**Policy Objective**

This policy focuses on the use of Personal Protective Equipment (PPE) as a component of Standard Infection Control Precautions. The policy emphasises appropriate use of PPE in reducing the transmission of infection and protecting the healthcare worker (HCW) and her/his colleagues from body fluids and occupationally acquired infection.

This policy relates only to PPE for the prevention of exposure to micro-biological agents.

This policy applies to all staff employed by NHS Greater Glasgow & Clyde and locum staff on fixed term contracts and volunteer staff.

**KEY CHANGES FROM THE PREVIOUS VERSION OF THIS POLICY**

- None

**Document Control Summary**

<table>
<thead>
<tr>
<th>Approved by and date</th>
<th>Board Infection Control Committee 25 July 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Publication</td>
<td>26 July 2011</td>
</tr>
<tr>
<td>Developed by</td>
<td>Infection Control Policy Sub-Group - 0141 211 2526</td>
</tr>
<tr>
<td>Related Documents</td>
<td>NHSGGC Decontamination Policy</td>
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<td></td>
<td>NHSGGC Hand Hygiene Policy</td>
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<td></td>
<td>NHSGGC Laundry Policy</td>
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<td>NHSGGC Standard Precautions Policy</td>
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<tr>
<td>Distribution/Availability</td>
<td>NHSGGC Infection Prevention and Control Policy Manual and the Internet <a href="http://www.nhsggc.org.uk/infectioncontrol">www.nhsggc.org.uk/infectioncontrol</a></td>
</tr>
<tr>
<td>Implications of Race Equality and other diversity duties for this document</td>
<td>This policy must be implemented fairly and without prejudice whether on the grounds of race, gender, disability, sexual orientation or religion.</td>
</tr>
<tr>
<td>Equality &amp; Diversity Impact Assessment Completed</td>
<td>July 2011</td>
</tr>
<tr>
<td>Lead</td>
<td>Lead Infection Control Nurse Clyde</td>
</tr>
<tr>
<td>Responsible Director</td>
<td>Board Infection Control Manager</td>
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</tbody>
</table>
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The most up-to-date version of this policy can be viewed at the following website:
www.nhsggc.org.uk/infectioncontrol
1. Responsibilities

**Healthcare Workers (HCWs) must:**

- Follow this policy.
- Inform a member of the Infection Control Team (ICT) if this policy cannot be followed.
- Reassure patients/ visitors who may be alarmed by HCWs approaching wearing Personal Protective Equipment (PPE).
- Wear PPE when it is required and do not wear it for routine social contact that is not considered a risk of infection.
- Complete Datix if exposed to blood or body fluids.

**Managers must:**

- Ensure that staff are aware of the contents of this policy.
- Support HCWs and ICTs in following this policy.
- Ensure HCWs are trained on the correct use of PPE.
- Ensure that sufficient stocks of PPE are available.
- Support staff if an incident occurs that may have resulted in cross-contamination and put in place any corrective action required to prevent a recurrence.
- Ensure that staff who have become ill due to occupational exposure are referred to Occupational Health Service.
- Advise procurement to ensure that gloves are of good quality as recommended by infection control.

**ICTs must:**

- Keep this policy up-to-date.
- Audit compliance with this policy.
- Provide education opportunities on this policy.
2. Legislative Framework/ Introduction

Protecting staff, patients and visitors from exposure to micro-organisms is a principle that is underpinned by several pieces of legislation; Health and Safety at Work Act (1974) reinforced by the Control of Substances Hazardous to Health (COSHH) Regulations (2002) which require employers to assess the risks associated with the handling of hazardous substances, including pathogenic micro-organisms, and legislation from the Health and Safety Executive (HSE) relating to PPE at work.

The risk of acquiring bloodborne pathogens can be minimised by treating blood and other blood and body fluids from all patients as potentially infectious and taking precautions to minimise the risk of exposure of non-intact skin or mucous membranes to blood and body fluids. Selection of PPE must be based on an assessment of the risk of transmission of micro-organisms to/from the patient and the risk of contamination of the HCWs clothing and skin by patients’ blood, body fluids (NICE 2003).

In addition to prevention of exposures to bloodborne pathogens it is recognised that HCWs should be protected against other micro-organisms carried in/on the body. The use of PPE will minimise the spread of infection if used appropriately in the management of all blood and body fluids.

