 48 hours ⁷¹ in relation to Hepatitis B exposure (specific Hepatitis B immunoglobulin is available for passive protection and may be used in addition to Hepatitis B vaccination to confer passive/active immunity after exposure).
- There is currently no recommended post exposure prophylaxis for Hepatitis C ⁶⁹.

See appendix 5 for flow chart on management sharps injury/contamination incident/injury

CHAPTER 8

Decontamination of Reusable Medical Equipment

The Quality and Patient Safety Directorate have identified the need to develop Standards and Recommended Practices for decontamination of RIMD - General Practice, this piece of work will be incorporated into the Directorate plan.

The options from which practices that use sterile medical devices must choose are: -

1. The use of sterile single use devices, which will obviate the need for decontamination.
2. Have reusable devices sterilised by a certified Sterile Services Department (SSD).
3. Decontamination of devices in the practice ⁴⁸.

1. Single use devices

A single use device (SUD) is a medical device that is intended to be used on an individual patient during a single procedure and then discarded. Medical devices that are for single use must be clearly labelled with the words "do not reuse" or display the symbol  ⁵⁰.

Single use devices must not be decontaminated and reused as this can affect their safety, performance and effectiveness, exposing patients and staff to unnecessary risks.

NB Single patient use devices

A medical device that is intended for **single-patient** use means that the device may be used for more than one episode of use on one patient only e.g., nebuliser.

2. Reusable devices sterilised by a certified Sterile Service Department (SSD)

If the users of sterile invasive medical devices opt to have reusable devices sterilised by a certified Sterile Services Department (SSD) in either a public/private hospital this SSD is then termed a "system and procedure pack manufacturer" and the requirements of the regulations as laid down by the Irish Medicines Board (2007) must be met and the devices must comply with all the relevant essential requirements.

3. Decontamination of devices in the practice.

The reprocessing of reusable invasive medical devices should comply with the recommendations set out in the following: -

- Code of practice for decontamination of RIMD (HSE 2007).

- Irish Medicines Board (IMB) (2005) Guide: Manufacture of Medical Devices within Healthcare Institutions.
- Safe and Effective Use of Bench-top Steam Sterilisers, IMB SN2009 (04).
- Irish Medicines Board (IMB): Cleaning and decontamination of reusable medical devices IMB safety notice; SN2010 (11). (**see appendix 9**)

The following must be in place where decontamination of reusable medical devices takes place: -

- Documented robust and comprehensive policies and procedures to ensure that decontamination processes are undertaken in a controlled manner to protect the health and safety of patients and staff.
- Manual cleaning of devices is restricted to those items deemed incompatible with automated processes.
- Equipment used to decontaminate devices must be fit for purpose, validated and tested in accordance with current recommendations.
- Organisations should have systems in place to trace instrument sets through decontamination processes and to the patient.
- A documented training scheme must be in operation with individual training records for all personnel, including management involved in decontamination activities.

It is critical that decontamination of the medical device in question should be carried out in accordance with the device manufacturer's instructions. If there is no reprocessing information provided with the device, then the manufacturer should be contacted for guidance.

* Users and potential purchasers of bench top vacuum steam sterilizers should be aware [the benchtop sterilizer should comply with the requirements of EN 13060 B cycle vacuum sterilizers are recommended.](#)

* Please note that so-called '[prion cycle](#)' alone will **not** inactivate prions ⁵⁷.

Suitability of decontamination facilities

Decontamination facilities should be designed, constructed, maintained and controlled to provide effective segregation of **clean and dirty** activities and to provide an environment that minimizes adventitious contamination of clean and disinfected RIMD.

- The decontamination area must not be used for any other purpose.
- The decontamination area must not be part of any patient treatment area.
- The decontamination area should contain dedicated manual cleaning equipment and accessories for specified RIMD that cannot be cleaned in an automated cleaning process.
- [The thermal washer disinfector should comply with the Standard requirements of EN 15883](#)
- The decontamination area must contain separate sinks for washing and rinsing ³⁹.

(Interested readers may wish to refer to Appendix 7 where the rationale for these recommendations is outlined in greater detail)

Decontamination of medical equipment

Decontamination of reusable invasive medical devices (RIMDs)

Decontamination is the combination of processes (including cleaning, disinfection and sterilisation) used to render Reusable Invasive Medical Devices (RIMDs) safe for handling by staff and for use on patients.

Cleaning is the process that physically removes soiling, including large numbers of microorganisms and the organic material on which they grow. This is usually carried out using neutral detergent and warm water. Detergent wipes may be used provided they have not dried out.

Disinfection describes a process that eliminates many or all-pathogenic microorganisms from inanimate objects, with the exception of bacterial spores, e.g. disinfection of environmental surface with a sodium hypochlorite solution.
The use of disinfectant wipes is not advised.

Sterilisation refers to a physical or chemical process that completely kills or destroys **all** forms of viable microorganisms from an object, including spores. This is usually carried out in an autoclave.

Medical device: The term medical device covers a very wide range of products, except medicines, used in healthcare for the diagnosis, prevention, monitoring or treatment of illness, disease or handicap. The range of products covered by the term includes items such as bandages, surgical instruments, syringes and blood glucose monitors, etc. For a device to be regarded as a medical device, it must have a medical purpose intended⁴⁷.

Medical devices are classified depending on their perceived risk. Instruments and equipment should be cleaned and reprocessed according to the level of risk associated with their intended use. The Spalding classification of infection risk is outlined in the "Code of practice for decontamination of RIMD (HSE 2007)" and in table 10.1.

Decontamination risk assessment

A risk assessment needs to be carried out for each piece of equipment.

This should include: -

- How the item will be used
- Which patient it will be used on
- The potential risk of this equipment acting as a reservoir or vector of infection

This risk assessment will determine what level of decontamination is required.

In general, it is difficult to achieve adequate decontamination in a General Practice setting where the infection risk is classified as critical or semi-critical.

For this reason the use of single use/disposable equipment is preferable.

Decontamination where the risk is non-critical can generally be achieved by cleaning (detergent wipes or solution of detergent and warm water).

Decontamination should always be carried out in accordance with the equipment manufacturer's instructions.

Table 10.1 Classification of Infection Risk Associated with the Decontamination of Medical Devices

Risk	Application	Recommendations	Examples of Medical dDevices
Critical	Items in close contact with a break in the skin or mucous membrane or introduced Into a sterile body area	Requires sterilisation	Surgical instruments, needles for injection, stitch cutter, speculum used to insert an IUD
Semi critical	Items in close contact with non intact skin or mucous membranes ⁷² or body fluids, particularly After use on infected patients or prior to use on immunocompromised patients	Requires high level disinfection (Sterilization preferred where practicable)	Speculum used for cervical smear, pessary and diaphragm fitting ring, nasal speculum, ear speculum and ear syringe nozzle, endoscopes and thermometers (in contact with mucous membrane)
Non-critical	Items in contact with healthy skin but not mucous membranes ⁷² .	Can be processed by cleaning (and low level disinfection where necessary)	Stethoscope, blood pressure cuffs, 24 hour BP monitor, examining table, baby scales, Doppler

Suggested Decontamination Method for Medical Equipment

Equipment	Recommended Method
Airway	Single use
Baby changing mat	Cover with a paper towel and change between each baby. Clean with detergent wipes at regular intervals-after each use
Baby weighing scales	Line the scales with disposable paper towel before each use. Change the paper towel between babies. Clean with detergent wipes at regular intervals-after each use
Blood pressure cuffs	Clean with detergent wipes at regular intervals. If contaminated with blood/body fluids discard into the yellow healthcare risk-waste bag
Ear syringe-Electronic	Refer to manufacturer instructions

Ear syringe- Mechanical	Refer to manufacturer instructions
Ear piece for mechanical ear syringes	Use single use disposable or refer to manufacturer's instructions
Ear pieces for electronic ear syringe	Use single use disposable
Ear pieces for otoscopes	Use single use disposable
ECG equipment ➤ Electrodes ➤ Straps ➤ Machine	<ul style="list-style-type: none"> ➤ Use disposable ➤ Clean with detergent wipes ➤ Clean with detergent wipe, keep covered when not in use
Examination couch	<p>Cover couch with clean disposable paper towel and change after each patient. Clean with detergent wipes at regular intervals and after high-risk procedures.</p> <p>If used for a patient with a transmissible infection (e.g., <i>C. difficile</i>) clean and then disinfect with sodium hypochlorite solution</p>
Dressing Trolley	Clean with detergent wipes and dry before and after use. If contaminated with blood/body fluids or used on an infectious patient clean and then disinfect with sodium hypochlorite solution. Always follow manufacturer's instructions re dilution and health and safety.
Glucometer	Refer to manufacturer's instructions.
Laryngoscope ➤ Handle ➤ Blade	<p>Clean with detergent wipe and dry thoroughly. If contaminated with blood/body fluids or used on an infectious patient clean and then disinfect with sodium hypochlorite solution Always follow manufacturer's instructions re dilution and health and safety.</p> <p>Ideally disposable</p> <p>If reusable, clean with detergent and water, and then sterilise after each use according to manufacturer's instructions.</p>
Measuring tape	Use laminated. Clean with detergent wipes at regular intervals.
Nebulizer Masks and tubing	Single use
Nebulizer machine	<p>Clean the outside of this machine with detergent wipes after each use. However, if contaminated with blood/body fluids or used on an infectious patient clean and then disinfect with sodium hypochlorite solution. Always follow manufacturer's instructions re dilution and health and safety.</p> <p>A new bacterial filter should be fitted after each patient to prevent cross infection (in line with</p>

	manufacturer's recommendations). There is no need to change the inlet filter, as this is not a bacterial/viral filter, just a dust filter to prevent airborne dust, fluff and other debris entering the machine. This filter only needs to be changed when it becomes discoloured and grey i.e., no longer the bright white colour it was when new.
Oxygen mask and tubing	Single use
Peak flow meter	Single patient use item
Placebo inhalers	Single use
Scales (weighing)	Clean with detergent wipes at regular intervals. If visibly soiled with blood/body fluids or used by an infectious patient clean and then disinfect with sodium hypochlorite solution Always follow manufacturer's instructions re dilution and health and safety.
Scissors ➤ Nurses scissors	Ideally disposable. If reusable clean with detergent wipe after each use, and then disinfect with a 70% alcohol swab
➤ Sterile scissors (for aseptic procedures)	Ideally disposable If reusable, clean with detergent and water, and then sterilise after each use according to manufacturer's instructions.
Speculae	Ideally disposable If reusable, clean with detergent and water, and then sterilise after each use according to manufacturer's instructions.
Sphygmomanometer	Clean with detergent wipes. If visibly soiled with blood/body fluids or used on an infectious patient clean and then disinfect with sodium hypochlorite solution Always follow manufacturer's instructions re dilution and health and safety.
Spirometer	An individual bacterial/viral (B/V) filter should be used .The filter must be discarded after use. The equipment should be cleaned after each use in accordance with the manufacturer's recommendations.
Stethoscopes	Clean with detergent wipes or 70% alcohol at regular intervals.
Thermometers Electronic/Digital	Refer to manufacturer's instructions for body of thermometer and use disposable tip covers.
Tourniquets	Use disposable or clean with detergent wipes and dry thoroughly. If contaminated with blood/body fluids discard into the yellow healthcare risk-waste bag.

