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Llywodraeth Cynulliad Cymru  
Welsh Assembly Government

## **Infection Prevention Model Policy/Procedure 3**

**Personal Protective Equipment Policy and  
Procedure**

(an element of Standard Infection Control Precautions)

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**Policy Content.**

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## 1.0 Executive Summary/Key Points.

- Personal protective equipment (PPE) is one of the nine elements of standard infection control precautions (SICPs) which should be applied in all healthcare settings.
- The use of the correct type of PPE (gloves, aprons/gowns and facial protection) is essential for health and safety.
- A risk assessment may be required in order to decide which PPE is most appropriate for the task/situation, depending on what the wearer might be exposed to.
- All staff must receive training in the principles of and correct use of PPE.
- The use of PPE in specific situations where particular organisms/infections are present (e.g. specific respiratory infections and the use of specialised masks) may require discussion with Infection Control staff.
- Managers must ensure any staff with health concerns, including any skin irritation relating to occupational exposure to PPE, or who have become ill due to occupational exposure, are referred to the relevant agency e.g., General Practitioner or Occupational Health.
- PPE should be located close to the point of use.
- PPE should be appropriate, fit for purpose and suitable for the person using/wearing it, with the donning and removing of items carried out appropriately each time.
- PPE should not be a source of further contamination, e.g. by being taken off and left on environmental surfaces, or by being removed inappropriately and contaminating hands or clothing.
- The use of gloves does not negate the need for hand hygiene.
- Gloves must not be washed or decontaminated with alcohol-based hand rub.
- Single use items should be used where appropriate/possible and **never** reused. Manufacturers' instructions should always be followed.

## Infection Prevention Model Policy/Procedure-Personal Protective Equipment

- Stocks of PPE should be stored off the floor, e.g. on appropriate shelving, in designated clean and dry storage areas to ensure that they are not contaminated prior to use.
- Do not store unused supplies of gloves or aprons/gowns in a dirty area such as a sluice, only those being currently used in this area should be kept here.
- PPE should not be decanted from the original box thus ensuring the expiry date is known and the integrity maintained.
- Never use disposable latex gloves that contain powder due to the risks associated with aerosolisation and an increased risk of latex allergies.
- PPE should be removed immediately following a procedure. The same PPE should never be worn for a different patient, client, procedure or area.
- It may be necessary to change PPE between tasks on the same patient/client to prevent unnecessary cross-contamination.
- Torn, punctured or otherwise damaged PPE should not be used and should be removed immediately (safety permitting) if this occurs during a procedure.
- Used PPE should never be placed on environmental surfaces, but disposed of safely and immediately following use into appropriate receptacles according to local safe disposal of waste policies.
- Hand hygiene should be carried out before donning gloves, immediately after removal and disposal of gloves, and between every change of gloves.
- If surgical masks become wet or soiled they should be changed in order to ensure continued protection from splashes/splattering to the mouth and nose.
- Reusable items (e.g. non-disposable goggles/face shields/visors) should have a decontamination schedule with responsibility for this assigned. Items should be dealt with immediately following use.

## 2.0 Introduction

The use of Personal Protective Equipment (PPE) is essential for health and safety. Selection of PPE must be based on an assessment of the risk of transmission of microorganisms to the patient or to the carer, and the risk of contamination of the healthcare workers (HCW's) clothing and skin/mucous membranes by patients' blood, body fluids, secretions and excretions. The use of PPE is considered standard in certain situations and is one of the nine elements of Standard Infection Control Precautions (SICPs), which apply to contact with blood, body fluids, non-intact skin and mucous membranes. Everybody involved in providing care should be educated about SICPs, and trained in the use of PPE. The benefit of wearing PPE is two-fold, offering protection to both patients/clients and those caring for them.

The principles described here should apply to all situations and all settings even though this policy may seem hospital focused. Everyone has an important part to play in improving patient/client safety.

For the purposes of this policy, the PPE described, which might be used in general health and social care settings, includes:

- **Gloves.**
- **Aprons/gowns.**
- **Face, mouth/eye protection, e.g. masks/goggles/visors.**

This policy **does not** contain details of:

\* Theatre/surgery apparel which is often more comprehensive due to the risks encountered, e.g. the use of head and foot wear. Theatre specific policies should be available at local level.