3. Definitions

<table>
<thead>
<tr>
<th><strong>Personal Protective Equipment (PPE)</strong></th>
<th>All equipment which is intended to be worn or held by a person at work and which protects the worker against one or more risks to the worker’s health or safety HSE 1992). This also includes equipment worn to protect the patient from microbiological agents.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In healthcare, PPE refers to a variety of barriers and respirators used alone or in combination to protect mucous membranes, airways, skin and clothing from contact with infectious agents. Centers for Disease Control (CDC).</td>
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<tr>
<td></td>
<td><strong>NB</strong> Personal spectacles are not to be considered PPE – use goggles, face shield or visor as required.</td>
</tr>
</tbody>
</table>

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4. Types of PPE

PPE should be used in addition to normal clothing and uniforms to protect both the patient and the HCW. The type of PPE worn must be based on the assessed risk of the clinical intervention to be undertaken. Uniforms and normal clothing are not considered to be PPE.

4.1 Gloves

4.1.1 Gloves should be worn when:
- There is a risk or potential risk of contamination by direct contact with blood or body fluids, mucous membranes, non-intact skin and other potentially infectious materials.
- Handling or touching visibly or potentially contaminated patient care equipment and environmental surfaces.

4.1.2 Type of gloves
- Gloves must be well-fitting and appropriate for the clinical task to be performed. If gloves are required they should be of a good quality, single-use sterile/ non-sterile, powder-free, low-protein, e.g. nitrile. Please see Appendix 1 – Glove Use Flowchart for additional information regarding glove choice.
- Double gloving may be considered for particular procedures where the perforation of gloves may be anticipated, e.g. orthopaedic surgery, cardiac surgery.
- Gauntlet style gloves should be considered in situations where significant exposure to blood and body fluids may be anticipated, e.g. dressings in burns units.

4.1.3 Principles of glove use
- Gloves are single-use items and should be changed in between patients.
- You must change gloves in between tasks performed on the same patient to prevent cross-contamination of body sites. It may also be necessary to change gloves if patient care involves contact with equipment, e.g. portable radiology equipment, ECG equipment, keyboards etc.
- Gloves are not a substitute for hand hygiene and gloves must NEVER be washed or decontaminated with alcohol hand gel.
- Always remove gloves as soon as possible after use to reduce the possibility of contaminating the environment, equipment, other patients and yourself. Gloves should not be worn if handling casenotes or charts, or answering telephones etc.
- When removing gloves the wrist end of the glove should be grasped and the glove should be pulled down gently over the hand turning the outer contaminated surface inward. Dispose immediately into the clinical waste stream.
- Hand hygiene should be performed before donning and after removing gloves.
- Gloves must be removed before leaving isolation room unless transporting body fluids to sluice, in which case they should be removed after disposing of body fluids.
4.2 Aprons/ Gowns/ Theatre Shoes

4.2.1 Aprons/ gowns should be worn:
- To protect the patient from infection and the wearers clothing/ uniform when there is a potential risk of contamination with blood or body fluids.
- When in direct contact with a patient when providing personal or clinical care.
- When in direct contact with a patient’s environment, e.g. cleaning activities, bed making.

4.2.2 Principles of apron/ gown use:
- Aprons/ gowns are single-use items and should be changed in between patients and if significantly contaminated, in between procedures.
- Following completion of the procedure(s) and before leaving the patients immediate bed space/ room, the apron must be removed and discarded into the clinical waste stream.
- Colour coded aprons may be used for staff working in specific areas such as ITUs or patient isolation rooms, or for specific tasks, e.g. serving meals. In this instance local procedures must be followed.
- Where there is a significant risk of exposure to body fluids, e.g. theatre or during an invasive procedure, a risk assessment should be undertaken and if appropriate an impermeable gown should be worn.
- Staff must not leave the ward/ department wearing disposable plastic aprons.
- Always remove PPE as soon as possible after use to reduce the possibility of contaminating the environment, equipment, other patients and yourself. Dispose immediately into the clinical waste stream.
- Hand hygiene must be performed after removing and discarding aprons/ gowns.
- Aprons must be removed before leaving isolation rooms unless to transport body fluids to sluice, in which case they should be removed after disposing of body fluids.

4.2.3 Theatre Shoes
- Where footwear is provided it must be worn, e.g. theatre shoes. It is staff members’ responsibility to keep shoes clean.
- Remove before leaving the theatre area.

