National Ambulance Service

Infection Prevention & Control Policy

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National Ambulance Service Infection Prevention & Control Policy 2021

Policy [x] **Procedure** [ ] **Protocol** **Guideline**

All National Ambulance Service locations

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Draft 1	06.2021	HSE PPPG Format Statement that this document replaces current NAS Policy on Control & Infection & Communicable Diseases 2012	Finbarr Heenan Infection Prevention & Control Manager
Draft 1	06.2021	The Policy has been written in line with the HSE National Framework for developing Policies, Procedures, Protocols and Guidelines (PPPGs) 2016	IPC Manager
Draft 2	07.2021	This policy was adapted from the HPSC Interim Guidance on Infection Prevention & Control for the Health Service Executive 2021 V1.3 11.01.2021.	IPC Manager
Draft 3	08.2021	Update to mode of transmission. Transmission based precautions examples. WHO 5 moments of Hand hygiene poster in appendix. Move hand hygiene instruction to first part of document. Give definition of notifiable diseases and reference. Include	HSE Community Healthcare IPC Team

		reference to HSE Waste Management Guidelines, EMI guideline and HSA Sharps Document.	
Draft 4	**08.2021**	**Risk management section and appendix 5 written to align more closely with HSE Integrated Risk Management Policy 2017**	**AMRIC**
Draft 4	**09.2021**	**Summary paragraph** **Suggest adding apply standard and transmission based precautions for all patient contact.** **Suggest listing all of standard precautions, as all are applicable.** **Scope** **Suggest change all settings to all areas where healthcare is delivered** **Page 7** **Chain of infection** **suggest adding section routes of transmission and aligning with section 2 Interim guidance basics of IPC** **Page 9** **Changes in guidance on hand hygiene guidance for C difficile and Norovirus.** **When choosing to use PPE suggest 4th bullet point the suspected or confirmed infection status of the patient** **Re Appropriate patient placement bullet point 4 depending on the suspected or confirmed infectious agent** **Page 11** **Management of sharps – suggest refer to sharps containers should never be more than ¾ full** **Safe injection practice – 1st bullet point refer to aseptic technique-** **4th bullet point multi-dose vials qualify in relation to use of vaccine in pandemic** **Page 13 Respiratory hygiene** **Suggest add stay home from work if you have respiratory virus infection until 48 hours after acute symptoms resolved** **Suggest align to interim guidance section 3.1.7 waste management** **Page 15 Transmission based precautions** **Interim Guidance for HSE seems the more relevant reference** **Page 17 Alcohol based hand rubs 4th bullet point – soap and water here needs to be**	**AMRIC**

		qualified **Add hand hygiene recommendations on c-difficile and norovirus**	
Final Approval	**29.09.2021**	**Approved by NASLT**	**Ciarán McCullagh NQPSM**

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Summary

Healthcare associated infections (HCAIs) can cause harm and suffering to the patients' we care for. Reducing the spread of infection is the role of everyone working within the National Ambulance Service.

- Effective hand hygiene is the single most important procedure in reducing the spread of infection.
- Apply standard and transmission based precautions for every patient contact.

  Standard Precautions consist of:

  - Hand hygiene as consistent with the WHO 5 moments for hand hygiene.
  - The use of appropriate personal protective equipment (PPE).
  - Respiratory hygiene and cough etiquette.
  - Safe injection practices (safe use and disposal of sharps).
  - Aseptic technique.
  - Management of patient care equipment (single use devices and reprocessing of reusable medical equipment and instruments).
  - Environmental hygiene.
  - Safe handling and disposal of waste.
  - Management of laundry and linen.
- Additional information can be found in the HSE infection Prevention and Control Guidance and Framework section of the Health Protection Surveillance Centre (HPSC) website **https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/infectionpreventionandcontrolguidance/hseinfectionpreventionandcontrolguidanceandframework/Interim%20HSE%20Guidance%20on%20IPC.pdf**
- Alternatively contact your local manager with specific queries.

1.0 INITIATION

1.1 Purpose

The purpose of this policy is to provide guidance on evidence based best practice in the prevention and control of transmissible infections. It is intended all future Protocols in Infection Prevention & Control for the National Ambulance Service, in the first instance, will be read in conjunction with this Policy.

1.2 Scope

1.2.1 This policy is for use by all National Ambulance Service staff, this includes clinical staff, management and support staff in all areas where healthcare is delivered.

1.2.2 This policy applies to all service users cared for by the NAS, and all areas of operation.

This policy replaces the previous *NAS Policy on Control & Infection & Communicable Diseases 2012.*

1.3 Objective(s)

To optimise the safety and quality of care delivered by the NAS, by reducing the risk of healthcare associated infections (HCAIs) and other adverse effects.

1.4 Outcome(s)

Promote the use of IPC practices within the NAS to

- Promote the creation of clean and safe environments through the implementation of evidence-based practices that minimise the risk of transmission of infectious microorganisms for patients and NAS Staff.
- Promote the reduction of HCAIs associated with NAS interactions.

1.5 PPPG Development Group

NAS Quality and Patient Safety Team / Infection Prevention & Control

1.6 PPPG Governance

NAS Clinical Directorate

1.7 Supporting Evidence

See reference list section 8.0

1.8 Glossary of Abbreviations

AMRIC – Antimicrobial Resistance and Infection Control

AMR – Antimicrobial Resistance

AMS – Antimicrobial Stewardship

AP – Advanced Paramedic

EMT- Emergency Medical Technician

IPC – Infection Prevention and Control

HCAI – Healthcare Associated Infection

HIQA – Health Information and Quality Authority

HPSC – Health Protection Surveillance Centre

HSE – Health Service Executive

HCW- Healthcare Worker

HPSC – Health Protection Surveillance Centre

IPCM – Infection Prevention & Control Manager

LT – Leadership team

NAS – National Ambulance Service

PPE - personal protective equipment

SMT – Senior Management Team

2.0 DEVELOPMENT OF PPPG

2.1 This policy was developed in order to provide a core IPC foundation to NAS staff and further support the development of additional Protocols in IPC practices. This policy was adapted from the HPSC Interim Guidance on Infection Prevention & Control for the Health Service Executive 2021 V1.3 11.01.2021.

2.2 ***Sources of information include:***

Health Service Executive

Health Protection Surveillance Centre

HPSC Guidelines for the Emergency Management of Injuries and Post-exposure Prophylaxis

AMRIC

Infection Prevention and Control, Community Healthcare

European Centre for Disease Prevention and Control

HSELand

2.3 Basics of Infection Prevention and Control

What are healthcare associated infections (HCAIs)?

Healthcare associated infections are infections that can develop either as a direct result of healthcare interventions such as medical or surgical treatment, or from being in contact with a healthcare setting. The term HCAIs includes any infection acquired as a direct result of treatment in any healthcare or social care setting or as a result of healthcare delivery in the community. [HIQA 2017]

While the specific risks of HCAI differ with the setting in which healthcare is delivered the basic principles of IPC apply regardless of the setting.

In order to prevent HCAIs, it is important to understand how infections occur in healthcare settings and then put in place measures to prevent them. If effectively implemented, the two-tiered approach of Standard and Transmission-based Precautions recommended in this Policy provide high-level protection to patients, NAS Staff and other people in healthcare settings.

The chain of infection demonstrates how infection causing organisms can be passed forward from source to host thus facilitating onward transmission and causing a HCAI. The six elements or stages of the chain of infection are as follows:

1. <u>Causative microorganism – the germ</u>

An infectious agent is an organism that has the potential to cause disease. Infectious agents can be classified as bacteria, fungi, protozoa, prions and viruses. There are two souces of infection.

"A. endogenous or self infection occurs when organisms which are harmless in one site cause infection when transferred to another e.g. E coli.

B. exogenous or cross infection occurs when organisms are transferred from another source e.g. nurse, doctor, other patient, the environment." (HSE 2021).

2. Resevoir – where the germs live

   The infectious agent resides and grows here. (for example blood, mouth or large intestine)

3. Portal of exit – how the germs get out

   This is any opening in the body that allows the infectious agent to leave (for example mouth, rectum or break in the skin)

4. Mode of Transmission – how the germs get around

   This is how the transmission of the infectious agent is facilitated to travel between persons (for example cross contamination by direrct contact or indirect contact

5. Portal of entry – how the germs get in

   This is any opening in the body that allows the infectious agent to enter (for example mouth, mucous membranes, break in the skin or and medical device inserted in to the body, ie cannulae or catheter)

6. Susceptible host – the next sick person

   A non infected person such as a patient.