\* The use of PPE in situations where particular organisms/infections are present (e.g. specific respiratory infections and the use of specialised masks) may require discussion with Infection Control staff.

### 3.0 Responsibilities

#### 3.1 Managers/Clinical Directors must:

- Ensure that all staff receive instruction/education on the principles of PPE and SICPs, and are trained in the use of PPE.
- Ensure that an up-to-date, evidence based PPE policy is easily available to all staff.
- Ensure that adequate resources are in place to allow the recommended infection prevention and control measures such as the use of PPE to be implemented.
- Undertake a risk assessment to optimise patient/client and staff safety, consulting expert infection control guidance if/as required.
- Take expert advice on the provision of alternatives to latex based products.
- Support staff in any corrective action or interventions if an incident occurs that may have resulted in the transmission of infection.
- Ensure any staff with health concerns, including any skin irritation relating to occupational exposure to PPE, or who have become ill due to occupational exposure, are referred to the relevant agency e.g., General Practitioner or Occupational Health.

#### 3.2 All staff – (providing direct care in a health or social care setting including a patient's/client's own home) **must**:

- Attend induction, mandatory and update infection prevention and control education sessions.
- Apply the principles of SICPs/PPE, and ensure that all other staff/agencies apply these principles.
- Explain to patients/clients/residents, carers and visitors any infection control requirements, such as PPE.
- Ensure that supplies of PPE are readily available for all to use.
- Report to line managers any deficits in relation to knowledge of SICPs/PPE, facilities/equipment or incidents, that may have resulted in cross contamination.
- Report any illness as a result of Occupational Exposure to their line manager.
- Not attend for clinical duty with known or suspected infections. If in any doubt consult with your General Practitioner, Occupational Health Department or the local Infection Control/ Health Protection Team.
- Consider the elements of SICPs such as PPE as an objective within staff continuing professional development and EKSF, ensuring continuous updating of knowledge and skills.

### **3.3 Infection Prevention and Control Staff must:**

- Provide education for staff and management on this policy.
- Act as a resource for guidance and support when advice on PPE is required.
- Provide advice on individual risk assessments for PPE decisions.

**NB: The source of infection prevention and control advice must be identified by all healthcare providers.**

### **3.4 Visitors should be advised:**

- Of the appropriate infection control precautions to be taken when visiting
- To contact the person in charge before visiting if they are unsure of the infectious status of the person they are visiting
- Of the requirement to avoid visiting if they are suffering from an infection such as those causing diarrhoea, vomiting or flu-like illnesses.

### **3.5 Incident Reporting:**

- Adverse reactions relating to the use of PPE should be reported, e.g. to Occupational Health Department, General Practitioner, Health and Safety.
- Poor availability or lack of adequate PPE should be reported immediately to the responsible line manager, and also reported as per local incident reporting procedures.

### **4.0 General Good Practice Points**

- Effective communication between all members of the health and social care team is imperative for patient safety.
- PPE should be appropriate, fit for purpose (e.g. CE marked) and suitable for the person using/wearing it, with the donning and removing of items carried out appropriately each time (see Appendix 1).
- PPE should be located close to the point of use.
- Adequate supplies of disposable plastic aprons, single use gloves and face protection should be available wherever care is delivered. Gowns should be available when advised by the infection control staff.
- The integrity of PPE, especially gloves, must not be affected during procedures (e.g. by using certain products used such as hand creams or solvents such as acetone) as this could potentially lead to exposure to blood, other body fluids, excretions and secretions. Control of Substances Hazardous to Health (COSHH) sheets, product data sheets and manufacturers' instructions should

be consulted to ensure PPE materials are compatible with the of products encountered.