4.3 Face Protection: Masks, Goggles, Face Shields, Visors

4.3.1 Masks, Goggles, Face Shields and Visors should be worn:
- To protect the HCW from contact with infectious material from patients, e.g. respiratory secretions and body fluids.
4.3.2 Principles of Face Protection use:

- Manufacturer’s instructions must be adhered to when using this type of PPE. Expiry dates should be checked and the equipment should fit comfortably.
- Goggles should provide adequate protection when a risk of splashing is present. If used they should be the ‘wrap around’ type which will protect the area to the side of the eye or if re-usable, e.g. goggles. Follow manufacturer’s instructions for cleaning but if heavily contaminated discard as clinical waste.
- Face shields/visors should be considered, rather than a surgical mask and/or goggles if there is an increased risk of splashing or aerosolisation of blood or body fluids.
- HCWs should avoid touching face protection while it is being worn.
- Disposable face protection should be changed in between patients and if significantly contaminated in between procedures. Surgical masks should be changed if they become wet.
- Always remove PPE as soon as possible after use to reduce the possibility of contaminating the environment, equipment, other patients and yourself. Dispose immediately into the clinical waste stream.
- Hand hygiene must be performed after removing and discarding face protection.

4.4 Respiratory Protection

Respiratory protection is used to prevent the transmission of airborne infectious agents. Details regarding the type of respiratory protection required is contained in the NHSGGC Tuberculosis Policy, Transmission Based Precautions Policy and the Influenza Policy.
5. Evidence Base


NHSGGC Control of Substances Hazardous to Health Policy (May 2011)


HPS – Transmission Based Precautions (TBP) http://www.hps.scot.nhs.uk/Search/guidedetail.aspx?id=37889

6. **Audit**

<table>
<thead>
<tr>
<th>Question</th>
<th>Auditor Guide</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Disposable aprons are worn for direct contact with patients.</td>
<td>Observe 2 occasions of direct patient care and assess use of aprons.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2 Disposable aprons and gloves are worn for decontamination of equipment/dealing with blood/body fluids.</td>
<td>Observe 2 occasions of decontamination of equipment/dealing with blood/body fluids and assess use of aprons and gloves.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Hand hygiene is performed after removing PPE (aprons and/or gloves).</td>
<td>Observe 2 occasions where PPE removed and check hands decontaminated.</td>
<td></td>
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</tr>
<tr>
<td>4 There is no evidence of aprons and/or gloves being worn when not required.</td>
<td>Observe staff to check appropriate use of PPE.</td>
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</tr>
<tr>
<td>5 Staff can state when eye protection should be worn.</td>
<td>Ask members of staff when they would wear eye protection (one example each).</td>
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</tr>
<tr>
<td>6 Staff can state when masks should be worn.</td>
<td>Ask 2 members of staff when they would wear a mask (one example each).</td>
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</table>

**Total criteria**

| Ward | Date of audit | | | |
|----------------------------------------|----------------------------------------|
| | | | | |

**Personal Protective Equipment (PPE) Audit - Feedback Statement**

<table>
<thead>
<tr>
<th>Number of Criteria assessed</th>
<th>Number of Criteria met</th>
<th>Number of Criteria not met</th>
<th>Number of criteria N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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Appendix 1 (page 1 of 2) - RISK ASSESSMENT – Glove Usage

ARE GLOVES REALLY NECESSARY?

Gloves are NOT required for procedures where there is minimal risk of cross-infection between patients and staff eg
- Basic care procedures without contact with blood or body fluids
- Transferring food from food trolleys to patient bedside
- Making uncontaminated beds/changing or removing patients’ uncontaminated clothing
- Taking recordings (BP, temperature, pulse)
- Closed entotracheal suction

Gloves ARE required for procedures where there is a risk of cross-infection between patients and staff and further risk assessment should be carried out.

IS THERE A HIGH-RISK OF EXPOSURE TO BLOOD AND BODY FLUIDS?

NO

NON-STERILE VINYL

IS A STERILE FIELD REQUIRED?

YES

Non-Theatre Environment:
- Sterile Nitrile

THEATRE ENVIRONMENT:
- Elastryn
- Neoprene
- Nitrine
- Non-powdered low-protein latex
- Synthetic Polyisoprene
- Tactylon

NO

Non-Sterile Nitrile or synthetic glove with equivalent barrier properties

(Adapted from HPS Model Policies – Transmission Based Precautions Policy)
Appendix 1 (page 2 of 2)

**TYPE OF ACTIVITY**

**Cleaning**
- Food Handling, Preparation, Serving
- General Cleaning
  - ‘Colour Coded’ Marigolds
  - Vinyl
- Isolation Room
- Bloodborne virus exposure / spillage
- Non-sterile Nitrile