   Please see appendix V Chain of Infection

   If the chain is allowed to remain intact this will facilitate the transmission of infection to an individual. Utilising standard precautions will help break this chain.

   Applying Standard Precautions will break the chain of infection focusing particularly but not exclusively on the mode of transmission, portal of entry and susceptible host sections of the chain. (HSE 2021).

2.4 Infection Prevention & Control Preacutions

According to the Core Infection Prevention and Control Knowledge and Skills, A Framework Document (May 2015), healthcare-assosciated infections (HCAIs) are defined as infections assosciated with receiving healthcare or treatment within any healthcare setting. The five most common HCAIs are, surgical site infection, pneumonia, urinary tract infection, bloodstream infection and gastroenteritis. (HSE 2021).

Standard Precautions:

All people potentially harbour infectious microorganisms. Standard Precautions refer to those work practices that are applied to everyone, regardless of their perceived or confirmed infectious status. Standard Precautions ensure a basic level of IPC. Implementing Standard Precautions as a first-line approach to IPC in the healthcare environment minimises the risk of transmission of microorganisms from person to person, even in high-risk situations.

Standard Precautions are used by healthcare workers to prevent or reduce the likelihood of transmission of microorganisms from one person or place to another and to render and maintain objects and areas as free as possible from infectious microorganisms.

How Standard Precautions are implemented:

• Personal hygiene practices, particularly hand hygiene, aim to reduce the risk of contact transmission of microorganisms.

• Appropriate use of personal protective equipment, which may include gloves, gowns, disposable aprons, masks/face shields and eye protection, aims to prevent exposure of the healthcare worker and people who use healthcare services to infectious microorganisms.

• Safe handling and disposal of sharps assist in preventing transmission of blood borne virus to people who use healthcare services and to healthcare workers.

• Environmental controls including cleaning and spills management, assist in preventing transmission of microorganisms from the environment to people who use healthcare services and healthcare workers.

• Single use equipment and appropriate reprocessing of reusable equipment and instruments including appropriate use of disinfectants, aims to prevent person to person transmission of microorganisms.

• Practising respiratory hygiene and cough etiquette reduces the risk of transmission of infectious microorganisms spread by droplets and aerosols.

• Aseptic technique aims to prevent microorganisms on hands, surfaces or equipment from being introduced into a susceptible site.

• Appropriate handling and disposal of waste and linen assists in reducing transmission of microorganisms.

1. Hand hygiene

Hands are the most common mode of transmission for microorganisms (bugs) that have the potential to cause infection.

You should:

Use alcohol hand rub when required.

Use soap and water when your hands are visibly dirty or after caring for a patient with diarrhoea if gloves have not been worn, if gloves are breached or hands visibly contaminated - use soap and water hand hygiene to facilitate the mechanical removal of spores.

Perform hand hygiene as per the WHO 5 moments for hand hygiene. **See appendix XI**

Remind/assist patients or colleagues to perform hand hygiene if their hands are visibly dirty, before eating and after toileting. Gloves are not a suitable substitute for hand hygiene, hands must be cleaned before and after glove use.

Hand hygiene Process.

It is recommended that routine hand hygiene is performed according to the World Health Organization technique in the following circumstances:

1. Before touching a patient.
2. Before a clean or aseptic procedure
3. After body fluid exposure
4. After touching a patient
5. After touching a patient's surroundings

N.B. Hand hygiene must also be performed before putting on gloves and after the removal of gloves

Minimum requirement of hand hygiene training.

Hand hygiene education and training is vital to ensure that NAS staff have the knowledge and skills to identify opportunities for hand hygiene and to perform hand hygiene using an effective technique. Education and training may be provided in a variety of formats including e-learning however direct face-to-face training with opportunities for demonstration and questions and answers is preferred by trainers and trainees. A programme of train the trainers is a practical option for supporting face-to-face training delivered by a peer in many settings.

All staff who are currently in employment in NAS are required to complete Hand Hygiene training on induction and refresher at least every 2 years. Record of training should be recorded on training records.

Technique

Effective hand hygiene relies on appropriate technique. Key factors in effective hand hygiene (Boyce and Pittet 2000)

- The duration of hand hygiene measures.
- The exposure of all surfaces of the hands to the preparation used.
- The use of rubbing to create friction.
- Ensuring that hands are completely dry.

Individual actions for reducing risk:

- Follow the 5 moments for hand hygiene.
- Become familiar with HSE policy on hand hygiene and follow it.
- Use the appropriate product for your situation.
- Follow HSE policy on cuts and abrasions, fingernails, nail polish and jewellery.
- Use hand-care products provided by NAS.
- Lead by example and champion hand hygiene in your setting.
- Attend hand hygiene education sessions to refresh your knowledge and skills.

Alcohol-based Hand Rubs

One advantage of alcohol based hand rubs is that they are easily accessible at point of care.

They have:

- excellent antimicrobial activity
- generally good antimicrobial activity against enveloped viruses including SARS-CoV2.
- lesser and/or variable antimicrobial activity against non-enveloped viruses (such as Norovirus).
- no activity against protozoan oocysts and bacterial spores (such as C. difficile, soap and water here).

Most published clinical studies that have demonstrated reductions in healthcare associated infections with the use of alcohol-based hand rubs have been associated with products that contain at least 70% alcohol (isopropanol) however products that contain 60% and 80% alcohol are considered effective (Hand Hygiene Australia 2018).

Plain soap and water

Hand washing refers to the appropriate use of a non-antimicrobial soap and water on the surface of the hands. Plain soaps act by mechanical removal of microorganisms and have no antimicrobial activity. They are suitable for performing hand hygiene and are required for cleansing of visibly soiled hands. They are also used for mechanical removal of certain organisms such as C. difficile and Norovirus.

Antimicrobial soaps are sometimes used to decontaminate hands however when alcohol-based hand rub is available in the healthcare facility for hand hygiene, the use of antimicrobial soap is not recommended. Antimicrobial soap is associated with skin care issues and it is not necessary for use in everyday clinical practice (Boyce and Pittet 2002 and Loveday et al. 2014).

Hand wipe products may be considered in instances where hygienic access to soap and water is not readily available, such as in some community care settings. Alcohol-based hand rubs are also suitable for use in resource limited or remote areas with lack of accessibility to sinks or other facilities for hand hygiene (including clean water and towels). As outlined above effective hand hygiene depends as much on technique as on the products used.

Using soap and water: See Appendix XI

Recommendation (strong recommendation, weak evidence)

In the presence of known or suspected Clostridioides difficile and viruses such as norovirus hand hygiene must be performed as follows:

If gloves are worn and appear intact on removal, then alcohol-based hand rub remains the agent of choice for hand hygiene.

If gloves have not been worn, if gloves have been breached or if there is visible contamination of the hands despite glove use, use soap and water to facilitate the mechanical removal of spores. After washing, hands should be dried thoroughly with a single-use towel.

Practical Info

When C. difficile and viruses such as norovirus are suspected or known to be present and gloves have not been worn, a combination of hand hygiene strategies may be required to reduce transmission of these organisms. This should include hand washing with soap and water for at least 20 seconds to facilitate the mechanical removal of spores or virus (Hall et al. 2007). Longer hand washing is likely to be required if visible soiling is present.

If gloves ae worn during the care of patients in settings where C. difficile or viruses such as Norovirus are suspected or known to be present, spore/virus contamination of the hands will be minimal and alcohol-based hand rub remains the agent of choice for hand hygiene (Traore 2007).

2. Use of personal protective equipment

PPE consists of:

Gloves.

Aprons/gowns.

Eye, nose and mouth protection.

When choosing to use PPE, you must carry out a dynamic risk assessment of the planned procedure and select PPE depending on:

- The nature of the procedure
- The risk of exposure to blood and body fluids
- The risk of contamination
- Suspected or confirmed infection status of the patient

You must ensure you remove and dispose of used PPE appropriately and perform hand hygiene immediately afterwards. **See appendix VII PPE**

3. Management of blood and body substance spills

Prompt removal of spots and spills of blood and body substances followed by cleaning and disinfection of the area contaminated is a sound infection control practice and meets occupational health and safety requirements.

In circumstances where emergency procedures or urgent transport are underway spills should be attended to as soon as it is safe to do so.

Process of spills management

Strategies for decontamination of spills of blood and other body substances (for example vomit or urine) differ based on the setting in which they occur and the volume of the spill:

• healthcare workers can manage small spills by cleaning with detergent solution.