CHAPTER 9

Decontamination of the Environment

Decontamination of the Environment

Environmental Cleaning

Routine environmental cleaning is required to minimise the number of microorganisms in the environment. A risk assessment must be undertaken to determine the method of decontamination required. Items not in close contact with patients or their immediate surroundings, e.g., floors, walls, ceiling, sinks and drains, present a minimal risk to patients and do not usually require disinfection. In most cases cleaning with a neutral detergent and warm water will be sufficient.

Suggested Decontamination Method of the Environment/General Equipment

Area	Recommended Method
Bins	Wash with detergent and warm water. Where disinfection required use a chlorine-releasing agent /sodium hypochlorite 1000 ppm concentration. Rinse and dry previously mentioned rinse and dry should be included for all sites referring to sodium hypochlorite as these agents can be corrosive. Always follow manufacturer's instructions re dilution and health and safety.
Brushes (toilet)	Regularly wash with detergent and warm water and suspend on holder to dry. If grossly contaminated risk assess and dispose of accordingly.
Buckets	Clean with warm water and detergent after use. Dry and store inverted. Equipment in contact with infective material should be cleaned and then disinfected with sodium hypochlorite solution.
Carpets	Not recommended in the clinical area. Carpets act as a reservoir for dust and microorganisms. They should be removed to maintain a safe environment
Ceilings	When visibly soiled, wash with detergent and water
Curtains	Should be laundered at least 6 monthly and when visibly soiled
Floors	<i>Dry Cleaning</i> – Use a vacuum cleaner or dust-attracting mop. <u>Sweeping brushes must not be used in clinical areas.</u>

	<i>Wet Cleaning</i> – wash with neutral detergent and warm water. Disinfection is only required if there is visible soiling with blood/body fluids or following treatment of a patient with a transmissible infection. Disinfect with sodium hypochlorite solution. Always follow manufacturer’s instructions re dilution and health and safety.
Furniture and fittings	Clean with detergent and warm water. If visibly soiled with blood/body fluids or used by an infectious patient clean and then disinfect with sodium hypochlorite solution. Always follow manufacturer’s instructions re dilution and health and safety.
Mop heads	Change after use and launder.
Sinks/wash hand basins and surrounding surfaces	Clean with detergent and warm water. A non-abrasive cream cleanser may be used to remove stain & scum. If soiled with blood/body fluids or used by an infectious patient clean and then disinfect with sodium hypochlorite solution. Always follow manufacturer’s instructions re dilution and health and safety.
Soap Dispenser/alcohol dispenser	The casing and the nozzle of the soap dispenser should be cleaned regularly with warm water and detergent. It is recommended that the dispenser have individual replacement cartridges. Clean inner casing of dispenser when changing the cartridge. If soap dispensers with reservoirs are used, inside container should be cleaned and dried prior to refilling. Rinse and dry thoroughly using paper towels. Do not top up liquid soap.
Telephones	Damp dust with detergent and warm water. If visibly soiled with blood/body fluids or used by an infectious patient disinfect with a 70% alcohol swab.
Toilet	All surfaces should be cleaned with detergent and warm water. Pay particular attention to handles and seats. If visibly soiled with blood/body fluids or used by an infectious patient clean and then disinfect with sodium hypochlorite solution. Always follow manufacturer’s instructions re dilution and health and safety. After use of hypochlorite the toilet seat should be rinsed with water and dried thoroughly (as this may act as an irritant to skin).

Toys – Hard (Soft toys not suitable for communal use)	Toys/wipeable books must be cleaned at regular intervals with detergent wipes. If visibly soiled with blood/body fluids or used by an infectious patient clean and then disinfect with sodium hypochlorite solution. Rinse well with water afterwards and dry thoroughly. Dispose if grossly contaminated.
Vacuum	Outside of machine should be regularly cleaned with detergent and warm water.
Walls	Clean with detergent and warm water when visibly soiled. If visibly soiled with blood/body fluids clean and then disinfect with sodium hypochlorite solution.
Work surfaces	General cleaning: clean with detergent and water. If visibly soiled with blood/body fluids clean and then disinfect with sodium hypochlorite solution.

Cleaning Methods

Dry Methods

- Dust attractant mop
- Dry dusting is not recommended as it may disperse dust and micro-organisms
- Sweeping brushes must not be used in clinical areas as they disperse dust and micro-organisms

Wet Methods

- Scrubbing
- Mopping
- Damp dusting

General Principles to Follow when Cleaning

1. Ensure any electrical equipment to be cleaned is unplugged before commencing the decontamination cleaning. (Ensure cold chain for vaccine storage is maintained if fridge is unplugged).
2. Refer to the health and safety data sheets before using any product.
3. Display warning signs in the area, ensuring all signs are visible.
4. Wear suitable personal protective equipment. For most tasks gloves and aprons are sufficient. If there is the potential of a splash/irritation to the conjunctiva or mucous membranes face protection such as a mask and visor or goggles must be worn.
5. Prepare a fresh solution of cleaning agent or disinfectant as required.
6. Do not over-wet the floor.
7. Clean using lightly moistened clean disposable cloths (colour coded as per National Hospital Office, below).The number of cloths required for cleaning per room depends on the level of activity being carried out e.g

- one for patient examination area, one for desk area, one for washbasin to prevent transfer of microorganism from one area to another.
8. Particular attention should be given to frequently touched surfaces and those most likely to be contaminated with blood or body fluids e.g., toilet seats/flush handles, sinks/taps and doorknobs.
 9. Sodium hypochlorite may damage metal surfaces. Remove disinfectant solution with clean water and dry with a disposable paper towel.
 10. Dry equipment with paper towel.
 11. Change gloves and perform hand hygiene between different tasks.
 12. Dispose of solution in the toilet or designated household sink. Do not discard into wash hand basins
 13. Dispose of cleaning cloth.
 14. All chemicals must be used in accordance with manufacturer's instructions to ensure correct dilution and usage. These should be stored in a locked cupboard/room safely away from public access.
 15. All equipment should be left clean, dry and tidy in storage area after use.

National Color Coding System ⁵⁹

Area	Colour Disposable Cloth
General areas including GP rooms, reception area/offices & public areas. Important to use new disposable cloth for wash hand basins (cave gram negative bacilli e.g pseudomonas) : Blue	
Sanitary (toilets) & washroom floors, sluices : Red	

Suggested Cleaning Agents

- Neutral detergent: Used to physically remove soiling. Detergents can be alkaline or neutral. Neutral detergents are pH 7 meaning neither acidic nor alkaline. Read the can or bottle first to determine. It is recommended that a neutral detergent be used as outlined in this guideline.
- Cream cleanser.
- Other cleaning agents for specific tasks e.g., glass and de-scaling may be permitted provided they do not contain any disinfectant.

Suggested Disinfectant Agents

For disinfection (after cleaning) of equipment/environment contaminated with body fluids (e.g., urine, faeces, vomit) or after use by an infected patient: -

- Use sodium hypochlorite **1000ppm** solution freshly made up from sodium hypochlorite tablets and cold water every day. Refer to manufacturer's instruction for dilution ⁵⁹.

For disinfection (after cleaning) of equipment/environment contaminated with blood: -

- Use sodium hypochlorite **1000ppm** solution, freshly made up from sodium hypochlorite tablets and water. Refer to manufacturer's instruction for dilution.

Note: *Correct dilution of disinfectants is essential. A 1-litre graduated jug is required for this purpose. Many sodium hypochlorite solutions will stay stable for 24 hours once made up, and can be used for decontamination of spots and splashes of blood urine and bodily fluids. Check with individual manufacturers regarding length of time freshly made up solution remains effective.*

For more detail on decontamination products see Appendix 10.

CHAPTER 10

Management of Blood and Body Fluid Spills

Blood Spills

Spills of blood and other high risk body fluids represent an infection risk and should be removed as soon as possible as described below ⁷⁶.

Body fluids/tissue that should be handled with the same precautions as blood includes:

- ✓ Any body fluid containing visible blood.
- ✓ Vaginal secretions, semen, synovial fluid, cerebrospinal, peritoneal, pleural, pericardial, synovial and amniotic fluids.
- ✓ Saliva in association with dentistry.
- ✓ Unfixed tissues and organs ⁵⁹.

** Practice staff dealing with spillages should be trained to do so. The person who discovers the spill is responsible for making it safe.*

Precautions to be Taken with all Blood Spills

- ✓ Position a warning sign "cleaning in progress" beside the contaminated area.
- ✓ Keep other persons away from the contamination until it is effectively and appropriately dealt with.
- ✓ Cuts/abrasions or breaks in the skin must be covered with waterproof dressing.
- ✓ All necessary equipment to deal with a spillage must first be gathered, including personal protective equipment (PPE) and spillage kits (if used). For ease of use spillage kits should be considered as they contain all the necessary materials. These should be checked to see that they are in date.
- ✓ Consider which PPE is required. **Single use**, non-sterile disposable gloves and a plastic apron must be worn when dealing with a spillage. If there is the potential of a splash to the conjunctiva or mucous membranes, face protection such as a mask and visor or goggles must be worn.
- ✓ Glass fragments must be picked up using a scoop and placed in a sharps bin. Eye protection must be worn when dealing with glass fragments.

Spots/Splashes of Blood or Small Volume Spills of Blood (less than 30 mls)

- ✓ Wear a disposable plastic apron and gloves.
- ✓ Wipe up the spots/splashes/small volume spills with paper towels which have been soaked in a freshly prepared solution of sodium hypochlorite 1,000ppm. Place waste into a yellow healthcare risk waste bag.

- ✓ Clean the area with a solution of detergent and warm water.
- ✓ Disinfect with solution of sodium hypochlorite 1,000 ppm
- ✓ Remove gloves and apron and place into a yellow healthcare risk waste bag
- ✓ Perform hand hygiene

OR if using spill kit

Cover the spillage with sodium hypochlorite granules*.

- ✓ Leave for 2-3 minutes to allow for disinfection.
- ✓ When the fluid is completely absorbed, scoop up with a disposable scoop (contained in some spill kits) or mop up with disposable cloth or paper towel and place in a yellow healthcare risk waste bag.
- ✓ Clean the area with a solution of detergent and warm water.
- ✓ Disinfect with solution of sodium hypochlorite 1,000 ppm
- ✓ Remove gloves and apron and place into a yellow healthcare risk waste bag.
- ✓ Perform hand hygiene.

*Where hypochlorite granules not available follow method for large spill (see below) using freshly prepared solution of sodium hypochlorite 10,000 ppm.