**Tasks where there is a low-risk of contamination, non-invasive clinical care, or environmental cleaning, eg:**
- Oral care
- Emptying catheter drainage bags
- Emptying urinals / bedpans and suction jars
- Handling low-risk specimens
- Clinical cleaning
- Dressing wounds when contact with blood / body fluids is unlikely eg gastrostomy dressings,
  - Endotracheal suction
  - Applying creams
  - Touching patients with unknown skin rash / scabies / shingles
  - Making beds / changing clothing of patients in isolation

**Procedures involving high-risk of exposure to BBVs and where high-barrier protection is needed, eg:**
- Potential exposure to blood / body fluids eg blood spillages, faecal incontinence, blood glucose monitoring, administering enemas / suppositories and rectal examinations
- Handling cytotoxic material
- Handling disinfectants
- Venepuncture / cannulisation
- Vaginal examination
- Basic care and specimen collection procedures on patients known or suspected to be high-risk of BBV
- Non-surgical dentistry / podiatry
- Handling dirty / used instruments
- Processing specimens in a laboratory

**Procedures which require a sterile field and high-barrier protection, eg:**
- Lumbar punctures
- Liver biopsies
- Clinical care to surgical wounds / drain sites
- Procedures for neutropenic patients
- Insertion of urinary catheters
- Vaginal examination in obstetrics

**All surgical and invasive radiological procedures**
- Sterile Surgical Gloves:
  - Elastryn
  - Neoprene
  - Nitrile
  - Non-powdered low-protein latex
  - Synthetic polyisoprene
  - Tactylon
- Sterile Nitrile examination gloves

**All staff using latex gloves of any type will be required to participate in the OHS skin health surveillance programme.**

(Adapted from HPS Model Policies – Transmission Based Precautions Policy)
## Personal Protective Equipment (PPE)

**PART OF STANDARD PRECAUTIONS**

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### Appendix 2 - Sample Risk Assessment (Page 1 of 3)

<table>
<thead>
<tr>
<th>Procedures</th>
<th>Potential Risks</th>
<th>PPE Required</th>
<th>Discard / Re-process</th>
<th>On removal of PPE</th>
<th>Complete for your area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct contact with wounds, exudates or other body fluids, breaks in skin, dressings, non-laboratory based specimen procedures and toileting patients. Direct contact with contaminated equipment or contaminated environment, e.g. undertaking procedures in source isolation rooms.</td>
<td>Cross infection/colonisation to HCW and subsequent cross infection to others from microbiological agents.</td>
<td><strong>Gloves</strong> – powderless low-protein gloves, e.g. nitrile&lt;br&gt;<strong>Plastic apron</strong>: knee length</td>
<td>Discard gloves and apron as clinical waste.</td>
<td>On completion of procedure remove gloves and apron and decontaminate hands</td>
<td>If required: Order Number: Sizes required:</td>
</tr>
<tr>
<td>Use of sharps. <em>(Avoid wherever possible the use of sharps).</em></td>
<td>Inoculation injury causing cross infection with bloodborne virus or other pathogens.</td>
<td><strong>Gloves</strong> - powderless low-protein gloves, e.g. nitrile&lt;br&gt;Plastic apron:</td>
<td>Discard gloves as clinical waste in the yellow/orange clinical waste bag.</td>
<td>On completion of procedure remove gloves and apron and decontaminate hands</td>
<td>If required: Order Number: Sizes required</td>
</tr>
<tr>
<td>Toileting of patients, emptying of catheter or stoma bags, or procedures where there may be contact or splash with faecal matter or urine.</td>
<td>Cross infection to HCW and subsequent cross infection to others from microbiological agents.</td>
<td><strong>Gloves</strong> – powderless low-protein gloves, e.g. nitrile&lt;br&gt;<strong>Plastic apron</strong>: knee length</td>
<td>Discard gloves and apron as clinical waste.</td>
<td>On completion of procedure remove gloves and apron and decontaminate hands</td>
<td>If required: Order Number: Sizes required</td>
</tr>
<tr>
<td>Procedures generating sprays of body fluid, e.g. delivering babies, removing drains, decontaminating equipment including endoscope or anywhere there is a risk of splash to the HCW.</td>
<td>Cross infection/colonisation to HCW and subsequent cross infection to others from microbiological agents.</td>
<td><strong>Gloves</strong> – powderless low protein gloves, e.g. nitrile&lt;br&gt;<strong>Apron</strong>: knee length&lt;br&gt;<strong>Full face protection</strong></td>
<td>Discard gloves and apron as clinical waste. If face protection is single-use discard as clinical waste in the yellow/orange clinical waste bag otherwise follow manufacturer’s instruction regarding discarding or re-processing.</td>
<td>On completion of procedure remove gloves and apron and full face protection then decontaminate hands</td>
<td>If required: Order Number: Sizes required</td>
</tr>
</tbody>
</table>
### Personal Protective Equipment (PPE)