• for spills containing large amounts of blood or other body substances workers should contain and confine the spill by:

➢ removing visible organic matter with absorbent material (for example disposable paper towels)

➢ removing any broken glass or sharp material with forceps

➢ soaking up excess liquid using absorbent clumping agents (for example absorbent granules)

If spillage of potentially contaminated material has occurred on soft furnishings, a detergent solution can be used to clean the area thoroughly. Hypochlorite is generally not suitable for use on soft furnishings. The extent of further action required will depend on a risk assessment taking account of the extent and nature of the spillage and the associated risk of transmission of infectious microorganisms. If the risk cannot be managed otherwise it may be necessary to replace the covers on part or all of the item of furniture. Soft furnishings can also be wet vacuumed. Following cleaning of soft furnishings, they must be allowed to dry before re use. Because of the difficulty of cleaning and decontamination, soft furnishings should be avoided in settings where spillage of blood or body fluids is likely to occur.

Alcohol solutions should not be used to clean spillages.

Table. Appropriate processes for managing spills

Volume of spill	Process
Spot cleaning	• Select appropriate personal protective equipment (for example gloves and disposable apron) • Wipe up spot immediately with a damp cloth tissue or paper towel • Discard contaminated materials • Perform hand hygiene
Small spills (up to 10 cm diameter)	• Select appropriate PPE (for example gloves and disposable apron) • Wipe up spill immediately with absorbent material • Place contaminated absorbent material into impervious container or plastic bag for disposal • Clean the area with warm detergent solution using disposable cloth or sponge • Wipe the area with sodium hypochlorite and allow to dry • Perform hand hygiene

Volume of spill	Process
Large spills (greater than 10 cm diameter)	• Select appropriate PPE (for example gloves and disposable apron) • Cover area of the spill with an absorbent clumping agent and allow to absorb • Use disposable scraper and pan to scoop up absorbent material and any unabsorbed blood or body substances • Place all contaminated items into impervious container or plastic bag for disposal • Discard contaminated materials • Mop the area with detergent solution • Wipe the area with sodium hypochlorite and allowed to dry • Perform hand hygiene

Choosing a disinfectant (when required)

The use of sodium hypochlorite is not necessary for routinely managing all spills but it may be used in specific circumstances. There is evidence supporting the use of sodium hypochlorite to inactivate various blood borne and gastrointestinal viruses and to disinfect rooms of people known or suspected to be infected with bacteria such as C. difficile or MDROs (Dalziel C 2017). The consideration of use of sodium hypochlorite should be based on risk assessment of the environment, the spill, the risk of transmission of microorganisms and the surface area and potential hazards with using the product.

If a disinfectant is required particularly during the implementation of Transmission-based Precautions sodium hypochlorite or another appropriate disinfectant must be used.

Choosing a disinfectant that is compatible with the surface material where the spill has occurred is integral in order to avoid damage to the surface.

Spill kit

Supplies for dealing with a spill of blood or body fluids should be readily available in each clinical area and should include a scoop and scraper, single use gloves, protective apron, surgical mask and eye protection, absorbent agent, health care risk waste bags and ties and detergent. All parts should be disposable to ensure that cross contamination does not occur.

A spill kit is a practical way to ensure that these supplies are readily available in one location when required.

4. Appropriate patient placement

When considering the placement of a patient, you must first assess the risk of infection within that environment. You must also assess the vulnerability of the patient including any invasive treatment they may have undergone.

Questions to ask include:

- Is it appropriate to transport the patient individually?
- Can the patient maintain their own hygiene if required to do so?
- Does the patient have any uncontrolled secretions or excretions?
- Patients may need additional transmission precautions depending on the suspected or confirmed infectious agent.

5. Management of sharps

Sharps are defined as any object or instrument used in specific healthcare activities which are able to cut, prick or cause injury or infection. This includes needles, scalpels and other sharp medical instruments. The person who has used a disposable sharp instrument or equipment is responsible for its immediate safe disposal after use.

- Sharps should be handled and disposed of in a manner which prevents injury risks. This includes the use of needle safe devices, and the disposing of syringes and needles as one single unit.
- Sharps should be discarded in an approved container at the point of use and never be overfilled above 2/3rds or as illustrated on the container.
- Needles must not be re-capped and sharps should not be passed from person to person by hand.
- Needle stick injury protocol must be followed. All incidents must be reported in accordance with the HSE Incident Management Framework as soon as is practicable after a sharps injury occurs and no later than one working day after the incident.

6. Safe injection practice

Safe injection practice and management of sharps is a key component of standard precautions. You need to ensure the following:

- Generally aseptic fields are used in standard aseptic technique when key parts can easily and optimally be protected by critical micro aseptic fields and aseptic technique. The main general aseptic field does not have to be managed as a key part and is essentially promoting rather than ensuring asepsis. Subsequently, aseptic technique is considerably simplified and typically involves nonsterile gloves.
- If possible all injections should be prepared in a clean area using aseptic technique. This area must not be used for the disposal of used needles and syringes, or any material contaminated with blood or body fluids.
- Eliminate the unnecessary use of sharps. Where this is not possible, use sharps with safety device.
- Needles and syringes are sterile, single-use items and must not be reused.

- Single-dose vials should be used wherever possible. Single-dose vials must not be used for multiple patients. (exception multi dose vials qualify in relation to use of vaccine in pandemic situation)
- Intravenous fluids and intravenous sets are single use sterile items for use by a single patient.
- Consider a syringe or needle/cannula contaminated once it has been used to enter or connect to a patient's intravenous infusion bag or administration set.

7. Management of needlestick injuries

Emergency Action

- Encourage bleeding
- Wash well under running water
- Cover with a waterproof dressing
- Report to nearest Emergency Department (ED) for treatment, on the same day of injury
- **Please see Appendix VIII** HPSC EMI Toolkit on the Guidelines for the Emergency Management of Injuries and Post-exposure Prophylaxis **https://www.hpsc.ie/a-z/EMIToolkit/**

In the event of a sharps injury

1. Report to an ED for treatment on the day of injury

2. If at all possible, attend the same ED to which the source patient was transported. This will facilitate blood sampling from the source, which may avoid the need for Hep B treatment or HIV PEP (if source patient negative)

3. A sample of your blood will be taken by ED staff and referred to the laboratory, or held for storage as appropriate

4. Complete an Incident Report Form

5. Follow the **HSE policy on the management of sharps and prevention of sharps injuries Nov 2020** **https://healthservice.hse.ie/filelibrary/staff/policy-on-the-management-of-sharps-and-prevention-of-sharp-injuries.pdf**

8. Respiratory hygiene and cough etiquette

Respiratory hygiene is vital to prevent the spread of respiratory infections such as influenza, colds etc. Measures to contain respiratory secretions should be implemented by NAS staff and patients and include:

• Covering nose/mouth using disposable tissues when coughing, or sneezing

• Disposing of tissue in the nearest bin after use

• Performing hand hygiene with soap and water or alcohol based hand rub after contact with respiratory secretions and contaminated objects/materials

• Keeping hands away from mucous membranes of the eyes and nose.

During periods of increased prevalence of respiratory illness such as influenza, heightened awareness of respiratory hygiene should be encouraged, stay home from work if you have respiratory virus infection untill 48 hours after acute symptoms resolve: refer to current guidance.

Please see Appendix IX Respiratory hygiene and cough etiquette

9. Management of waste, Within healthcare: there are 2 types of waste:

- **Healthcare Non-risk Waste.**

This includes normal household and catering waste, and all non-infectious waste including nontoxic, non-radioactive and non-chemical waste.

- **Healthcare 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.

For management of waste, you must ensure that you:

• Apply Standard Precautions to protect against exposure to blood and body substances during handling of waste; perform hand hygiene following the procedure.

• Segregation should occur at the point of generation

• Waste should be contained in the appropriate receptacle, identified by colour and label, and disposed of according to the facility waste management plan.

• Healthcare workers should be trained in the correct procedures for waste handling.

Regardless of where waste is generated (for example from isolation rooms versus routine patient care areas) the principles of determining whether it is to be treated as healthcare risk waste or general waste remain the same.

For additional information on waste management, see the HSE Waste Management Handbook https://www.hse.ie/eng/about/who/healthbusinessservices/national-health-sustainability-office/files/hse-waste-management-handbook.pdf

10. **Management of linen**

Linen includes bedding, towels, clothes, and coveralls etc. which have been either worn or used by NAS staff or a patient.

The correct handling and transport of linen may prevent the transmission of microorganisms (bugs) to other patients, NAS staff and the environment. This includes:

- Storing clean linen separate from used linen.
- Wearing protective equipment such as gloves and an apron if required to dispose of used linen.
- Hand hygiene to be performed following handling of used linen
- Predominently linen in NAS is single use such as disposable stretcher sheets or MediFleece blankets.