Large Volume Spill of Blood (greater than 30 mls)

- ✓ Concentrated chlorine granules are not suitable for dealing with large spills as large amounts can act as a respiratory irritant.
- ✓ Ventilation is essential during the cleaning process.
- ✓ Wear a disposable plastic apron and gloves.
- ✓ If there is a risk of splashing, wear a mask and eye protection (visor or goggles).
- ✓ Place paper towels over the spillage.
- ✓ Pour freshly prepared solution of sodium hypochlorite 10,000ppm over the blood soaked towels.
- ✓ Leave for 2-3 minutes.
- ✓ Gather the soiled paper towels (fresh paper towels may be required to soak up all the liquid) and discard into a yellow healthcare risk waste bag, or into yellow rigid bin if there is a risk of leakage.
- ✓ Clean the area with a solution of detergent and warm water.
- ✓ Disinfect with solution of sodium hypochlorite 1,000 ppm
- ✓ Allow to dry.
- ✓ Remove personal protective equipment and place in yellow healthcare risk waste bag.
- ✓ Perform hand hygiene immediately after removing gloves.

Note: Correct Dilution of Disinfectants is Essential.

10,000 ppm for large volume blood spills

1000 ppm for spots splashes and small volume blood spills, spills of urine, vomit and faeces.

A 1-litre graduated jug is required for this purpose. The outer surface can be cleaned and disinfected if contaminated, using the chlorine solution after use and left inverted to dry. Chlorine releasing agents are corrosive to metal should be rinsed and dried after contact. **Many sodium hypochlorite solutions will stay stable for 24 hours once made up.** Check individual manufacturer's instructions regarding length of time solution remains effective. (See appendix 8 for further information re disinfectant agents).

All items used during a spillage must be disposed of, or decontaminated appropriately. Control of substances hazardous to health (COSHH) and product sheets should also be referred to in order to ensure safe management of spillages e.g., disinfectants being used in accordance with manufacturer's instructions for reconstitution, storage, contact times and expiry dates.

Spillage of Urine Faeces or Vomit

- ✓ Wear a disposable plastic apron and gloves.
- ✓ **Chlorine based disinfectants should not be added to spillages of urine or vomit as it may result in the release of toxic chlorine vapour.**
- ✓ Cover the spill (urine, faeces or vomit) with disposable paper towels and allow being completely absorbed.
- ✓ Using the paper towels, mop up the area of spillage.
- ✓ Place the paper towels into a non-risk healthcare waste bag. If urine is blood-stained or faeces is from a patient known or suspected to have a gastrointestinal infection, then place the paper towels into a yellow healthcare risk waste bag.
- ✓ Clean the area with a solution of neutral detergent and warm water. Allow to dry.
- ✓ Then disinfect the contaminated area using a disposable cloth or paper towels soaked with a freshly made solution of sodium hypochlorite 1,000ppm
- ✓ Remove personal protective equipment and place in a non-risk healthcare waste bag. If dealing with a faeces spill from a patient known, or suspected to have a gastrointestinal infection, place into a yellow healthcare risk waste bag if contaminated.
- ✓ Perform hand hygiene immediately after removing gloves.

Suggested Stock List to Manage a Spill

- ✓ Non sterile disposable gloves
- ✓ Plastic aprons
- ✓ Goggles/visors
- ✓ Masks
- ✓ Warning sign
- ✓ Approved appropriate solution or granules containing sodium hypochlorite with a concentration of 1,000 and 10,000ppm available chlorine
- ✓ Neutral detergent
- ✓ 1 litre graduated jug/graduated plastic capped bottle
- ✓ Waste receptacle-yellow healthcare risk waste bag (yellow rigid bin if leakage)
- ✓ Paper towels
- ✓ Spill kit

* A spill kit will contain a lot of the above

* Detergents can be alkaline or neutral. Neutral detergents are pH 7 meaning neither acidic nor alkaline. Read the can or bottle first to determine. It is recommended that a neutral detergent be used as outlined in this guideline.

CHAPTER 11

Management of Laundry

Laundry from infected patients may be heavily infected with pathogenic microorganisms. Reusable fabrics that have close, prolonged contact with patients can become contaminated. Unless thorough decontamination occurs between users, these microorganisms can be transmitted to susceptible patients. Practices, which do not use a contracted laundry service, should use disposable pillowcases, sheets and hand towels as appropriate.

Disposable Linen

Instead of using bed linen in the clinical area, cover the couch with clean disposable paper towel and change after each patient. Pillows are not considered essential, as all couches should have head-tilts. If pillows are used they should be enclosed in a waterproof cover and if disinfection required, use chlorine releasing substance according to manufacturer's instructions. Instead of using pillowcases, the paper roller towel may be pulled up to cover both the couch and pillow. If disposable pillowcases are used, change between patients. Blankets/sheets are not considered essential. For modesty, a length of disposable paper towel/disposable sheet should be used to cover exposed parts of the body.

Reusable Linen

Practices that do not use disposable linen should use a contracted laundry service and the service provider's guidelines must be followed. The contracted laundry should have quality assurance procedures including external quality evaluation. The HPSC (Health Protection Surveillance Centre) recommend that segregation and transportation of used laundry should be in accordance with the guidelines from the Society of Linen Services and Laundry Managers (2008) 24,30,77. Laundry should be handled and transported in a manner that prevents transmission of microorganisms to other patients, health care workers or the environment. There should be a documented process for planning and managing linen in the practice. Linen should be changed between patients. Staff handling soiled linen should wear gloves and a disposable plastic apron. Foul/infected linen must be placed carefully into a soluble alginate bag in line with the national linen segregation policy ⁵⁹.

The standard disinfection process for linen (used and infected) requires thermal disinfection at 65 degrees for 10 minutes or 71 degrees for 3 minutes ².

Pillows

Pillows should be enclosed in a waterproof cover. Clean regularly with a solution of detergent and warm water and disinfect when required with sodium hypochlorite solution.

Curtains

Curtains should be laundered at least 6 monthly and when visibly soiled ⁵⁹

CHAPTER 12

Safe Management of Healthcare Risk Waste

The waste management acts of 1996 and 2001 places the primary responsibility for waste and its disposal on the producer or holder of the waste. Disposal means the acceptance of the waste by a local authority or private waste contractor properly licensed/permitted to transport store and treat such healthcare risk wastes. The producer is also responsible for the safety of staff, contractors and members of the public who may be exposed to the waste

16.

Waste Collection Permit

The waste holder can be defined as the owner, person in charge or any other person having possession or control of the waste. It is the responsibility of the waste holder to ensure that the waste carrier possesses a valid waste collection permit. The waste collection permit is issued by the nominated authority authorizing that permit holder to collect waste subject to the conditions attached to the permit. From the 1st Feb 2012 all waste collection permits shall be processed by the National Waste Collection Permit Office.

Waste Transfer Forms

A waste transfer form is an identification document for tracking and controlling the movement of hazardous (including healthcare risk waste) waste within Ireland and is used to ensure that a consignment is delivered to an authorized facility.

Transfrontier Shipment Form

Required for pharmaceutical waste as shipped abroad for incineration.

Responsibilities

All Personnel

- Ensure the safe disposal of waste they have generated according to "Segregation and Packaging of Healthcare Risk and Non-Risk Waste"
- Undertake training which should be provided for all those who generate, segregate, packaging, collect, transport and store waste.
- Ensure that waste is correctly and safely segregated and prepared for collection.

General Practice Manager/GP

- Structures are in place so that waste is generated into the appropriate containers at the point of generation.
- Adequate supplies of approved bags/containers and individual tag ties are available.
- Training is available for staff and staff are facilitated to attend.
- Measures are taken to correct hazards identified or breach of guidelines.
- Any incidents that occur in relation to waste are reviewed and appropriate action taken to prevent a recurrence in the future.

Segregation and good packaging are required in order to comply with the application of basic waste management principles, which are dictated by environmental, health and safety considerations as well as statutory requirements. The Segregation, Packaging and Storage Guidelines for Healthcare Risk Waste (DOHC, 2010) recommends a uniform system of segregation and packaging in the provision of patient care in the Republic of Ireland. **Please note a uniform colour coded system is not currently in place so you need to check with your local waste contractor to ensure you place healthcare risk waste in the correct receptacle.**

The following guideline outlines the various waste produced in the General Practice setting and how to manage it correctly”

Healthcare Waste

This is the solid or liquid waste arising from healthcare and must be segregated at the point of origin into two main categories:

- healthcare risk waste
- Healthcare non risk waste.

Healthcare risk waste is classified as hazardous or dangerous due to the risk of it being infectious or because it contains used sharp materials that could cause injury. The infectious property is the primary hazard in dealing with healthcare waste. Infectious substances are defined as substances containing viable micro-organisms including bacteria, viruses, rickettsiae, parasites, fungi or their toxins and other agents such as prions, which are known to cause disease

Healthcare non risk waste is categorised as non risk waste, which is not hazardous to those who come in contact with it. Its contents are non- infectious, or non-chemical.

Healthcare Non-Risk Waste

Category	Description
Domestic Waste	This includes normal household waste and catering waste, all non-infectious waste, non-toxic and non- chemical waste <ul style="list-style-type: none"> • office waste, • paper hand towels, • wrapping paper and cardboard.
Confidential Material	This includes shredded waste documents of a confidential nature e.g. patient notes and laboratory results.
Patient Care Equipment	Items not contaminated with blood or body fluids and items contaminated with faeces, urine or breast milk that has been assessed as non-infectious <ul style="list-style-type: none"> • plastic items plastic wrapping, • oxygen tubing and face masks, • nebulizer sets, • gloves and aprons.
Potentially Offensive Material	Items contaminated with faeces, urine or breast milk that has been assessed as non-infectious and not contaminated with blood or other body fluids, <ul style="list-style-type: none"> • empty urine specimen containers (empty urine into sluice or toilet) • pregnancy test kits • incontinence wear, stoma bags, • urinary drainage bags, tubing urinary catheters

Healthcare Risk Waste

Category	Description
Infectious Waste	<p>1: Blood and any items visibly soiled with blood e.g. wound dressings, wound drains, swabs, disposable aprons and gloves that are blood stained.</p> <p>2: Items contaminated with faeces, urine or breast milk with known or suspected transmissible micro-organisms.</p> <p>3: Items contaminated with body fluids other than faeces, urine or breast milk i.e. pus, sputum or peritoneal fluid e.g suction containers and tubing and VAC wound dressing canisters.</p> <p>4: Incontinence wear with known or suspected enteric pathogens e.g. Clostridium difficile or salmonella</p> <p>5: Other healthcare infectious waste from treatment areas as covered by definition of</p>

	infectious waste.
<p>Sharps</p> <p>Single use metal instrument's e.g. forceps, scissors, sponge holders ,staple remover .</p>	<p>Categorized as any object that has been used in the diagnosis, treatment or prevention of disease and that is likely to cause a puncture wound or cut to the skin, e.g. used needles, scalpels, razors, lancets, contaminated broken glass, stitch cutters or any other contaminated disposable sharp instrument or item.</p> <p>These items cannot be disposed of in a sharps bin.</p> <p>You need to check with your local waste contractor to clarify which container is appropriate e.g endoscopic bin for incineration,</p>
Pharmaceuticals	<p>Unused drugs and other pharmaceuticals should be returned to the pharmacy. This is the preferred method of disposal of pharmaceuticals. If this method is not feasible out of date drugs must be disposed of in a 30 litre yellow rigid bin with a purple lid.</p>

Segregation

This should take place at the point of generation (see appendix 9 for further information). All practices should stock suitable and consistent packaging, which is vital in enabling the different forms of waste to be handled, transported and disposed of in a manner, which is safe and consistent with the nature of the waste. The risk of waste spreading infection is very low when handled properly.