- Stocks of PPE should be stored off the floor, e.g. on appropriate shelving, in designated clean and dry storage areas, to ensure that they are not contaminated prior to use. Do not store unused supplies of gloves or aprons/gowns in a dirty area such as a sluice, only those being currently used in this area should be kept here.
- Expiry dates/lifespan of PPE should be adhered to according to manufacturers' instructions. PPE should not be decanted from the original box thus ensuring the expiry date is known and the integrity maintained.
- Single use items should be used where appropriate/possible and **never** reused (packaging of such items clearly states if they are single use). Manufacturers' instructions should always be followed.

## 5.0 Gloves

### 5.1 How to choose the correct glove

The attached "Risk assessment for glove use", in appendix 2, describes the types of glove that are available. Every organisation should have in place a risk assessment and policy for glove choice and usage. Purchasing policy should ensure that suppliers meet acceptable criteria for products.

Gloves are available in a variety of materials. Risk assessment should ensure that the physical characteristics and barrier properties are acceptable, and provide protection against the risks encountered (e.g. microbiological, chemical, cytotoxic). Natural rubber latex remains superior in protecting against bloodborne viruses. However, latex gloves that contain powder should never be used due to the risks associated with aerosolisation and an increased risk of latex allergies. When risk assessment requires latex glove use they must be non-powdered and low protein. The problem of patient or healthcare worker sensitivity to natural rubber latex must be considered when deciding on glove materials, and alternatives must be available in a variety of sizes. Sensitivity issues can occur with these alternative materials as well, and Occupational Health Departments should assess and advise on all staff with any sensitivity problems.

Gloves must be well fitting to avoid interference with dexterity, friction, excessive sweating and finger and hand muscle fatigue. Therefore, the supply and choice of the correct size of glove, e.g. small, medium or large, is important.

### 5.2 When to wear gloves

Gloves must be worn for invasive procedures, contact with sterile sites and non-intact skin or mucous membranes, and all activities that have been assessed as carrying a risk of exposure to blood, body fluids, secretions and excretions; and when handling

sharp or contaminated instruments. Appendix 3, "Summary guide to the use of personal protective equipment" contains more detail.

Gloves should be donned by holding the wrist end of the glove open with one hand to allow the other hand to enter easily (do not wear jewellery other than a wedding band under gloves).

Gloves must be worn as single use items. They are put on immediately before an episode of patient contact or treatment and removed as soon as the activity is completed. Gloves are changed between caring for different patients, or between different care/treatment activities for the same patient. The same PPE should never be worn for a different patient, client, procedure or area. Never perform hand washing whilst wearing gloves, and never use products such as alcohol-based hand rub to clean gloves.

Gloves are not a substitute for employing good hand hygiene, and this should be performed before donning gloves, immediately after removal and disposal of gloves, and between every change of gloves. Gloves used for clinical practice may leak even when apparently undamaged, and the use of gloves as a method of barrier protection reduces the risk of contamination but does not eliminate it and hands are not necessarily clean because gloves have been worn. Therefore compliance with hand hygiene measures is essential.

A double gloving strategy should be considered in high risk situations, e.g. exposure prone procedures.

The use of gauntlet-style (long arm) gloves to cover the forearms may be necessary in certain situations, e.g. situations where significant exposure to blood and other body fluids is likely, and should be considered within risk assessment procedures.

Torn, punctured or otherwise damaged gloves should not be used and should be removed immediately (safety permitting) if this occurs during a procedure.

### **5.3 How to remove and dispose of gloves**

Gloves should be removed promptly after use and before touching non-contaminated/clean areas/items, environmental surfaces, or other persons (including yourself). Gloves which have been worn for a procedure/activity should not be worn to handle or write on charts or to touch any other communal, clean surface.

Care should be taken when removing used gloves to avoid contamination of hands and clothing. The wrist end of the glove should be handled and the glove should be pulled down gently over the hand, turning the outer contaminated surface inward while doing so, i.e. the gloves are then disposed of inside out, preferably with the second glove also pulled over the first while removing it so that they are wrapped together. Used gloves should never be placed on environmental surfaces, but disposed of safely and immediately following use, as clinical waste, into appropriate receptacles according to local disposal of waste policies.

Hand hygiene should be performed immediately after the removal and disposal of gloves .