11. **Decontamination of reusable medical equipment** Medical devices designated as “Single Use Only” must not be reused under any circumstances.

Sign for single use item: DO NOT RE-USE or USE ONCE ONLY

Non-critical equipment refers to equipment that comes in contact with intact skin but not mucous membranes. It includes patient care items and environmental surfaces.

Examples of non-critical patient-care items are blood pressure cuffs and stethoscope.

Non-critical environmental surfaces include bed rails, some food utensils, patient furniture and floors.

Non-critical environmental surfaces frequently touched by hand potentially could contribute to secondary transmission by contaminating hands of NAS staff or by contacting shared medical equipment which is subsequently used by another patient. Such equipment must be thoroughly cleaned prior to use on another patient.

Reusable Invasive Medical Devices (RIMD) refers to equipment that is classified as semi critical or critical. RIMDs are in contact with sterile body sites, mucous membranes, and breaks in the skin. Staff must ensure that RIMDs are not used for another patient until cleaned and reprocessed appropriately in line with HSE Code of Practice for Decontamination of Reusable Invasive Medical Devices, 2007. Generally NAS uses single use equipment but you may encounter RIMDs when working with other health professionals.

12. Decontamination of the environment

Routine environmental cleaning is required to minimise the number of microorganisms (bugs) in the environment. Particular attention should be given to frequently touched surfaces and surfaces most likely to be contaminated with blood or body fluids.

Cleaning with a neutral detergent is the first step in environmental decontamination.

Chemical disinfectants are not recommended for routine environmental cleaning. When using disinfectants, staff should follow the manufacturer's instructions for dilution and contact times.

Transmission-Based Precautions

Any IPC strategy should be based on the use of Standard Precautions as a minimum level of control.

Transmission-based Precautions are recommended as additional work practices in situations where

Standard Precautions alone may be insufficient to prevent transmission. This includes the use of Transmission-based Precautions in the event of an outbreak (for example gastroenteritis) to assist in containing the outbreak and preventing further infection.

Transmission-based Precautions should be tailored to the particular infectious microorganisms involved and its mode of transmission. This may involve a combination of practices.

Guidance on when and how to implement Transmission-based Precautions is given below.

Types of Transmission-based Precautions

• **Contact** precautions are used when there is a known or suspected risk of direct or indirect transmission of infectious microorganisms that is not effectively contained by Standard Precautions alone.

• **Droplet** precautions are used for people who use healthcare services who are known or suspected to be infected with microorganisms transmitted over short distances by large respiratory droplets.

• **Airborne** precautions are used for people who use healthcare services who are known or suspected to be infected with microorganisms transmitted from person to person by the airborne route and for microorganism transmitted by droplets when Aerosol Generating Procedures associated with an increased risk of infection (AGPs) are performed.

2.5 National notifiable diseases

As per the HPSC all medical practitioners, including clinical directors of diagnostic laboratories, are required to notify the Medical Officer of Health (MOH)/Director of Public Health (DPH) of certain diseases. This information is used to investigate cases thus preventing spread of infection and further cases. The information will also facilitate the early identification of outbreaks. It is also used to monitor the burden and changing levels of diseases, which can provide the evidence for public health interventions such as immunisation.

The current list of notifiable diseases is available on the Health Protection Surveillance Centre website.
https://www.hpsc.ie/notifiablediseases/listofnotifiablediseases/

3.0 GOVERNANCE AND APPROVAL

3.1 NAS Clinical Directorate
Quality and Patient Safety team
Approval by NAS senior leadership team

3.2 Policy **adapted** from HPSC Interim Guidance on Infection Prevention & Control for the Health Service Executive (2021)

3.3 **Approved PPPG Checklist**
Available upon request

4.0 COMMUNICATION AND DISSEMINATION

4.1 On approval, this Policy will be circulated electronically to all Managers, Supervisors and Staff This Policy will be available electronically in each Ambulance Station for ease of retrieval and reference. This policy will also be placed on the National Ambulance Service website for reference.

5.0 IMPLEMENTATION

5.1

The Manager/Supervisor responsible for updating Policies and Procedures will return the Confirmation Form to the IPC Manager NAS Headquarters to confirm document circulation to all staff.

IPC Manager to implement healthcare auditing.
Education and training underpin efforts to integrate IPC practices into practice at all levels.

Essential education for all NAS staff should cover IPC work practices and their role in preventing the spread of microorganisms and the development of infection. This will be conducted as part of the undergraduate education, staff orientation and any continuing professional development training provided by NAS.

5.2

Useful online training available to all staff via HSELand considered essential for clinical staff:
AMRIC Introduction to Infection Prevention and Control and Antimicrobial Resistance
AMRIC Basics of Infection Prevention and Control
AMRIC Standard and Transmission-Based Precautions
AMRIC Hand Hygiene
AMRIC Personal Protective Equipment
AMRIC Respiratory Hygiene and Cough Etiquette
AMRIC Aseptic Technique
AMRIC Antimicrobial Stewardship in Practice

5.3 Lead person(s) responsible for the implementation of the PPPG.

Quality & Patient safety risk manager

Infection Prevention & Control manager

Quality Safety Risk Managers

Education and Competency Assurance Team

5.4 Risk Management

Risk management is the basis for preventing and reducing harm arising from healthcare associated infection and underpins the approach to IPC throughout this protocol. A successful approach to risk management includes action at the organizational level (for example providing support for effective risk management through an organizational risk management policy, staff training and monitoring and reporting) as well as in clinical practice.

Organisational support for risk management

For risk management within the NAS to be effective, there needs to be appropriate infrastructure and culture; a logical and systematic approach to implementing the required steps; and embedding of risk management principles into the philosophy, principles and business processes of the service, rather than it being a separate activity or focus. Factors that support risk management across the service include development of a risk management framework/policy; staff training in risk management; implementation of a risk register, risk treatment schedule and integrated action plans; monitoring and audit; and risk incident reporting.

An infrastructure and environment that encourages two-way communication between management and NAS staff and among staff is an important factor in increasing the level of support for and compliance with IPC programs.

Management should:

• provide direction (for example nominate issues for attention that are relevant to the core business of the service, such as respiratory hygiene and cough etiquette in daily practice)

• establish goals and periodically evaluate performance (for example establish healthcare auditing).

• provide information to individuals, staff, service users and other stakeholders with an emphasis on continually improving performance.

NAS staff can contribute to the development of risk management structures and are integral to the success of such strategies.

New technologies and testing

Before purchasing any new technologies, consultation should occur with the Quality and Patient Safety team.

Advice should be sought on:

• the impact on risk of infection to people who use service or other individuals as a result of the product.

• whether the product may be implicated in the transmission of microorganisms and the development of infection.

• whether the product will have IPC implications for other consumables, equipment or plans.

• whether any difficulties in cleaning and reprocessing the product might impact on the product functionality and safety.

• whether any alternative products that are available may present a lower risk of infection.

• whether the product has met all regulatory requirements relevant to IPC.

A risk assessment should be undertaken before purchasing new technologies which should consider:

• the design of the instrument - how this may impact the ease of cleaning.

• local capacity and expertise - whether staff will be able to adequately reprocess the instrument (assessed in association with the IPC manager).

6.0 MONITORING, AUDIT AND EVALUATION

Q&PS team will conduct monitoring
Infection Prevention & Control Manager will coordinate audit.

Auditing to measure compliance with IPC policies and procedures can occur through:
• Direct observation
• Examining logs and registers of specific activities, for example policy compliance.
• Use of auditing tools

Evaluation to be reviewed by Quality & Patient Safety Manager

7.0 REVISION/UPDATE

7.1 Document will be reviewed by the Quality and Patient safety team, led by the Infection Prevention and Control Manager every three years.
7.2 PPPG will be amended in light of new evidence being presented as required.
7.3 Complete version control update on PPPG Template cover sheet as required.