General Requirements for Packaging of Health Care Risk Waste

Practice staff should use appropriate personal protective equipment (PPE). Gloves are always used when handling waste; an apron can be used to protect clothes if handling wet waste. Hand hygiene should be carried out after handling waste (even if gloves are worn). In general all containers, including wheeled bins carrying bagged waste, should conform to basic requirements relating to:

Manufacture:

All packaging's must be manufactured and tested to approve UN standards.

Colour coding:

The basic colour put forward for the body of each type of container is yellow. Lid colours are used to indicate the disposal stream.

Labelling:

All packaging used for healthcare risk waste must be marked with a diamond shaped risk label with class number "6" and biohazard symbol and the relevant 4 digit UN number (e.g. UN3291)

Filling:

Containers must not be over-filled. In general rigid boxes should not be more than three-quarters filled (or beyond manufacturer's fill line) while bags should not be more than two thirds filled.

Closure and Storage:

It is essential that lids to UN containers are fitted and closed in accordance with the manufacturer's recommendations. Plastic bags should be closed using a "swan-necking" technique and tied with either tape or a cable-tie. Once closed the person must sign that the container is sealed correctly. Bags/containers that have been appropriately sealed, tagged and labelled should be stored in a designated secure area (inaccessible to the public) awaiting collection.

Tracability:

All waste packages must be tagged with a unique reference number which is traceable to the point of production. Proprietary closure ties which incorporate a reference number system are now extensively used. Each healthcare waste generator should retain records of tags issued to particular locations for a recommended period of not less than three years.

Transportation of healthcare risk waste is governed by several sets of regulations (and must conform to ADR* requirements)

dealing with different concerns relating to the materials transported. The main regulations are:

- The Carriage of Dangerous Goods by Road Act 1998 (no. 43 of 1988)
- The Carriage of Dangerous Goods by Road Regulations, 2007 (S.I. No. 288/289 of 2007)
- S.I. No. 147 of 1998 – Waste Management (Movement of Hazardous Waste) Regulations, 1998
- The Waste Management (Collection Permit) Regulations, 2007 (S.I. No. 820 of 2007)

The local authority or private waste contractor disposing of the Practice healthcare waste should ensure appropriate and proper final disposal to suitably licensed facilities.

The frequency of collection of healthcare waste should be dictated by clinical activity but frequency of collection should be arranged to ensure that waste is stored no longer than necessary or appropriate at the point of origin.

*ADR: Accord Dangereuses Route - short for "L'accord europeen au transport des marchandises dangereuses Par route", now known as the European Agreement concerning the International Carriage of Dangerous Goods By Road". In the HSE Waste Management Guidelines ADR is referred to as "The Carriage of Dangerous Goods by Road Regulations, 2007.

Waste Segregation in General Practice (Full poster appendix 13)

Yellow Clinical Waste Bags used for:

- Blood stained or contaminated/infectious items including dressings, swabs, bandages, personal protective equipment (gowns, aprons, gloves). Suction catheters and tubing.
- Incontinence waste from known or suspected enteric infections.
- **Soft Waste Only**, no hard objects.

Excluded items:

- Sharps or fluids.
- Disposable forceps (should be placed in sharps container/yellow rigid bin as they will tear yellow bag).
- Chemical/cytotoxic/pharmaceutical waste.
- Blood or blood components.

Place Yellow Bag in foot-operated pedal bin/suspend in rigid holder



Yellow rigid puncture-resistant box/bin used for:

- All used sharps
- Needles and syringes
- Blood stained /contaminated glass
- Stitch cutters

Excluded items:

- Cytotoxic waste
- Chemicals/pharmaceuticals
- Free liquids

* *Place sharps containers out of the reach of children and all unauthorized people at ALL times. Always dispose of sharps safely as outlined in guideline 7.*

Yellow rigid puncture-resistant box/bin with red or blue lid.



Rigid Container with Yellow Lid used for:

- Material containing small volumes of free fluids.
- Contained blood, plasma and body fluids.
- Blood administration sets.
- Disposable suction liners / redivac drains/ VAC Canisters.
- Sputum containers.
- Disposable blunt instruments.
- Empty medicine bottles.

Excluded items:

- Sharps.
- Cytotoxic /chemical waste.
- Free fluids.

Liquid waste should be contained in a leak proof container Absorbent pads must be used when liquid present.

Yellow Rigid box/ bon with yellow sealable lids.



Yellow Rigid bin/box with Purple Lid used for:

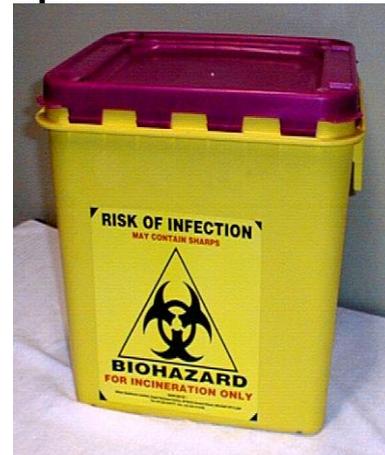
- Non-sharps cytotoxic contaminated healthcare waste including left-over cytotoxic drug preparations.
- Pharmaceutical waste and discarded chemicals and medicines.

Excluded items:

- Sharps, pharmaceuticals or medicines in bulk.

Must contain absorbent material when liquid present

Yellow Rigid bin/box with Purple Lid



Yellow Sharps bin/ Box with Purple Lid used for:

- Needles, syringes, sharp instruments, cartridges and broken glass which have been used for the administration of Cytotoxic Drugs.

Excluded items:

- Free liquids.

Yellow Sharps bin/Box with Purple Lid



- * Medication vials and bottles containing trace quantities may be discarded in the regular yellow sharps container. Medication vials and bottles containing more than residual quantities must be disposed of in the yellow rigid container **or** sharps bin with purple lid (pharmaceutical container).

Disposal of Urine

Urine samples from non-infectious patients may be emptied into the toilet/sluice and the container placed in black/clear bag. Urine from an infectious patient **and** where there is no immediate access to a toilet should be placed (still in primary container) in a yellow rigid bin with yellow lid.

- * **Hand washing facilities should only be used for the purpose of hand washing i.e. should not be used for disposal of any body fluids (including urine) as this may give rise to the potential for infection from taps and sinks.**

Key Principles in Successfully Managing Healthcare Risk Waste

- A proper understanding of the nature of the waste generated.
- The ability to identify and segregate different hazardous waste into separate streams in accordance with the disposal method appropriate to each stream.
- The use of packaging, which keeps any hazard, confined so that personnel and the environment are protected during storage, handling and transportation.
- Understanding and adherence to statutory requirements in relation to packaging, labeling and consignment of hazardous waste.
- The use of licensed carriers and appropriate vehicles for transportation of the waste for treatment or final disposal.
- The use of a uniform tagging and tracking system which enables the waste to be identified and traced at all stages from generation to disposal.
- Appropriate and proper final disposal to suitably licensed facilities.
- Maintenance of comprehensive records.
- Accountability / monitoring and performance measurement.
- Training personnel involved so management of the waste is carried out safely, in accordance with best practice and in compliance with statutory requirements.

It should be noted that the Environmental Protection Agency produced a National Hazardous Waste Management Plan 2008-2012 in which it recommended the following:

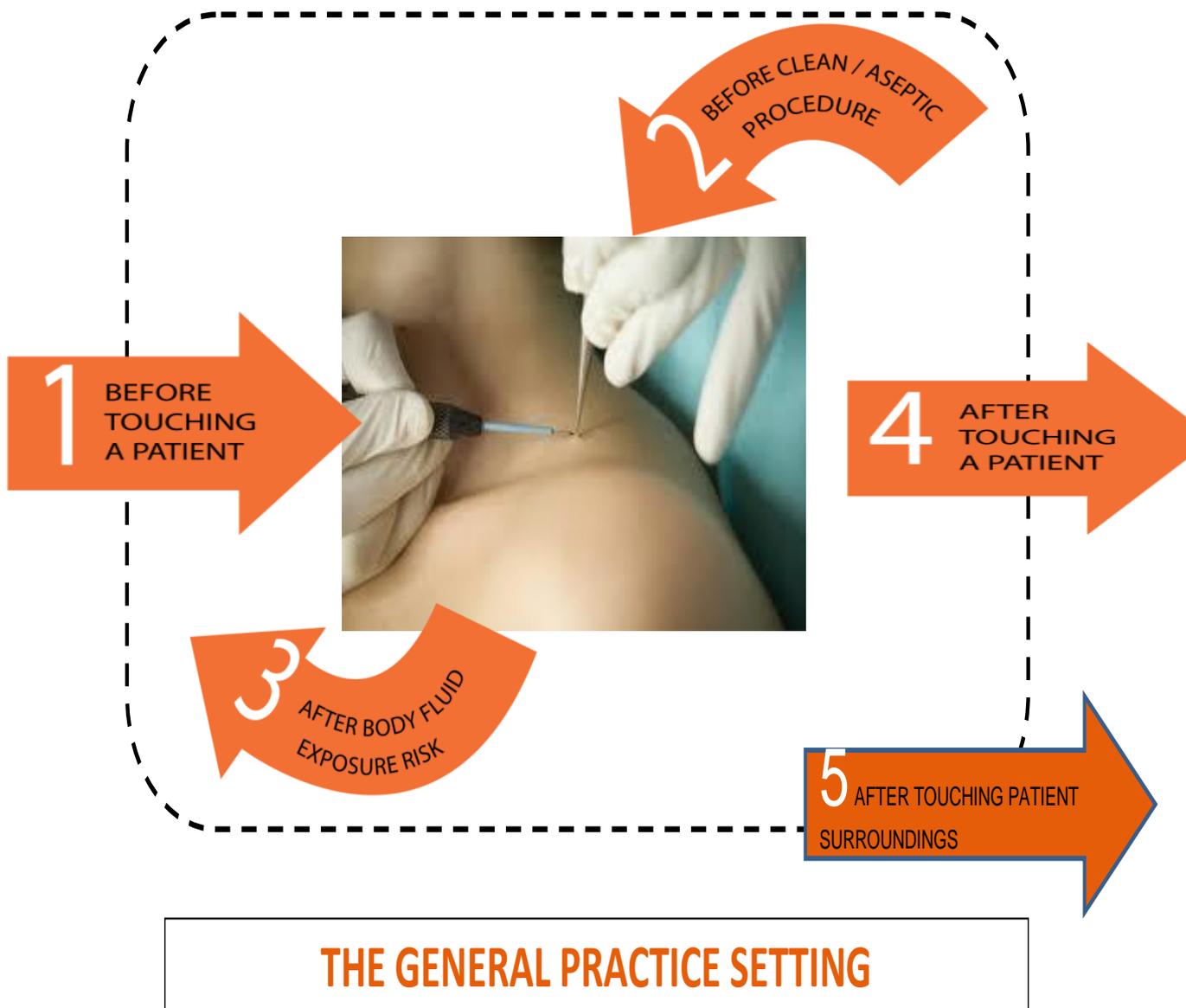
"The Health Service Executive should ensure that adequate and suitable systems are in place to manage healthcare risk waste for which it is responsible from the smallest sources. The EPA will engage with the Health Service Executive and other relevant stakeholders on this issue"

For further information on Healthcare Risk Waste Management Segregation Packaging and Storage please refer to

- Department of Health and Children (2010) Healthcare Risk Waste Management Segregation Packaging and Storage Guidelines for HealthCare Risk. Dublin, HSE.