*(part of standard precautions)*

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<th>Discard / Re-process</th>
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<tbody>
<tr>
<td>Regular or prolonged contact with patients with smear positive: <strong>tuberculosis</strong>. <em>(For other airborne infections such as measles and chickenpox, ensure only immune HCWs attend the patient).</em></td>
<td>Cross infection through inhaling contaminated air.</td>
<td>Use face mask FFP3 for TB</td>
<td>Discard face mask as clinical waste after 8 hours continuous use or immediately if visibly contaminated. If face protection is single-use discard as clinical waste.</td>
<td>The face mask can usually last for up to 8 hours</td>
<td>If required: Order Number: Sizes required</td>
</tr>
<tr>
<td>Aerosol generating procedures (AGPs) performed on patients with possible TB or highly infectious respiratory pathogen. <em>AGPs include: use of high flow oxygen (&gt;6 l/min), use of nebulisers, chest physio, continuous positive airways pressure (CPAP), bronchoscopy, tracheal intubation, suctioning, humidification.</em></td>
<td>Cross infection through inhaling contaminated air, or contaminated droplets landing on mucous membranes.</td>
<td>Gloves powderless low-protein gloves, e.g. nitrile Plastic apron: knee length Face mask FFP3 Full face protection DO NOT PERFORM AGPs WHEN THE PATIENT HAS OR IS SUSPECTED OF HAVING SARS</td>
<td>Discard face mask as clinical waste after 8 hours continuous use. If face protection is single-use discard as clinical waste. Otherwise, follow manufacturer’s instruction regarding discarding or re-processing full face protection. Discard gloves and apron as clinical waste.</td>
<td>On completion of procedure remove gloves and apron and full face protection. Then decontaminate hands.</td>
<td>If required: Order Number: Sizes required</td>
</tr>
<tr>
<td>Handling clinical waste</td>
<td>Cross infection via direct contact.</td>
<td>Gloves powderless low-protein gloves, e.g. nitrile Plastic apron: knee length</td>
<td>Discard gloves and apron as clinical waste.</td>
<td>On completion of procedure remove gloves and decontaminate hands.</td>
<td>If required: Order Number: Sizes required</td>
</tr>
<tr>
<td>Laboratory work</td>
<td>Special risk assessments must be available in laboratories.</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

The face mask can usually last for up to 8 hours.
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<tr>
<td>Operating theatre procedures, where there is a risk of splash.</td>
<td>Cross infection to HCW from microbiological agents from blood or other body fluids.</td>
<td>Gloves, powderless low-protein gloves, e.g. nitrile</td>
<td>Discard gloves and apron as clinical waste. Place gown, if non-disposable in alginate bag and then in a secondary clear plastic bag and send to laundry. Clean shoes if contaminated, with 1000 ppm available chlorine or send for heat disinfection if available.</td>
<td>Remove all PPE and decontaminate hands.</td>
<td>If required: Order Number: Sizes required</td>
</tr>
<tr>
<td>Operating theatre procedures where there is a risk of inhalation of contaminated air.</td>
<td>Inhalation of viruses or other pathogens disseminated via contaminated fumes when for example performing some laser procedures.</td>
<td>Use face mask EN 149: 2001 FFP1 capable of preventing inhalation of fumes.</td>
<td>Discard mask as clinical waste.</td>
<td>Discard mask and decontaminate hands.</td>
<td>If required: Order Number: Sizes required</td>
</tr>
<tr>
<td>Endoscopy procedures including bronchoscopy.</td>
<td>Potential splash contamination with blood or body fluids containing pathogens.</td>
<td>Gloves; powderless low-protein gloves, e.g. nitrile</td>
<td>Discard gloves and apron as clinical waste. Place gown in a red alginate bag and then into a clear plastic bag. If face protection is single-use discard as clinical waste otherwise follow manufacturer’s instruction regarding discarding or re-processing.</td>
<td>After each procedure remove protective clothing, and then decontaminate hands</td>
<td>If required: Order Number: Sizes required</td>
</tr>
</tbody>
</table>