8.0 REFERENCES

- CDC Guidelines for Isolation Precaution, Siegel JD et al., 2007
- Core Infection Prevention and Control Knowledge and Skills, A Framework Document (May 2015)
- HSE Health and Safety Authority Guide to the European Union Regulations 2014 (Prevention of Sharps Injuries in the Healthcare Sector): https://www.hsa.ie/eng/Your_Industry/Healthcare_Sector/Biological_Agents_/Sharps_/Sharps_Directive_and_Regulations/
- Health Service Executive (2009) Standard Precautions, available: https://www.hpsc.ie/a-z/microbiologyantimicrobialresistance/infectioncontrolandhai/standardprecautions
- HSE Quality Improvement Division and the HCAI/AMR Committees, Core Infection Prevention and Control Knowledge and Skills A Framework Document, May 2015
- HSE Waste Management Awareness Handbook 2014
- HPSC EMI Guidelines for the Emergency Management of Injuries and Post-exposure Prophylaxis

- Interim Guidance on Infection Prevention & Control for the Health Service Executive 2021 (V1.3 11.01.2021)
- World Health Organisation (2006), *Your 5 moments for Hand Hygiene,* available: https://www.who.int/gpsc/tools/5momentsHandHygiene_A3.pdf?ua=1

9.0 APPENDICES

Appendix I:

Signature Sheet

I have read, understand and agree to adhere to this Policy

Print Name	Signature	Area of Work	Date

Appendix II:

Membership of the PPPG Development Group (Template)

Available upon request

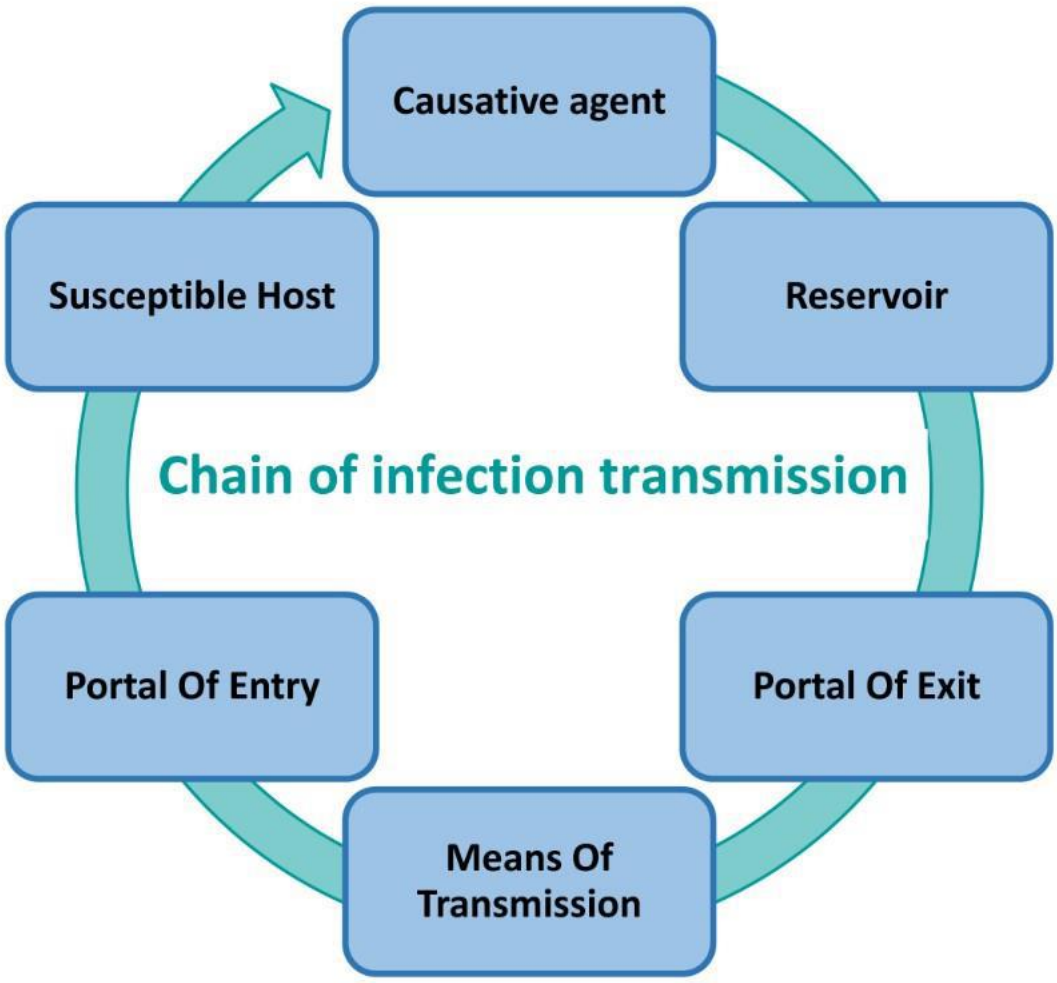
Appendix III: Conflict of Interest Declaration Form (Template)

Available upon request

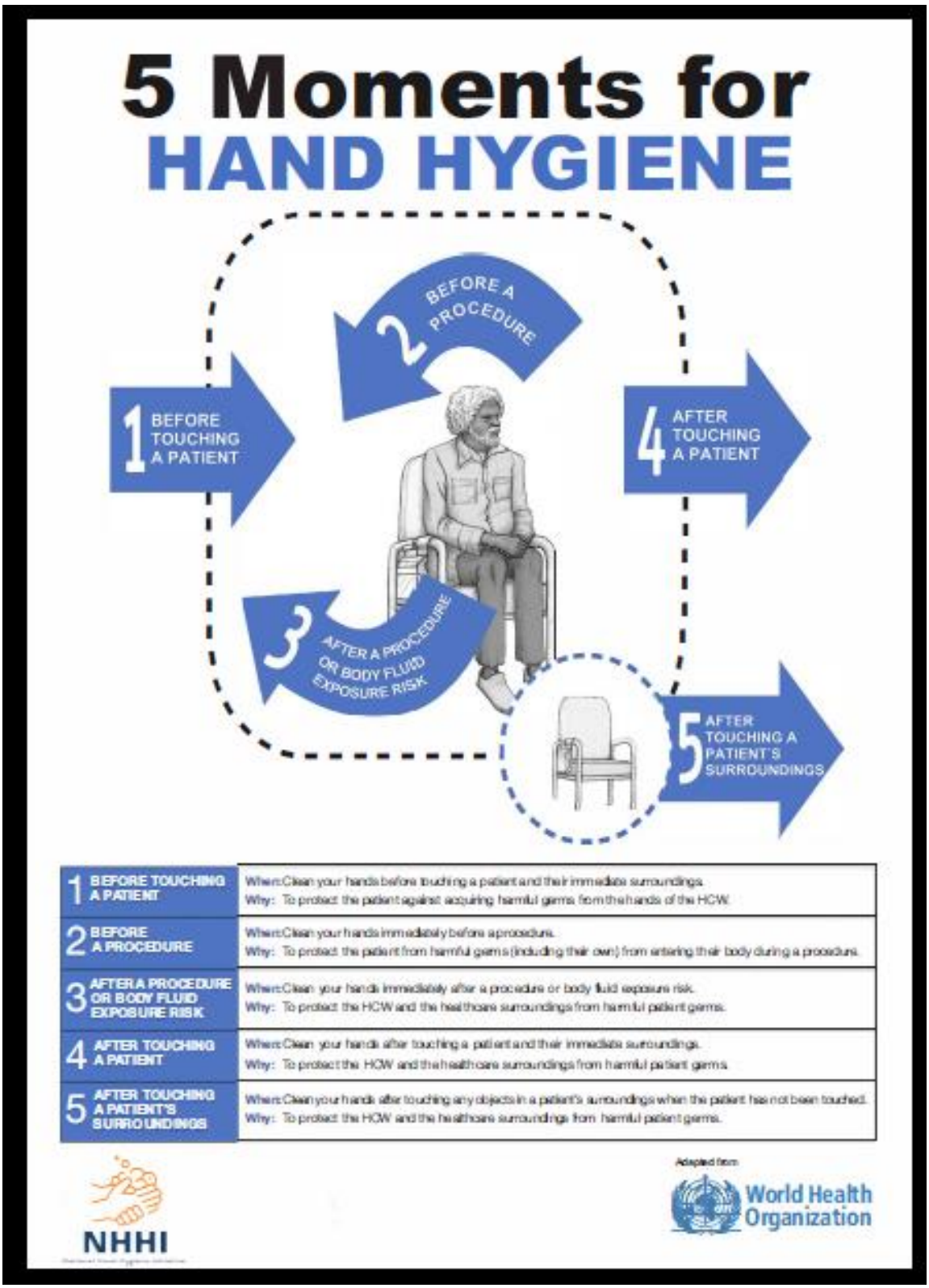
Appendix IV:
Membership of the Approval Governance Group (Template)