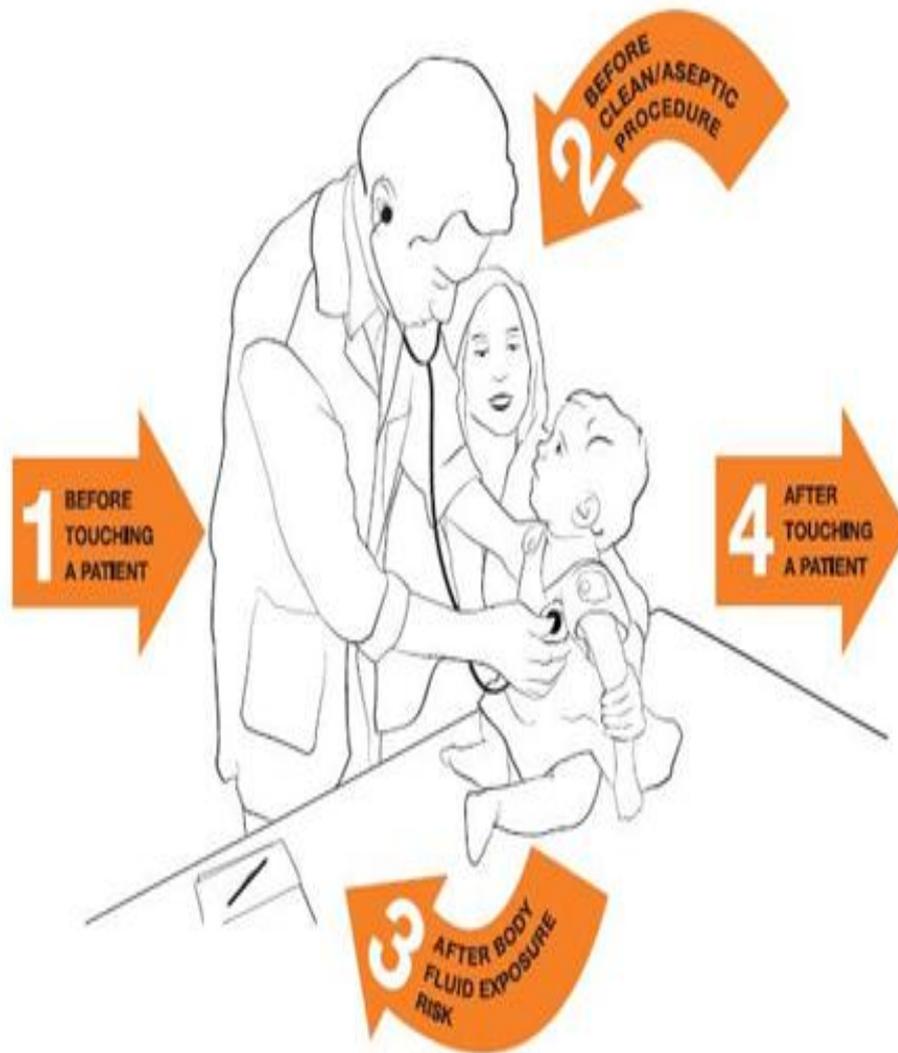
- Department of Health and Children (2011) Waste Management Awareness Handbook 2011.
http://pnd.hseland.ie/download/pdf/waste_management_handbook.pdf

WHO 5 Moments for Hand hygiene ; minor operative procedures



4 Moments

WHO 4 Moments for Hand Hygiene;



THE GENERAL PRACTICE SETTING

Handwashing Technique

Preparation



1. Remove hand and wrist jewelry (wedding band allowed/N.B. Keep nails short)



2. Wet hands thoroughly under warm running water



3. Apply 5mls of soap/antiseptic soap to cupped hand by pressing dispenser with heel of hand (do not use finger tips on the dispenser)

Handwashing – (process takes at least 15 seconds)



A. Rub palm to palm 5 times



B. Rub right palm over the back of left hand up to wrist level 5 times. Do the same with the other hand



C. With right hand over back of left hand rub fingers 5 times. Do same with the other hand



D. Rub palm to palm with the fingers interlaced



E. Wash thumb of each hand separately using a rotating movement



F. Rub the tips of the fingers against the opposite palm using a circular motion. Also ensure nail beds are washed



G. Rinse hands thoroughly under running water to remove all traces of soap



H. Turn off tap using elbows

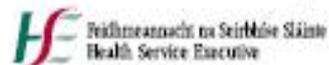


I. Dry hands completely using a disposable paper towel



J. Discard paper towel in waste bin. Open bin using foot pedal only to avoid contaminating clean hands

Supported by PEI
Developed by Infection Control Team
St. James's Hospital



Clean your hands
Say no to infection

How to Handwash?

WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HANDRUB

 Duration of the entire procedure: 40-60 seconds



Wet hands with water;



Apply enough soap to cover all hand surfaces;



Rub hands palm to palm;



Right palm over left dorsum with interlaced fingers and vice versa;



Palm to palm with fingers interlaced;



Backs of fingers to opposing palms with fingers interlocked;



Rotational rubbing of left thumb clasped in right palm and vice versa;



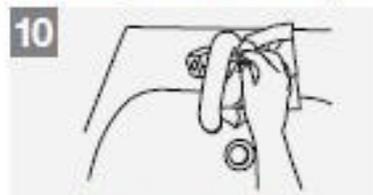
Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



Rinse hands with water;



Dry hands thoroughly with a single use towel;



Use towel to turn off faucet;



Your hands are now safe.



World Health Organization

Patient Safety

A World Alliance for Safer Health Care

SAVE LIVES

Clean Your Hands

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Appendix 4 Alcohol Handrub Technique

Alcohol Handrub Technique



1. Remove hand and wrist jewellery (wedding band allowed) N.B. Keep nails short.



2. Apply about 3mls of alcohol and rub into palm of hand.



3. Rub palm to palm to spread alcohol over entire hands and fingers.



4. Rub the back of your left hand with the palm of right hand. Reverse and repeat action.



5. Open fingers and rub the finger webs. Reverse and repeat action.



6. Rub palm to palm with fingers interlocked.



7. Rub thumb of each hand using a rotating movement.



8. Rub the tips of the fingers against the opposite palm using circular movements.



9. Rub wrists of both hands.



10. Allow hands to dry completely.

Appendix 5 Definitions For Hand Hygiene

- Hand hygiene:
A general term that applies to hand washing, antiseptic hand wash, alcohol-based hand rub, or surgical hand antisepsis.
- Hand washing:
Washing hands with plain (non-antimicrobial) liquid soap and water.
- Hand decontamination:
Is an activity, which aims to remove transient microorganisms, acquired on the hands before they can be transferred. Hands that are visibly soiled with dirt or organic material, or potentially contaminated with microorganisms, should be washed using liquid soap and water or antiseptic hand cleansing solutions. Additionally, if hands are potentially contaminated, but visibly clean, they can be decontaminated using a waterless alcohol-based hand rub.
- Plain soap:
Plain soap refers to liquid detergents that do not contain antimicrobial agents.
- Alcohol-based hand rub:
An alcohol containing preparation designed for application to the hands without the use of water. It serves to reduce the number of viable microorganisms present on the skin. It may be used at any time to decontaminate physically clean hands.
- Antiseptic hand wash:
Washing hands with water and soap or other detergents containing an antiseptic agent.
- Antiseptic agent:
Antimicrobial substance that is applied to the skin to reduce the number of microbial flora present. Examples include alcohols, chlorhexidine, iodophors, and triclosan.

Appendix 6 Cover Up / Coughing and Sneezing

COVER UP

COUGHING AND SNEEZING



- Turn your head away from others
- Use a tissue to cover your nose and mouth



- Drop your tissue into a waste bin



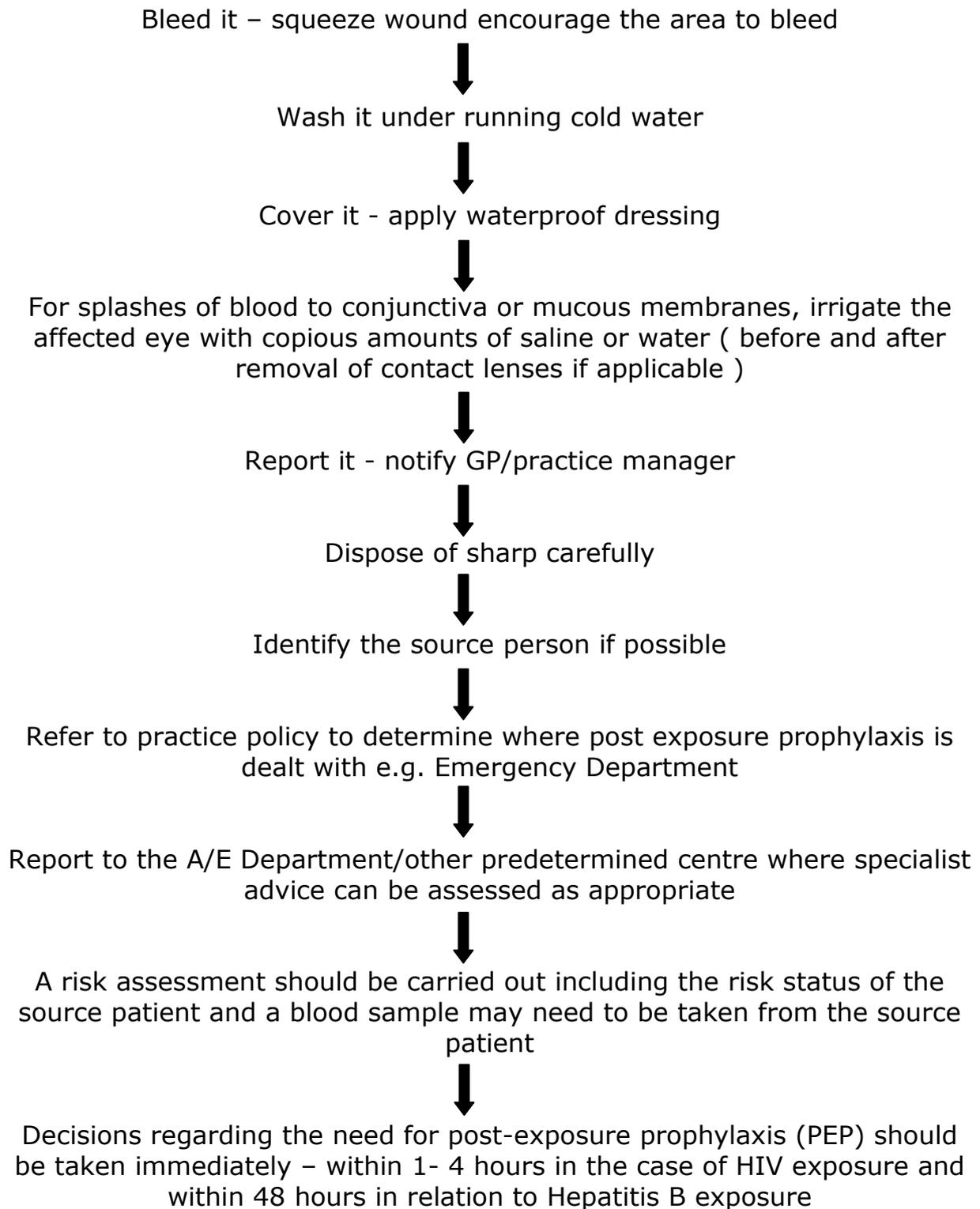
- No tissues? Use your sleeve



- Clean your hands after discarding tissue using soap and water or alcohol gel for at least 15 seconds