## **6.0 Aprons and Gowns**

### **6.1 When to wear and how to choose an apron/gown**

The use of disposable plastic aprons are indicated for a wide array of activities within care settings including “clean” and “dirty” tasks. They must be worn when close contact with the patient, materials or equipment are anticipated, and when there is a risk that clothing may be become contaminated with pathogenic microorganisms or blood, body fluids, secretions or excretions, with the exception of perspiration. Appendix 3, “Summary guide to the use of personal protective equipment” contains fuller details.

There are many types of gowns available and the most appropriate should be considered following local risk assessment, often involving in the first instance Infection Control staff, Occupational Health services and Procurement departments. Aprons/gowns should be appropriate for use, fit for purpose and should avoid any interference during procedures.

Colour-coded aprons are often used for specific tasks and/or in specific areas (e.g. when handling or serving food within a clinical area).

Never reuse or wash single-use disposable aprons/gowns.

A full-body fluid-repellant gown should be worn, rather than a plastic apron, when there is a risk of significant splashing of blood, body fluids, secretions or excretions (with the exception of perspiration), onto skin or clothing, or for other reasons if indicated by risk assessment.

### **6.2 When to change an apron/gown and how to remove and dispose of it**

Aprons/gowns should be changed between patients/clients/procedures. It may be necessary to change aprons/gowns between tasks on the same patient/client to prevent unnecessary cross-contamination. Remove aprons/gowns immediately once a task is finished. Never wear them while moving to a different patient/client/area.

Torn or otherwise damaged aprons/gowns should not be used and should be removed immediately (safety permitting) if this occurs during a procedure.

Remove aprons/gowns carefully to avoid contact with the most likely contaminated areas (e.g. the front surface), and prevent contamination of clothes under them. The outer contaminated side of the apron/gown should be turned inward, rolled into a ball and then the item should be discarded immediately, as clinical waste, into appropriate receptacles according to local disposal of waste policies. Never place used aprons/gowns on environmental surfaces.

Change disposable aprons used for clinical/care procedures before serving meals, a colour-coded system is commonly used for the latter.

Perform hand hygiene immediately after removal/disposal of aprons/gowns.

**NB** The donning of gowns is not detailed here but should be included within local theatre policies.

## **7.0 Face, mouth/eye protection, e.g. surgical masks/goggles**

### **7.1 How to choose the correct protection and when and how to wear it?**

Face masks and eye protection must be worn where there is a risk of blood, body fluids, secretions or excretions splashing into the face and eyes. Appendix 3, "Summary guide to the use of personal protective equipment" contains fuller details.

Well fitting, fit for purpose, comfortable protection is important to ensure adequate protection. Manufacturers' instructions should be adhered to while donning face protection to ensure the most appropriate fit/protection. Surgical masks should always fit comfortably, covering the mouth and nose. When not in use for protection, they should be removed and not worn around the neck.

Goggles should provide adequate protection when the risk of splashing is present, e.g. those used must 'wrap around' the eye area to ensure side areas are protected. Face shields/visors should be considered, in place of a surgical mask and/or goggles, where there is a higher risk of splattering/aerosolisation of blood/other body fluids.

Face protection should not be touched while being worn and should be removed immediately following a procedure. Face protection should be changed between patients/clients/procedures. It may be necessary to change between tasks on the same patient/client to prevent unnecessary cross-contamination. Remove PPE immediately once you have finished the task, these should never be worn while moving to a different patient/client/area.

Risk assessments will dictate the need for other types of masks, e.g. particulate filter masks, and should be carried out in conjunction with infection control staff. These masks must be correctly fitted and staff must be trained in their use.

If surgical masks become wet or soiled they should be changed in order to ensure continued protection from splashes/splattering to the mouth and nose. The efficacy of surgical masks in providing protection against airborne/droplet infections rather than from splashes of blood/other body fluids is the subject of continuing debate, as is the length of time they can be worn for.

Torn or otherwise damaged face protection should not be used and should be removed immediately (safety permitting) if this occurs during a procedure.