Available upon request

Appendix V: Chain of Infection

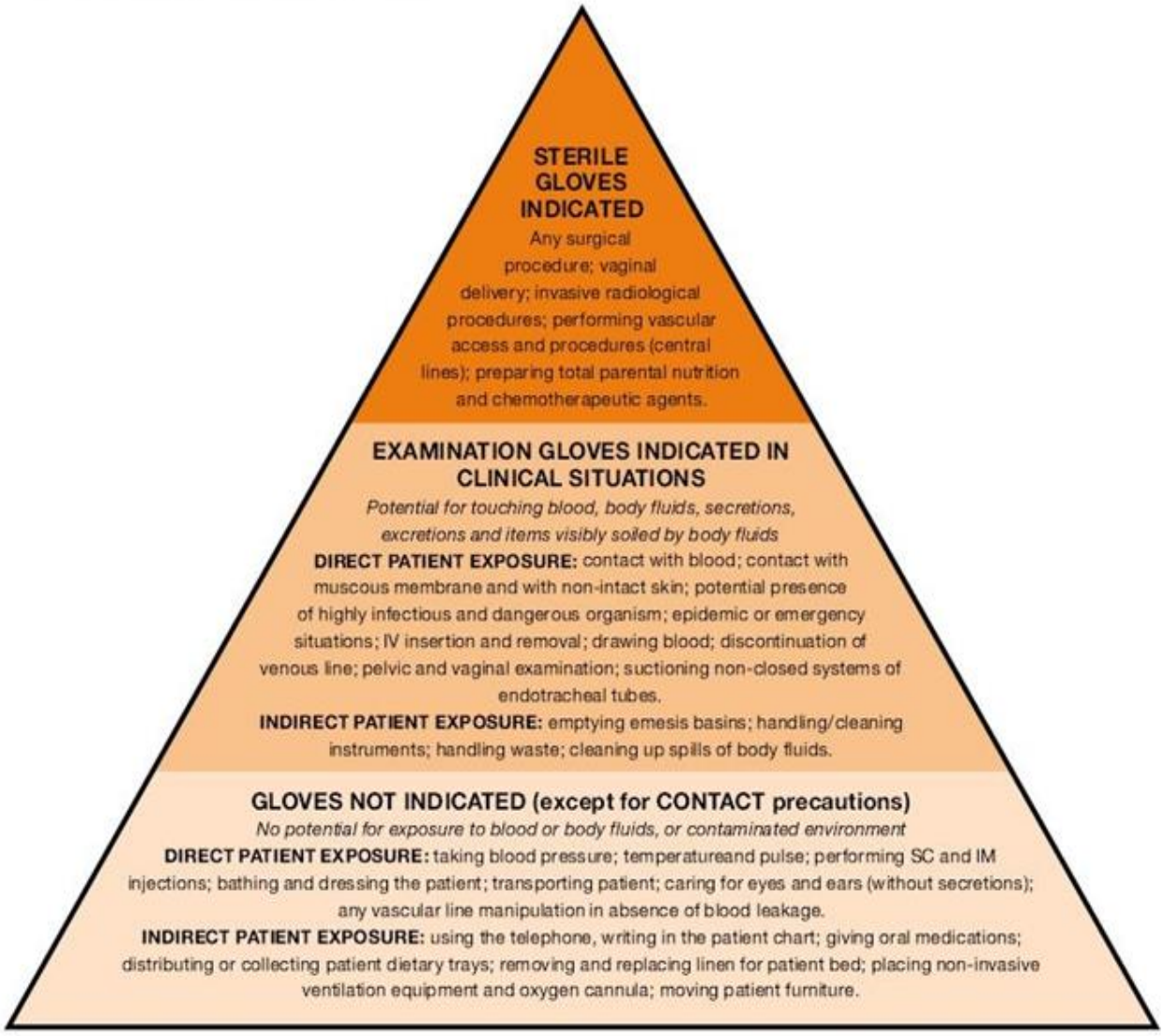


Appendix VI: WHO 5 moments for Hand Hygiene (seated patient)



Appendix VII: PPE Personal Protective Equipment

Figure I.23.1
Situations requiring and not requiring glove use



Gloves must be worn according to STANDARD and CONTACT PRECAUTIONS. The pyramid details some clinical examples in wich gloves are not indicated, and others in which examination or sterile gloves are indicated. Hand hygiene should be performed when appropriate regardless indications for glove use.

Safe use of FFP2 respirator mask

Separate the edges of the respirator mask to fully open it.

Slightly bend the nose wire to form a gentle curve.

Hold the respirator mask upside down to expose the two headbands.

Using your index fingers and thumbs, separate the two headbands.

While holding the headbands with your index fingers and thumbs, cup the respirator mask under your chin.

Pull the headbands up over your head.

Release the lower headband from your thumbs and position it at the base of your neck.

Position the remaining headband on the crown of your head.

Conform the nosepiece across the bridge of your nose by firmly pressing down with your fingers.

Continue to adjust the respirator mask and secure the edges until you feel you have achieved a good facial fit. Now, perform a fit check.

Check the fit of the respirator mask every time you wear it.

The wearer should be clean shaven to achieve a good fit.

Positive pressure inhale and exhale several times.

The respirator mask should collapse slightly when you inhale and expand when you exhale. You should not feel any air leaking between your face and the respirator mask.

If the respirator mask does not collapse and expand, or if air is leaking out between your face and the respirator mask, then you have NOT achieved a good facial fit.

Adjust the respirator mask until the leakage is corrected and you are able to successfully fit check your respirator mask.

For coloured masks the coloured side must be worn facing outward and upward in order to provide moisture resistant protection.

HELPFUL TIPS:

The wearer should remove the respirator mask if:

- the respirator mask becomes uncomfortable
- breathing becomes difficult
- the respirator mask is damaged or distorted
- the respirator mask becomes obviously contaminated by respiratory secretions, blood or bodily fluids.

Stay safe. Protect each other.

Coronavirus COVID-19

Coronavirus COVID-19 Public Health Advice

Guide to donning and doffing standard Personal Protective Equipment (PPE)

FOR HEALTH AND SOCIAL CARE SETTINGS

DONNING OR PUTTING ON PPE

- Before putting on the PPE, perform hand hygiene.
- Be well hydrated and have taken a toilet break
- Have removed all jewellery including earrings
- Be bare below the elbows
- Have secured your hair back off your face
- Do not bring mobile phones/bleeps into an isolation area

CLICK HERE FOR FIT CHECK GUIDE!

1. Put on your plastic apron, making sure it is tied securely at the back.

2. Put on your surgical or FFP2 mask. For mask with ties - tie the upper straps on top of head and bring the lower straps up in front of the ears and tie on top of head. For mask with loops - loop straps over the ears. Mould the metal strap over the bridge of the nose and make sure the mask is extended to cover your mouth and chin.

3. Put on your eye protection if there is a risk of splashing.

4. Put on non-sterile nitrile gloves.

5. You are now ready to enter the patient/ resident area.

DOFFING OR TAKING OFF PPE

Surgical or FFP2 mask may be used for single session use but gloves and apron must be changed between patients/residents. Gloves and aprons must be changed between patients/residents or between care activities as appropriate.

1. Remove gloves, grasp the outside of the cuff of the glove and peel off, holding the glove in the gloved hand, insert the finger underneath and peel off second glove.

2. Perform hand hygiene.

3. Remove eye protection.

4. Snap or unfasten the neck ties and allow to fall forward. Snap waist ties and fold apron in on itself, do not touch the outside as it is contaminated, and put into Healthcare risk waste.

5. Once outside the patient room or cohort area, remove facemask.

6. Perform hand hygiene.

Many thanks to Public Health England for the use of their images. Produced by the HSE AMRIC team hcai.amrteam@hse.ie

Rialtas na hÉireann Government of Ireland

How to use **Face Coverings**

Coronavirus **COVID-19** Public Health Advice

ALWAYS CLEAN YOUR HANDS BEFORE **AND** AFTER WEARING A FACE COVERING

Correct Covering

Medical masks should be reserved for health workers or patients in treatment.

If you have been advised to wear a medical mask, always have the coloured side showing and the metal band at the top of your nose.

Check Your Fit

Check that the face covering is made from a fabric that you are comfortable wearing.

Check that it is easy to fit and completely covers your nose and mouth, all the way down under your chin.

Tighten the loops or ties so it's snug around your face, without gaps. If there are strings, tie them high on top of the head to get a good fit. Do not touch or fidget with the face covering when it is on.

DO NOT: Wear the face covering below your nose.

DO NOT: Leave your chin exposed.

DO NOT: Wear it loosely with gaps on the sides.

DO NOT: Wear it so it covers just the tip of your nose.

DO NOT: Push it under your chin to rest on your neck.