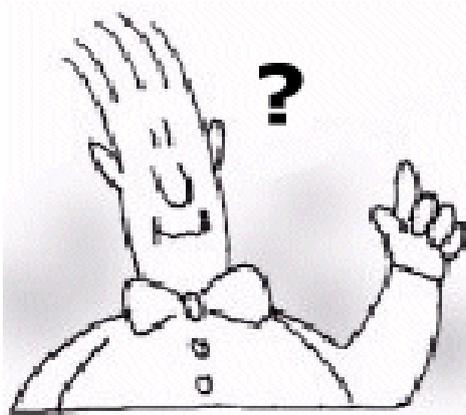
Appendix 7 Flow chart on management sharps injury/contamination incident/injury

In the Event of a Needle Stick/Sharps Injury



Appendix 8 Sharps Disposal Do's and Don'ts

Sharps Disposal Do's and Don'ts



- Before starting any procedure involving sharps, **Do** plan their safe disposal after use
- **Do** dispose of used sharps point first into an approved sharps container
- **Don't** resheath needles
- **Do** make sure that the sharps container is placed at point of use before the procedure commences
- **Don't** over-fill sharps containers
- **Do** use purpose built sharps containers, designed for safe sharps waste disposal
- In areas where visitors have access, **Do** ensure that sharps containers are out of the reach of small children, secured and locked
- **Do** use the handles to transport sharps containers
- **Don't** hold sharps containers against your body when carrying or sealing
- **Don't** attempt to open a sealed sharps container

Source: Waste co-coordinator, UCHG

Appendix 9 EMI Tool Kit Patient Management Form

Bloodborne Virus Exposure • Patient Management Form

Reporting time: : : Reporting date: / /

Doctor name: Doctor signature:

RECIPIENT DETAILS

Name
 Address
 Gender M F Date of birth / /
 MRN
 Tel no. Mobile
 Occupation
 Work address
 GP name and address and telephone number

Past Medical History (incl. immunosuppression)

Is recipient known to have HBV, HCV, or HIV? No Yes Detail below

Medications
 Allergies

If female Pregnant Breastfeeding

Hepatitis B Vaccination
 1 dose 2 doses Full course Year
 Antibody result if known

Tetanus
 Date of last vaccination Number of doses

ASSESSMENT OF EXPOSURE RISK

Details of injury (date, time, place etc.)

Nature of material (e.g. blood, saliva, semen etc.)

if NOT blood, was fluid blood stained Yes No

Needlestick/sharp injury
 Hollow bore needle Solid Needle
 Visible blood present
 Device had been directly in source artery or vein
 Other sharp Describe

Severity of needlestick or sharp injury
 Superficial - source scratch, no blood appeared
 Moderate - penetrated skin and blood appeared
 Deep - puncture, with or without blood appearance

Human bite Skin breached

Splash
 Intact skin Non-intact skin
 Mucous membrane Eye

Sexual exposure
 Receptive anal Insertive anal
 Receptive oral Insertive oral
 Receptive vaginal Insertive vaginal
 Condom used/ condom intact Ejaculated

If sexual assault, consider referral to a sexual assault treatment unit or social worker

Other injury (describe in "Details of injury" box)

HEALTHCARE EXPOSURES (Consider using local form if applicable)

Area where exposure occurred

Was this an 'exposure prone procedure'? Yes No

Were gloves worn at the time of the injury? Yes No

Instrument (if any) which caused the injury

What was the instrument originally intended for?

Did the instrument have a safety mechanism? Yes No

Was the safety mechanism activated? Yes No

DECISION		emi FOUNDRY																					
Overall, is exposure significant? (see section 2.4, page 13) Yes <input type="checkbox"/> No <input type="checkbox"/>																							
<p>If no, no further follow up is required</p> <p>Reassured <input type="checkbox"/></p> <p>Patient information leaflet provided (appendix 28) <input type="checkbox"/></p> <p>Discharged <input type="checkbox"/></p>	<p>If exposure is considered significant, proceed.</p> <p>If unsure how to proceed, discuss with senior doctor in the Emergency Department or in Infectious Diseases.</p>																						
<p>If exposure is considered significant</p> <p>Is source known? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>If yes, ID number <input style="width: 100px;" type="text"/> e.g. source hospital MRN or laboratory number (Health care institution to assign an ID number by which the recipient and source can be confidentially linked)</p>																							
RECIPIENT MANAGEMENT CHECKLIST																							
<p>First aid given Yes <input type="checkbox"/> No <input type="checkbox"/> (see section 2, page 12)</p> <p>Recipient bloods taken (appendix 9) Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>For testing <input type="checkbox"/> For storage only <input type="checkbox"/></p> <p>Appropriately labeled "Possible BBV exposure - Recipient" <input type="checkbox"/></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 20%; text-align: center;">Test Date</th> <th style="width: 20%; text-align: center;">Result</th> </tr> </thead> <tbody> <tr><td>HBsAg</td><td style="text-align: center;">_____</td><td style="text-align: center;">_____</td></tr> <tr><td>Anti-HBc</td><td style="text-align: center;">_____</td><td style="text-align: center;">_____</td></tr> <tr><td>Anti-HCV</td><td style="text-align: center;">_____</td><td style="text-align: center;">_____</td></tr> <tr><td>HIV Ag/Ab</td><td style="text-align: center;">_____</td><td style="text-align: center;">_____</td></tr> <tr><td>Syphilis (sexual exposures only)</td><td style="text-align: center;">_____</td><td style="text-align: center;">_____</td></tr> <tr><td>Pregnancy</td><td style="text-align: center;">_____</td><td style="text-align: center;">_____</td></tr> </tbody> </table> <p>Informed consent received for testing Yes <input type="checkbox"/> No <input type="checkbox"/> (see Checklist, appendix 30)</p> <p>Following sexual assault Yes</p> <p>Social worker referral <input type="checkbox"/></p> <p>Sexual assault unit referral <input type="checkbox"/></p> <p>Emergency contraception <input type="checkbox"/></p> <p>Garda notification if patient agrees <input type="checkbox"/></p>		Test Date	Result	HBsAg	_____	_____	Anti-HBc	_____	_____	Anti-HCV	_____	_____	HIV Ag/Ab	_____	_____	Syphilis (sexual exposures only)	_____	_____	Pregnancy	_____	_____	<p>Treatment record, including PEP Yes</p> <p>HBV vaccination given (appendices 8 & 11) <input type="checkbox"/></p> <p>HBIG required (appendix 8) <input type="checkbox"/></p> <p>HBIG given <input type="checkbox"/></p> <p>HIV PEP offered (appendix 7) <input type="checkbox"/></p> <p>HIV PEP accepted (HIV PEP should be discontinued immediately if the source is found to be HIV negative) <input type="checkbox"/></p> <p>Considered interactions between PEP and other medication (Consult BNF, pharmacist, www.hiv-druginteractions.org, product insert) <input type="checkbox"/></p> <p>HIV PEP information leaflet given (appendix 32) <input type="checkbox"/></p> <p>Baseline bloods taken (FBC, LFTs, Renal, Bone profile) <input type="checkbox"/></p> <p>Urinalysis for proteinuria (in renal impairment, give first dose of Truvada and discuss with an ID consultant. Kaletra can be given) <input type="checkbox"/></p> <p>Time between exposure and starting HIV PEP _____ hours</p> <p>Number of days of HIV PEP given _____ days</p> <p>HIV PEP drugs prescribed (name of drugs) _____</p> <hr/> <p>Tetanus vaccine given (appendix 15) <input type="checkbox"/></p> <p>Tetanus immunoglobulin (TIG) <input type="checkbox"/></p> <p>Examined wound for infection <input type="checkbox"/></p> <p>Antibiotics prescribed <input type="checkbox"/></p> <p>Note: Record details of medication/ vaccines in patient's chart</p>	
	Test Date	Result																					
HBsAg	_____	_____																					
Anti-HBc	_____	_____																					
Anti-HCV	_____	_____																					
HIV Ag/Ab	_____	_____																					
Syphilis (sexual exposures only)	_____	_____																					
Pregnancy	_____	_____																					
FOLLOW-UP ARRANGEMENTS																							
<p>Precautions advised during follow-up period – 3 months (appendix 29)</p> <p>Avoid unprotected sexual practices <input type="checkbox"/></p> <p>Seek expert advice regarding pregnancy or breastfeeding <input type="checkbox"/></p> <p>Discussed</p> <p>Compliance with medication <input type="checkbox"/></p> <p>Possible adverse reactions and how to manage them <input type="checkbox"/></p> <p>No modification to work practices <input type="checkbox"/></p> <p>No restrictions to sports <input type="checkbox"/></p> <p>Importance of advising relevant agency if donating blood, blood products, organ donation, other donation <input type="checkbox"/></p>	<p>Follow-up referral for: _____ Name of service _____ (Please use the standard referral forms – appendices 35 & 36)</p> <p>Test results _____</p> <p>Further testing (6/52, 3/12) (appendix 9) _____</p> <p>Vaccinations _____</p> <p>HIV PEP (urgent, in 3-5 days – appointment to be arranged in ID or HIV clinic, or in the occupational health department (if appropriate)). _____</p> <p>Counselling _____</p> <p>STI screen _____</p> <p>Patient information leaflet regarding significant exposures provided (appendix 29) <input type="checkbox"/></p>																						

INFORMATION ON SOURCE



Do not give this part of the form to the recipient if it contains confidential information that the recipient has not themselves provided.