## **7.2 How to remove and dispose of face protection**

Remove face protection promptly after use, avoiding contact with most likely contaminated areas, e.g. the front surface. This should be done by handling, for example, the straps/ear loops/goggle legs only (manufacturers' instructions where given should be followed). The outer contaminated side of masks should be turned inward upon removal for disposal.

Dispose of disposable masks/face protection safely and immediately following use into appropriate receptacles according to local disposal of waste policies. Used face protection should never be placed on environmental surfaces.

Reusable items (e.g. non-disposable goggles/face shields/visors) should have a decontamination schedule with responsibility assigned. Items should be dealt with immediately following use.

Hand hygiene should be performed immediately after removal/disposal of face protection.

## **8.0 Footwear**

The correct use of footwear should be considered to promote infection control and prevention practice. When providing care, closed-toed shoes should be worn to avoid contamination with blood or other body fluids or potential injury from sharps. Footwear should be kept clean, and care should be taken when donning/removing shoes at any time during care delivery to avoid hand contamination. Hand hygiene should be performed following the handling of footwear.

Where designated footwear is assigned (e.g. in theatre settings, sterilising departments), policies should be available for the use and care of these, including clear cleaning schedules with responsibilities assigned. The principles applied within policies covering care of equipment should be followed when considering footwear decontamination.

Staff should not wear designated footwear for patient/client procedures outside their area of clinical practice e.g. between wards or in canteen areas.

It is advised that overshoes should not be worn as they can lead to unnecessary hand contamination while donning/removing and can cause aerosolisation of microorganisms due to bellowing when walking.

## **9.0 References/literature review**

This policy/procedure is supported by a full review of literature with references.

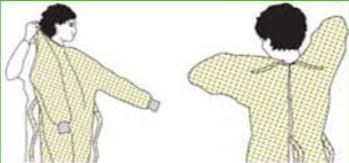
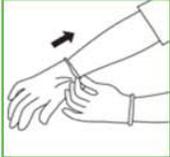
**This work is based on the Model Infection Control Policies developed by health Protection Scotland, with thanks.**

# Appendix 1 – Putting on and removing PPE

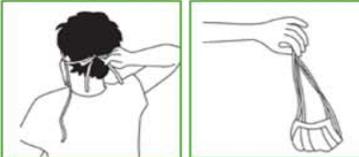
The type of PPE used will vary based on the type of exposure anticipated, and not all items of PPE will be required. The order for putting on PPE is Apron or Gown, Surgical Mask, Eye Protection (where required) and Gloves.

## 1. Putting on Personal Protective Equipment (PPE)

- Perform hand hygiene before putting on PPE

	<p><b>Apron</b></p> <ul style="list-style-type: none"> <li>• Pull over head and fasten at back of waist</li> </ul>
	<p><b>Gown</b></p> <ul style="list-style-type: none"> <li>• Fully cover torso from neck to knees, arms to end of wrist and wrap around the back. Fasten at the back</li> </ul>
	<p><b>Surgical Mask (or respirator)</b></p> <ul style="list-style-type: none"> <li>• Secure ties or elastic bands at middle of head and neck</li> <li>• Fit flexible band to nose bridge</li> <li>• Fit snug to face and below chin</li> <li>• Fit/check respirator if being worn</li> </ul>
	<p><b>Eye Protection (Goggles/Face Shield)</b></p> <ul style="list-style-type: none"> <li>• Place over face and eyes and adjust to fit</li> </ul>
	<p><b>Gloves</b></p> <ul style="list-style-type: none"> <li>• Select according to hand size</li> <li>• Extend to cover wrist</li> </ul>