FOLLOW THESE TIPS TO STAY SAFE:

- **ALWAYS** wash your hands before and after handling your face covering.
- **ALWAYS** change your face covering if it is dirty, wet or damaged.
- Carry unused face coverings in a sealable clean waterproof bag, for example, a ziplock.
- Carry a second similar type bag, to put used face coverings in.
- **CHILDREN UNDER 13** Face coverings are not required unless clinically advised.
- **ALWAYS** wash cloth face coverings on the highest temperature for cloth.

Safe Removal

Use the ties or ear loops to take the face covering off.

Do not touch the front when you take it off.

Disposing Of Single-Use Mask

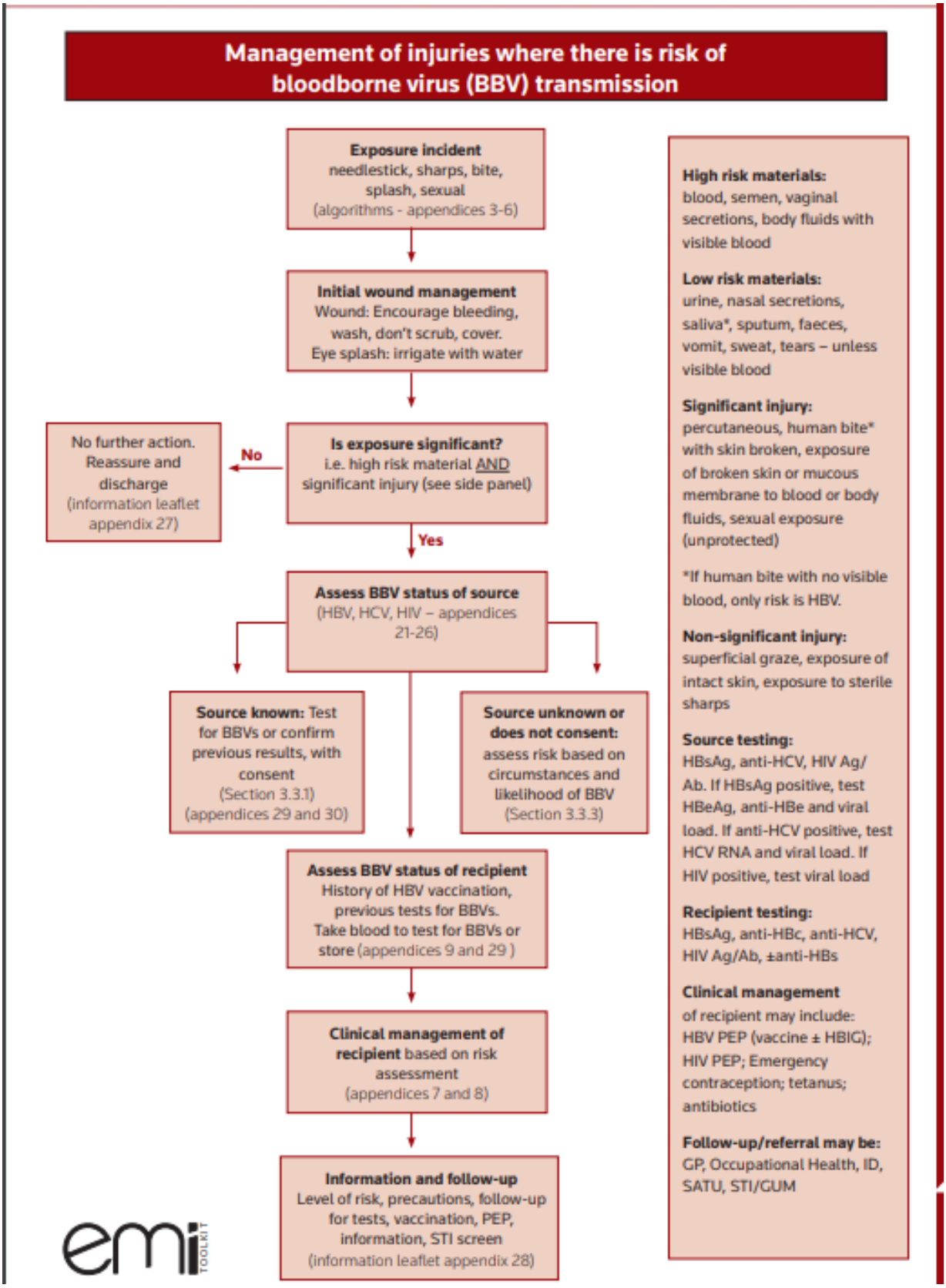
Always dispose of single-use masks properly in a bin.

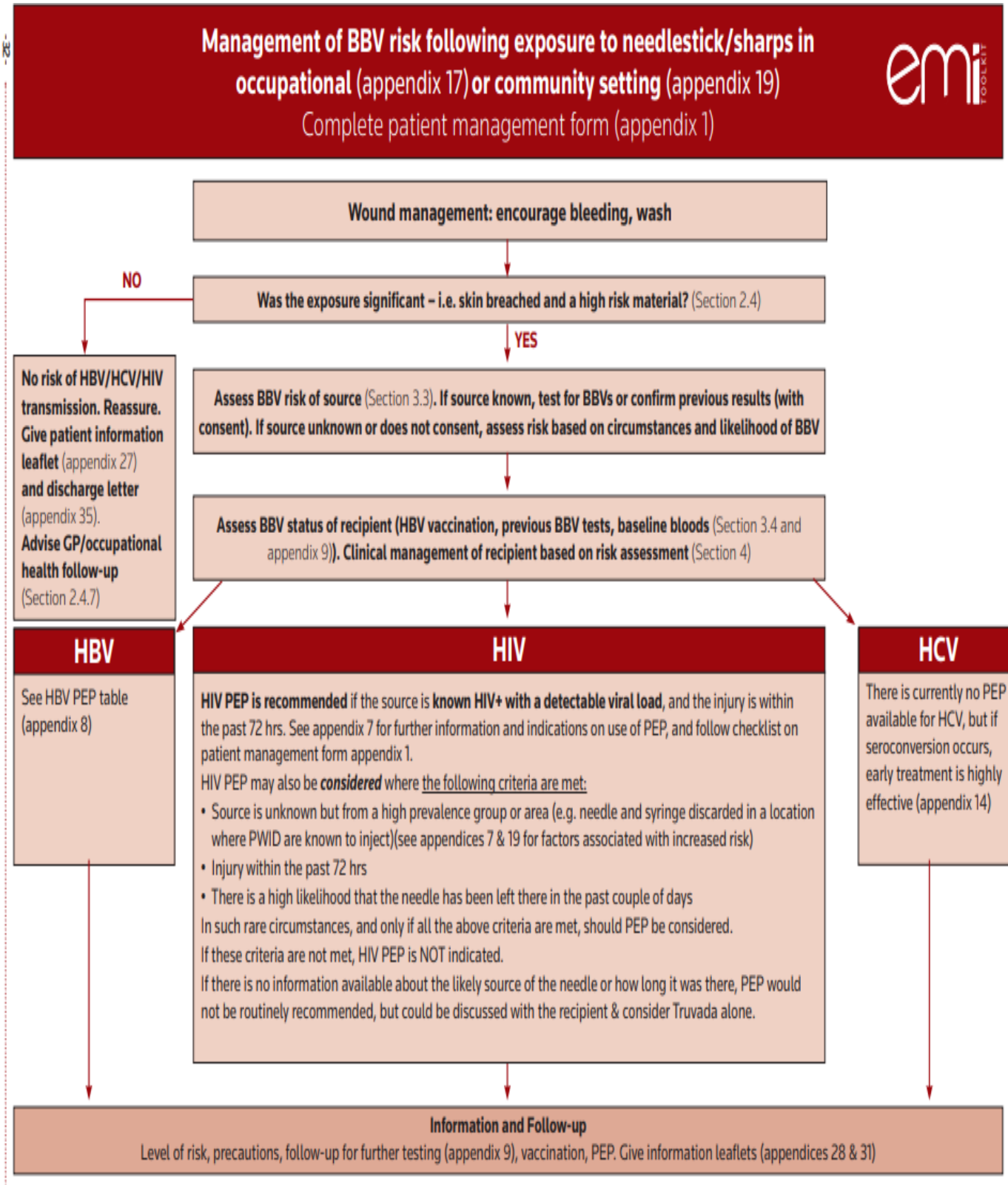
Don't forget to clean your hands and keep social distance.