In these circumstances, local plans must be made so that the form can be forwarded to the ID clinic when the recipient is being referred

ID number e.g. source hospital MRN or laboratory number
(Health care institution to assign an ID number by which the recipient and source can be confidentially linked)

ASSESSMENT OF SOURCE INFECTIVITY (SEE SECTION 3.3, PAGE 14)

Source: Any risk factors for BBV? Yes No Unknown

IDU

Prisoner

Born in an endemic country
(Refer to maps in [appendices 22, 24, 26](#))

Recipient of blood/ blood products (pre August 1973 HBV, pre Oct 1985 HIV, pre Oct 1991 HCV)

High risk sexual behaviour

MSM (men who have sex with men)

CSW (commercial sex worker)

Multiple sexual partners

Partner with BBV

Is source immunosuppressed? Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/>	If unknown serology, test the following:	Date sent	Result:
HBV HBsAg: Positive <input type="checkbox"/> Negative <input type="checkbox"/> Unknown <input type="checkbox"/> If positive: HBeAg positive <input type="checkbox"/> Viral load _____ If negative: Date of last negative test _____	HBsAg If HBsAg positive: HBeAg Anti-HBe Viral load	-----	-----
HCV Anti-HCV: Positive <input type="checkbox"/> Negative <input type="checkbox"/> Unknown <input type="checkbox"/> If positive: RNA positive <input type="checkbox"/> Viral load _____ If negative: Date of last negative test _____	Anti-HCV If Anti-HCV positive: RNA Viral load	-----	-----
HIV HIV Ag/Ab: Positive <input type="checkbox"/> Negative <input type="checkbox"/> Unknown <input type="checkbox"/> If positive: Viral load _____ CD4 count _____ What ART now? _____ If negative: Date of last negative test _____	HIV Ag/Ab If HIV Ag or Ab positive: Viral load	-----	-----

Was source consent received for testing? Yes No

Implications of testing discussed with source Yes No

Consent sought from source to disclose test results to recipient Yes No

Source information leaflet provided ([appendix 31](#)) Yes No

Reason for not testing source person serology (if applicable)

Unknown source Refused Dead Unable to give consent

Discharged/ not available Next of kin not available

Appendix 10 Sterilisation in General Practice-Rationale for Change

Infection prevention and control is concerned with preventing healthcare-associated infection and addresses factors related to the spread of infections within the health-care setting. This includes the spread of infection related to inadequate cleaning, disinfection and sterilization of reusable invasive medical devices.

Best practice in relation to the sterilisation of reusable medical devices is a cause for concern in general practice and clear guidance for GPs has not been easily available in the past. What follows is an outline of current Irish Standards and requirements, the scope of which applies to many settings including GPs in Ireland.

Some Irish standards/guidance that do pertain to the sterilisation of reusable medical devices are mentioned below:

National Standards for the Prevention and Control of Healthcare Associated Infections (2009)

In 2009 the Health Information and Quality Authority (HIQA) published National Standards for the Prevention and Control of Healthcare Associated Infections. These Standards are generic in nature and are designed to “apply to all health and social care services in Ireland”. These services include General Practice. The Standards require evidence that management and decontamination of reusable invasive medical devices (RIMDs) conforms to the Health Service Executive (HSE) 2007 Code of Practice for Decontamination of Reusable Medical Devices.

HSE Code of practice for decontamination 2007

The Health Service Executive (HSE), Code of Practice for Decontamination of Reusable Medical Devices, 2007 was produced by the Health Service Executive. According to this Code of Practice the Irish Medicines Board (IMB) is the competent authority for general medical devices, active implantable medical devices and in-vitro diagnostic medical devices in Ireland.

The Irish Medicines Board

The Irish Medicines Board (IMB) has responsibility under legislation to ensure that manufacturers of medical devices and the medical devices they place on the market meet the requirements of the legislation in the interest of protection of the patient, user and others involved in the use of medical devices. (The legislation derives from six EU Directives concerning medical devices all of which are transposed into Irish law by way of Statutory Instrument. This legislation places explicit obligations on manufacturers who intend to place their products on the market in Ireland or elsewhere in the European Union).

The Irish Medicines Board has issued a number of documents giving guidance in the decontamination of reusable invasive medical devices including: -

- Irish Medicines Board (IMB) (2005) Guide: Manufacture of Medical Devices within Healthcare Institutions.
- Irish Medicines Board (IMB) Safe and Effective Use of Bench-top Steam Sterilisers, IMB SN2009 (04).
- Irish Medicines Board (IMB) Cleaning and decontamination of reusable medical devices; IMB safety notice; SN2010 (11).

- Irish Medicines Board 2010 Single use and single patient use Medical devices, IMB safety notice; SN2010 (14).

The Irish Medicine Board (2009) states that users of sterile medical devices have three initial options to consider: -

1. Employ sterile single use devices,
2. Have reusable devices sterilised by a certified Sterile Services Department (SSD) or,
3. Reprocess the devices themselves.

If practitioners opt to reprocess the devices themselves, they must comply with the recommendations set out in the: -

- Code of practice for decontamination of RIMD (HSE 2007)
- Irish Medicines Board (IMB) (2005) Guide: Manufacture of Medical Devices within Healthcare Institutions.
- Safe and Effective Use of Bench-top Steam Sterilisers, IMB SN2009 (04).
- Cleaning and Decontamination of Reusable Medical Devices; Reference: IMB Safety Notice: SN2010 (11).

Appendix 11 Cleaning and Disinfectant Agents

Disinfectant	Use	Active against	Comments on the product
Detergent General purpose (GP) low foaming neutral detergent or detergent wipes.	Used to physically remove soiling from equipment	General cleaning of medium and low risk items	Use with warm water to physically remove soiling from equipment
Single use alcohol swab e.g. ethanol and Isopropyl. The use of containers of alcohol wipes is not recommended.	Disinfection of medium and low risk items after thorough cleaning with detergent e.g. e.g top of dressing trolley or for scissors used for clean procedures .	Kills bacteria and most viruses.	Use with warm water to physically remove soiling from equipment Dry and then wipe with alcohol wipe . Usual concentrations are 70% for ethanol and 60-70% for isopropanol Flammable
Sodium hypochlorite/chlorine releasing agents e.g Milton,Klorosept,presept,actichlor Sodium dichloroisocyanurate (NaDCC)	Wide range of bactericidal and virucidal activity. Can be inactivated by organic matter so equipment/environment must be cleaned prior to disinfection	Granules Tablets Prepare with cold water to minimize fumes	These products are corrosive to metal (e.g. stainless steel) and should be rinsed off after use. NB: do not use directly on spillages of urine because harmful noxious fumes are produced

Appendix 12

Healthcare Non-Risk Waste

Category	Description
Domestic Waste	This includes normal household waste and catering waste, all non-infectious waste, non-toxic and non- chemical waste <ul style="list-style-type: none"> • office waste, • paper hand towels, • wrapping paper and cardboard.
Confidential Material	This includes shredded waste documents of a confidential nature e.g. patient notes and laboratory results.
Patient Care Equipment	Items not contaminated with blood or body fluids and items contaminated with faeces, urine or breast milk that has been assessed as non-infectious <ul style="list-style-type: none"> • plastic items plastic wrapping, • oxygen tubing and face masks, • nebulizer sets, • gloves and aprons.
Potentially Offensive Material	Items contaminated with faeces, urine or breast milk that has been assessed as non-infectious and not contaminated with blood or other body fluids, <ul style="list-style-type: none"> • empty urine specimen containers (empty urine into sluice or toilet) • pregnancy test kits • incontinence wear, stoma bags, • urinary drainage bags, tubing urinary catheters

Healthcare Risk Waste

Category	Description
Infectious Waste	<p>1: Blood and any items visibly soiled with blood e.g. wound dressings, wound drains, swabs, disposable aprons and gloves that are blood stained.</p> <p>2: Items contaminated with faeces, urine or breast milk with known or suspected transmissible micro-organisms.</p> <p>3: Items contaminated with body fluids other than faeces, urine or breast milk i.e. pus, sputum or peritoneal fluid e.g suction containers and tubing and VAC wound dressing canisters.</p> <p>4: Incontinence wear with known or suspected enteric pathogens e.g. Clostridium difficile or salmonella</p> <p>5: Other healthcare infectious waste from</p>

	treatment areas as covered by definition of infectious waste.
Sharps	Categorized as any object that has been used in the diagnosis, treatment or prevention of disease and that is likely to cause a puncture wound or cut to the skin, e.g. used needles, scalpels, razors, lancets, contaminated broken glass, stitch cutters or any other contaminated disposable sharp instrument or item.
Single use metal instrument's eg. forceps, scissors, sponge holders staple remover .	These items cannot be disposed of in a sharps bin. You need to check with your local waste contractor to clarify which container is appropriate e.g endoscopic bin for incineration,
Pharmaceuticals	Unused drugs and other pharmaceuticals should be returned to the pharmacy. This is the preferred method of disposal of pharmaceuticals. If this method is not feasible out of date drugs must be disposed of in a 30 litre yellow rigid bin with a purple lid.

Appendix 13 Segregation and Packaging of Healthcare Risk and Non-Risk Waste

SEGREGATION & PACKAGING OF HEALTHCARE RISK & NON-RISK WASTE

RISK WASTE		
YELLOW BAG	YELLOW SHARPS BIN (with blue or red lid)	YELLOW 30/60 LITRE RIGID BIN (with yellow lid)
		
<ul style="list-style-type: none"> • All blood-treated items and all items soiled with body fluids assumed to be infectious • Suction catheters & tubing • Instrumentation washed from patients or subjected to specific infections <p style="color: red; font-weight: bold; margin-top: 5px;">* NO SHARPS OR FREE LIQUIDS</p>	<ul style="list-style-type: none"> • Needles, Syringes & Scalpels • Contaminated slides & glass • Sharps tips of clear IV giving sets • Blood stained glass • Slitch cutters • Guide wires/trocars • Razors <p style="color: red; font-weight: bold; margin-top: 5px;">* NO FREE LIQUIDS</p>	<ul style="list-style-type: none"> • Blood administration sets (never disassemble line from bag) • Contained blood and body fluids • Non-cultured laboratory waste (including autoclavable microbiological cultures) • Disposable suction lines • Red/irc drains (ensure drain closure sealed) • Sputum containers • Chest drains <p style="color: red; font-weight: bold; margin-top: 5px;">* NO SHARPS OR FREE LIQUIDS</p>
RISK WASTE		
YELLOW 30/60 LITRE RIGID BIN (with purple lid)	YELLOW SHARPS BIN (with purple lid)	YELLOW RIGID BIN (with black lid)
		
<ul style="list-style-type: none"> • Cytotoxic drugs including infusion lines, left over drug preparations and personal protective equipment used. • Small quantities of residual medicines or pharmaceuticals left over after administration to patients. <p style="color: red; font-weight: bold; margin-top: 5px;">* NO SHARPS OR FREE LIQUIDS</p>	<ul style="list-style-type: none"> • Contaminated cytotoxic sharps, needles, syringes, sharp instruments and broken glass <p style="color: red; font-weight: bold; margin-top: 5px;">* NO FREE LIQUIDS</p>	<ul style="list-style-type: none"> • Non-sterilized microbiological cultures • Large /recognisable anatomical body parts • Placenta with additional leak proof containers • Large solid metal objects and instruments <p style="color: red; font-weight: bold; margin-top: 5px;">* NO SHARPS OR FREE LIQUIDS</p>
NON-RISK WASTE	RECYCLABLE WASTE	
CLEAR BAG	GREEN BAG	
		