## 2. Removing Personal Protective Equipment (PPE)

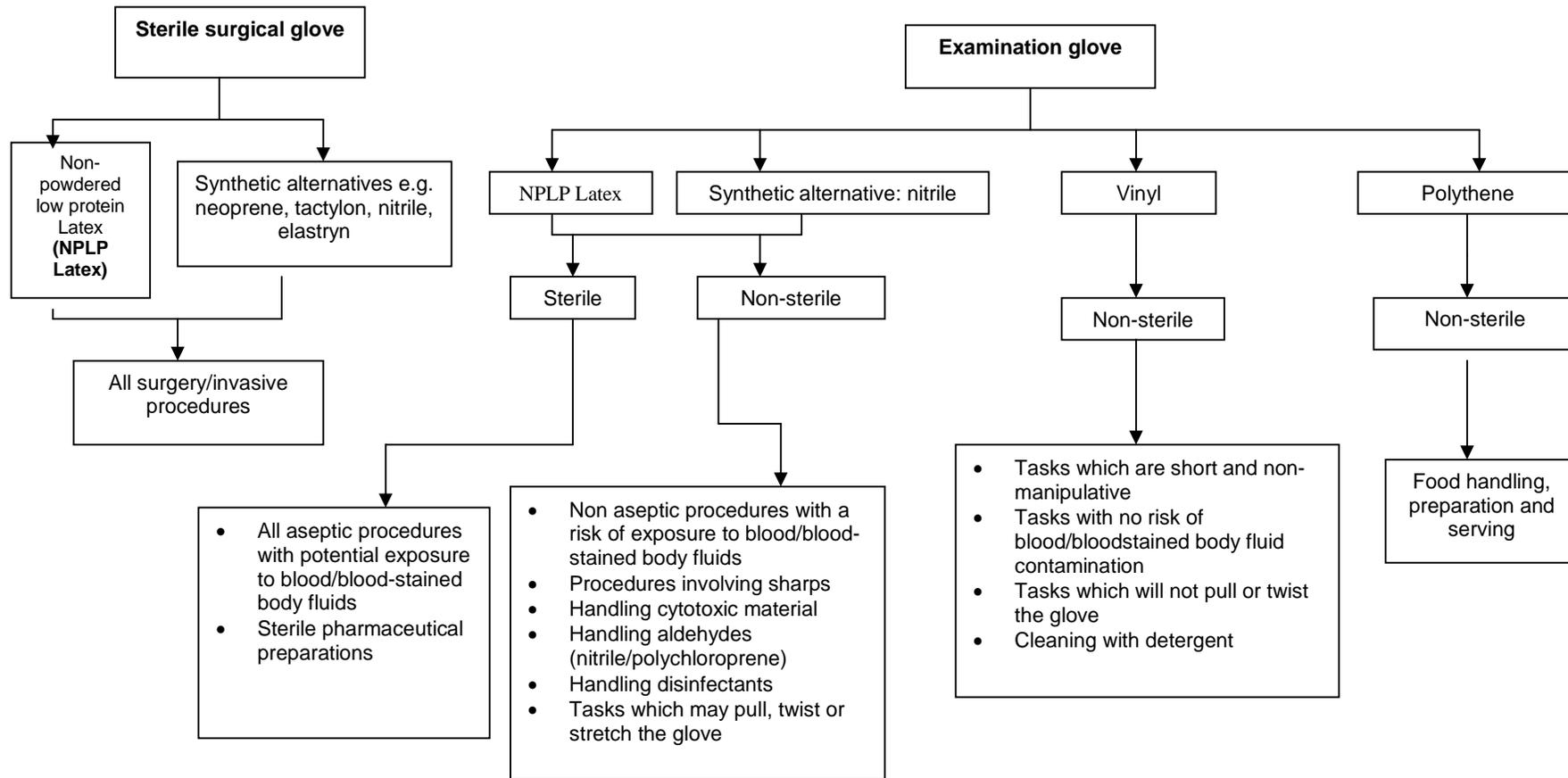
		<p><b>Gloves</b></p> <ul style="list-style-type: none"> <li>• Outside of gloves are contaminated</li> <li>• Grasp the outside of the glove with the opposite gloved hand; peel off</li> <li>• Hold the removed glove in the gloved hand</li> <li>• Slide the fingers of the ungloved hand under the remaining glove at the wrist</li> <li>• Peel the second glove off over the first glove</li> <li>• Discard into an appropriate lined waste bin</li> </ul>
		<p><b>Apron</b></p> <ul style="list-style-type: none"> <li>• Apron front is contaminated</li> <li>• Unfasten or break ties</li> <li>• Pull apron away from neck and shoulders lifting over head, touching inside only</li> <li>• Fold or roll into a bundle</li> <li>• Discard into an appropriate lined waste bin</li> </ul>
		<p><b>Gown</b></p> <ul style="list-style-type: none"> <li>• Gown front and sleeves are contaminated</li> <li>• Unfasten neck, then waist ties</li> <li>• Remove gown using a peeling motion; pull gown from each shoulder toward the same hand</li> <li>• Gown will turn inside out</li> <li>• Hold removed gown away from body, roll into a bundle and discard into an appropriate lined waste bin or linen receptacle</li> </ul>
		<p><b>Eye Protection (Goggles/Face Shield)</b></p> <ul style="list-style-type: none"> <li>• Outside of goggles or face shield are contaminated</li> <li>• Handle only by the headband or the sides</li> <li>• Place in designated receptacle for reprocessing or into an appropriate lined waste bin</li> </ul>
		<p><b>Surgical Mask (or respirator)</b></p> <ul style="list-style-type: none"> <li>• Front of mask/respirator is contaminated – do not touch</li> <li>• Unfasten the ties – first the bottom, then the top</li> <li>• Pull away from the face without touching front of mask/respirator</li> <li>• Discard into an appropriate lined waste bin</li> </ul>
<ul style="list-style-type: none"> <li>• Perform hand hygiene immediately on removal</li> </ul>		