Stay safe. Protect each other.

hpsc HSE Rialtas na hÉireann Government of Ireland

Appendix VIII: Needle stick injury




Management of BBV risk following exposure to needlestick/sharps in occupational (appendix 17) or community setting (appendix 19)
Complete patient management form (appendix 1)
emi TOOLKIT
Wound management: encourage bleeding, wash
Was the exposure significant – i.e. skin breached and a high risk material? (Section 2.4)
NO
YES
No risk of HBV/HCV/HIV transmission. Reassure. Give patient information leaflet (appendix 27) and discharge letter (appendix 35). Advise GP/occupational health follow-up (Section 2.4.7)
Assess BBV risk of source (Section 3.3). If source known, test for BBVs or confirm previous results (with consent). If source unknown or does not consent, assess risk based on circumstances and likelihood of BBV
Assess BBV status of recipient (HBV vaccination, previous BBV tests, baseline bloods (Section 3.4 and appendix 9)). Clinical management of recipient based on risk assessment (Section 4)
HBV
See HBV PEP table (appendix 8)
HIV
HIV PEP is recommended if the source is known HIV+ with a detectable viral load, and the injury is within the past 72 hrs. See appendix 7 for further information and indications on use of PEP, and follow checklist on patient management form appendix 1.
HIV PEP may also be considered where the following criteria are met:
• Source is unknown but from a high prevalence group or area (e.g. needle and syringe discarded in a location where PWID are known to inject)(see appendices 7 & 19 for factors associated with increased risk)
• Injury within the past 72 hrs
• There is a high likelihood that the needle has been left there in the past couple of days
In such rare circumstances, and only if all the above criteria are met, should PEP be considered.
If these criteria are not met, HIV PEP is NOT indicated.
If there is no information available about the likely source of the needle or how long it was there, PEP would not be routinely recommended, but could be discussed with the recipient & consider Truvada alone.
HCV
There is currently no PEP available for HCV, but if seroconversion occurs, early treatment is highly effective (appendix 14)
Information and Follow-up
Level of risk, precautions, follow-up for further testing (appendix 9), vaccination, PEP. Give information leaflets (appendices 28 & 31)

Appendix IX: Respiratory cough etiquette

Respiratory Hygiene and Cough Etiquette

When coughing or sneezing use a tissue to cover your nose and mouth

Dispose of the tissue afterwards in a waste bin

Decontaminate your hands after discarding tissue using soap and water or alcohol gel

These 3 steps will help prevent the spread of respiratory infections

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

hpsc

Appendix X: 5 Moments for hand hygiene (bed/stretcher)

1 BEFORE PATIENT CONTACT	WHEN? Clean your hands before touching a patient when approaching him or her WHY? To protect the patient against harmful germs carried on your hands
2 BEFORE AN ASEPTIC TASK	WHEN? Clean your hands immediately before any aseptic task WHY? To protect the patient against harmful germs, including the patient's own germs, entering his or her body
3 AFTER BODY FLUID EXPOSURE RISK	WHEN? Clean your hands immediately after an exposure risk to body fluids (and after glove removal) WHY? To protect yourself and the health-care environment from harmful patient germs
4 AFTER PATIENT CONTACT	WHEN? Clean your hands after touching a patient and his or her immediate surroundings when leaving WHY? To protect yourself and the health-care environment from harmful patient germs
5 AFTER CONTACT WITH PATIENT SURROUNDINGS	WHEN? Clean your hands after touching any object or furniture in the patient's immediate surroundings, when leaving - even without touching the patient WHY? To protect yourself and the health-care environment from harmful patient germs

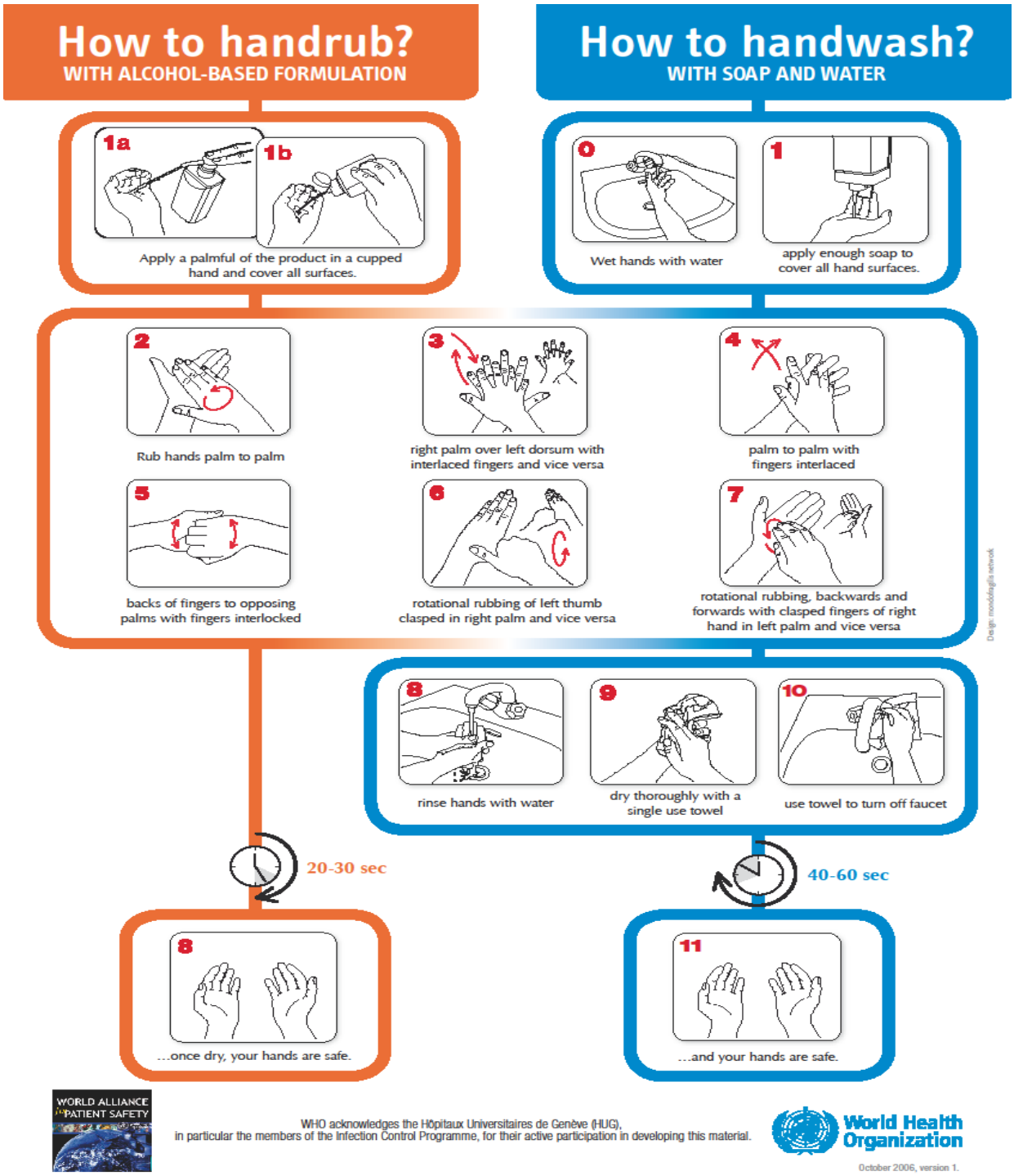
WORLD ALLIANCE FOR PATIENT SAFETY

WHO acknowledges the Hôpitaux Universitaires de Genève (HUG), in particular the members of the Infection Control Programme, for their active participation in developing this material.

World Health Organization

October 2006, version 1.

Appendix XI: Hand wash technique



Appendix XII: Clinical waste

Segregation and Packaging of Healthcare Waste

Orange/Blue Sharps Container

Needles, syringes and all contaminated sharps.

Yellow Lidded Container

Contained blood & body fluids with absorbent, hard plastic instruments.
No sharps, free liquids or heavy metals.

Yellow Bag

Soft waste only.
No sharps, liquids or hard objects.

Purple Lidded Container

Non sharps cytotoxic waste & pharmaceuticals.
No sharps or free liquids.

Black Lidded Container

Recognisable anatomical waste, placentas, large metal objects and non-autoclaved microbiological cultures.
No sharps or free liquids.

Purple Sharps Container

Contaminated cytotoxic sharps and unused medicines.
No free liquids.

Please note max weight limit in the UN code:

Rigid containers: On the handle is a "UN code" which shows the weight limit. E.g.: Y15 = 15Kg max weight.
Sharps containers: The max weight is displayed between the 'Y' and the 'S'.

We protect what matters.

Stericycle®

NOTES