<ul style="list-style-type: none"> • Instrumentation used (from non-infectious patients) • Oxygen flow meters • Empty urinary drainage and empty suction drainage bags • Clear tubing (eg. oxygen, urinary catheters, ventilator, nasal gastric, IV lines with clips removed) • Empty feeding equipment • Non-contaminated gloves, aprons and masks • Empty disinfectant ambulatory personnel decontamination (CAPD) bags • All other household electrical, non-recyclable waste <p style="color: red; font-weight: bold; margin-top: 5px;">* NO SHARPS OR LIQUIDS</p>	<ul style="list-style-type: none"> • Mixed Dry Recyclables - Paper, Cardboard, Tins, Pucks, Plastic Packaging / Wrappings, Tins/Cans, Plastic Bottles <p style="color: red; font-weight: bold; margin-top: 5px;">* NO SHARPS OR LIQUIDS</p>	
<p>PLEASE NOTE:</p> <ol style="list-style-type: none"> 1) Do not use waste bags for sharp or breakable items or for liquids 2) Close healthcare risk waste bags using "over neck" when 2/3 full 3) Signs and seal sharps bins correctly when 3/4 full or at manufacturer's fill line 4) Label all healthcare risk waste appropriately at point of generation 5) Apply traceability tags to all healthcare risk waste at point of generation 6) Use long sharps bins for large trocars, knives, stapling guns etc. 7) For all 30/60 litre rigid bins, add absorbent material or gelling agent in sufficient quantities to hold the fluid and prevent leakage. 8) For further details on healthcare risk waste, please refer to www.dohc.ie/publications 		
 <p style="font-size: small;">An Roinn Sláinte DEPARTMENT OF HEALTH</p> <p style="font-size: x-small;">Endorsed by: </p>		
<p>© 2014 Edition</p>		

Audit Tools

SARI Infection Prevention and Control Audit tool

Date: _____	Practice: _____
Practice Manager: _____	Audit Undertaken By: _____

Answer Yes, No or Not applicable – please tick a box for **all** questions

Section 1: Clinical environment

Standard: *The practice environment will reflect infection prevention and control guidelines and reduce the risk of cross infection to patients, while providing appropriate protection to staff.*

	Y	N	NA	Comments
1. Infection Prevention Control Guidelines are available				
2. Staff are aware of Infection Prevention and Control Guidelines				
3. Latex/nitrile sterile gloves are available				
4. Latex/nitrile non-sterile gloves are available.				
5. Plastic disposable aprons are available for staff.				
6. Full body fluid repellent gowns are available to staff				
7. Eye protection (visors/goggles) is available to staff				
8. Surgical masks are available to staff				
9. Respirator masks are available to staff				
10. Specimens are transported in a safe container in accordance with practice policy				
11. Signs are posted in the practice for patients in relation to respiratory hygiene and cough etiquette				
12. Surgical masks are available to patients who present with a flu like illness.				
13. Tissues, waste bin and hand hygiene (wash basin/alcohol gel) are available in the waiting area.				
14. All general areas are clean and dust free.				
15. Clinical rooms are clean and dust free.				
16. Furniture and fittings are in a good state of repair				

	Y	N	NA	Comments
17. Surfaces in the clinical areas are clean and uncluttered.				
18. Clinical rooms are free from inappropriate items.				
19. Chairs have a wipe-able surface and the covers are intact				
20. Examination couches have wipe-able surfaces and the covers are intact.				
21. Disposable paper towelling is used to cover the examination couch.				
22. Paper covers are changed between patients. (observe of question staff)				
23. If linen items are used segregation and transportation of used linen is carried out in accordance with the Society of Linen Services and Laundry Managers Guidelines (2008)				
24. There is evidence of a dedicated cleaning schedule for the practice including responsibilities for same (to include toilet areas, floors, office equipment etc.).				
25. Staff are aware of the procedure in the event of a spill				
26. All equipment necessary to deal with a spill is available to staff				
27. Cleaning equipment is designated for use and is stored clean, dry and inverted.				
28. Toys are wipe-able and in a good state of repair.				
29. Toys examined are clean and unsoiled.				

SARI Infection Prevention and Control Audit tool

Date: _____	Practice: _____
Practice Manager: _____	Audit Undertaken By: _____

Answer Yes, No or Not applicable – please tick a box for **all** questions

Section 2: Hand Hygiene

Standard: *Systems are in place in order to facilitate performance of Hand Hygiene.*

	Y	N	NA	Comments
1. There is a designated clinical hand hygiene sink in each clinical room (i.e. dedicated only for hand hygiene)				
2. Hand hygiene sink is clean and intact (check sealant, taps, splash back)				
3. Hand hygiene sink meets the standard HTM 64 Sanitary assemblies (2006) i.e. no plugs, no overflows, water from taps not directly situated above plug hole)				
4. Elbow operated or sensor taps are fitted to the clinical hand wash basin				
5. Liquid soap (and not bar soap) is available at all sinks in the clinical rooms				
6. Soap dispensers are in good working order				
7. Soap dispenser nozzles are clean				
8. Adequate amount of liquid handwash soap is available				
9. Alcohol hand rub is available in clinical room				
10. Only disposable paper towel is available (not reusable towels)				
11. Towel dispenser is in good working order and adequate amount of disposable paper towels is available				
12. A foot operated lidded waste bin for paper towels is available and is in good working order				
13. Hand hygiene poster is displayed at each sink				
14. Access to hand wash sink is not obstructed				

SARI Infection Prevention and Control Audit tool

Date: _____	Practice: _____
Practice Manager: _____	Audit Undertaken By: _____

Answer Yes, No or Not applicable – please tick a box for **all** questions

Section 3: Safe handling and disposal of sharps

Standard: *Sharps will be handled in accordance with guidelines in order to negate the risk of sharps injury.*

	Y	N	NA	Comments
1. The sharps bins in use comply with UN approval. UN3291 or UN2814				
2. Bins have not been filled above the fill line				
3. Bins are free from protruding sharps				
4. All bins have been assembled correctly (check lid is secure)				
5. The temporary closure mechanism is used when bins not in use				
6. Bins are stored appropriately off the floor				
7. All sharps bins are labelled and signed				
8. Bins are stored safely, away from the public and out of reach of children				
9. Needles and syringes are discarded into a sharps bin as one unit				
10. Inappropriate re-sheathing of needles does not occur (observe or question a member of staff)				
11. A sharps injury/significant exposure policy is available				
12. There is a policy and or poster available for the management of sharps injury/contamination incident/injury				
13. Staff are aware of procedure to follow following a sharps injury/contamination incident/injury (ask a member of staff).				
14. Full sharps boxes are stored in a designated locked area awaiting collection/disposal				

SARI Infection Prevention and Control Audit tool

Date: _____	Practice: _____
Practice Manager: _____	Audit Undertaken By: _____

Answer Yes, No or Not applicable – please tick a box for **all** questions

Section 4: Decontamination of patient equipment

Standard: *There is a system in place that ensures as far as reasonably practicable that all reusable equipment is properly decontaminated after use*

	Y	N	NA	Comments
1. Evidence of a decontamination policy relating to patient equipment				
2. The responsibility for the cleaning of dedicated patient equipment is clearly defined				
3. Staff understand the Spaulding classification for risk and that instruments and equipment should be cleaned and reprocessed according to the level of risk associated with their intended use				
4. Manufacturer’s instructions are available for the decontamination of newly purchased equipment				
5. Staff can state the decontamination procedure for commonly used equipment e.g. examination table, weighing scales- for both low level disinfection and after use by a patient with a known/suspected transmissible disease.				
6. Check that general equipment in clinical room is visibly clean. E.g. examination couch, pillow, blood pressure cuff, dressing trolley.				
7. Staff can indicate the single use symbol				
8. Local decontamination of reusable invasive medical devices is not undertaken in the practice.				
9. If bench top autoclaves are used or practices use an outside SSD to decontaminate RIMDs evidence that they comply with national guidelines (outlined in the decontamination ICP policy)				
10. Staff can differentiate between single use and single patient use device				

SARI Infection Prevention and Control Audit tool

Date: _____	Practice: _____
Practice Manager: _____	Audit Undertaken By: _____

Answer Yes, No or Not applicable – please tick a box for **all** questions

Section 5: Waste

Standard: *That waste segregation and management is complies with The Segregation, Packaging and Storage guidelines for Healthcare risk waste (DOHC, 2010)*

	Y	N	NA	Comments
1. There is evidence that the practice waste policy is available and staff are aware of its contents				
2. All clinical areas have foot operated bins				
3. Foot operated bins are in working order				
4. Clinical and household waste is correctly segregated				
5. Yellow bags are used for disposal of clinical waste				
6. There is evidence that risk waste bags are less than ¾ full when closed				
7. There is evidence that risk waste bags are closed using a "swan neck " method				
8. There is evidence that risk waste bags are tagged for traceability				
9. There is a dedicated area for the safe storage of clinical waste (inaccessible to the public)				
10. The storage area is clean and there is evidence of a cleaning schedule				
11. The storage area is cleaned immediately following a spill.				
12. Appropriate protective clothing is available for staff handling clinical waste bags.				
13. There is evidence that the waste contractor is registered with a valid licence				

SARI IPC Audit Outcome

Standard 1: Clinical Practice

Standard: *Practices will reflect infection prevention and control guidelines and reduce the risk of cross infection to patients, while providing appropriate protection to staff.*

Date: _____ **Auditor:** _____

1. Summary of strengths evident from the Audit

2. Improvements required evident from the audit

Improvements required	Actions necessary for improvement
1.	
2.	
3.	
4.	

Signature of auditor: _____ Date: _____

Signature of practice manager: _____ Date: _____

SARI IPC Audit Outcome

Standard 2: Hand Hygiene

Standard: Systems are in place in order to facilitate performance of Hand Hygiene.

Date: _____ **Auditor:** _____

1. Summary of strengths evident from the Audit

2. Improvements required evident from the audit

Improvements required	Actions necessary for improvement
1.	
2.	
3.	
4.	

Signature of auditor: _____ Date: _____

Signature of practice manager: _____ Date: _____

SARI IPC Audit Outcome

Standard 3: Safe handling and disposal of sharps

Standard: Sharps will be handled in accordance with guidelines in order to negate the risk of sharps injury.

Date: _____ **Auditor:** _____

1. Summary of strengths evident from the Audit

2. Improvements required evident from the audit

Improvements required	Actions necessary for improvement
1.	
2.	
3.	
4.	

Signature of auditor: _____ Date: _____

Signature of practice manager: _____ Date: _____

SARI IPC Audit Outcome

Standard 4: Decontamination of patient equipment

Standard: *There is a system in place that ensures as far as reasonably practicable that all reusable equipment is properly decontaminated after use.*

Date: _____ **Auditor:** _____

1. Summary of strengths evident from the Audit

2. Improvements required evident from the audit

Improvements required	Actions necessary for improvement
1.	
2.	
3.	
4.	

Signature of auditor: _____ Date: _____

Signature of practice manager: _____ Date: _____

SARI IPC Audit Outcome

Standard 5: Waste

Standard: *That waste segregation and management is complies with The Segregation, Packaging and Storage guidelines for Healthcare risk waste (DOHC, 2010)*

Date: _____ **Auditor:** _____

1. Summary of strengths evident from the Audit

2. Improvements required evident from the audit

Improvements required	Actions necessary for improvement
1.	
2.	
3.	
4.	

Signature of auditor: _____ Date: _____

Signature of practice manager: _____ Date: _____

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