**Use safe work practices to protect yourself and limit the spread of infection**

- Keep hands away from face and PPE being worn
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Regularly perform hand hygiene

NB Masks and goggles are not routinely recommended for contact precautions. Consider the use of these under standard infection control precautions or if there are other routes of transmission.

## Appendix 2. Glove usage and selection



### Appendix 3. Summary guide to the use of personal protective equipment

This guide is by no means exhaustive. Instead, it offers examples of common health and social care activities where blood/other body fluid exposure may occur and protection must be worn. As standard, a risk assessment must be undertaken to consider the risks of blood/other body fluid exposure prior to activities. For further details, refer to the introduction of this policy or consult with Infection Control staff.

<b>Activity</b>	<b>Apron/Gowns</b> (depending on risk of significant splashing exposure)	<b>Face, eye/mouth protection</b> (surgical masks, goggles)	<b>Gloves</b> (for type of glove to be used where indicated below see Risk Assessment Glove Usage Chart)
Contact with intact skin. No visible blood/body fluids, rashes.	N/A	N/A	N/A
Sterile procedures	√	Risk assessment	√
Contact with wounds, skin lesions	√	Risk assessment	√
Cleaning up incontinence	√	Risk assessment	√
Potential exposure to blood/other body fluids, e.g. performing suctioning, cleaning up spillages, taking specimens	√	Risk assessment	√
Venepuncture, cannulation	√	N/A	√
Vaginal examination	√	Risk Assessment (Ob)	√
Applying topical lotions, creams, etc	N/A	N/A	√
Touching patients/clients with unknown skin rash/risk assessment	Risk assessment	Risk assessment	Risk assessment
Emptying/changing urinary catheter bags, urinals, bedpans, etc	√	Risk assessment	√
Handling specimens	√	N/A	√
Handling used instruments	√	N/A	√

<b>Activity</b>	<b>Apron/Gowns</b> (Depending on risk of significant splashing exposure)	<b>Face, eye/mouth protection</b> (surgical masks, goggles)	<b>Gloves</b> (For type of glove to be used see Appendix 3)
Using disinfectants, cleaning agents	√	Risk assessment	√
General cleaning of clinical areas	Risk assessment	N/A	Risk assessment
Bed making, dressing patients/clients	√	N/A	Risk assessment
Oral care	Risk assessment	Risk assessment	√
Feeding patient/client	√	N/A	Risk assessment
General housework	Risk assessment	N/A	Risk assessment
Handling waste	Risk assessment	Risk assessment	√

**NB** (1) Theatre specific policies should be available at local level to detail specific PPE for their situations.

(2) This policy does not detail information on the use of PPE to be used in specific situations where particular organisms/infections are present. This should be discussed with Infection Control staff; however, the principles described should apply to all situations.