

East Midlands Ambulance Service NHS Trust

Infection Prevention and Control Operational Procedures

Links

The following documents are closely associated with this procedure

- Infection Prevention and Control Policy
- Health and Safety Policy
- Untoward Incident Reporting Policy
- Personal Protective Equipment (PPE) Procedures
- Waste Management Policy, Strategy and Standard Operating Procedure
- Transfer Policy
- Service Level Agreement with Occupational Health Provider
- Health and Safety Workplace Inspection Process
- Decontamination Policy
- Vehicle Decontamination Procedure
- Code of Dress for Uniformed Workforce Standard Operating Procedure

Document Owner :	Director of Nursing and Quality
Document Lead:	Head of Infection Prevention and Control
Document Type:	Operational Procedures
For use by:	EMAS staff including volunteers

Equality Impact Assessment	<i>October 2015</i>
----------------------------	---------------------

This document has been published on the:	
Name	Date
Library (EMAS Public Drive)	<i>17 September 2015</i>
Intranet	<i>17 September 2015</i>

<i>Infection Prevention and Control Procedures</i>		Page:	Page 1 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

Version Control	Document Location If using a printed version of this document ensure it is the latest published version. The latest version can be found on the Trust's Intranet site.
------------------------	---

Version	Date Approved	Publication Date	Approved By	Summary of Changes
1.0	24 July 2006	July 2006	CIDC	New Policy for new EMAS Trust
1.1	01 August 2007	August 2007	Clinical Governance Committee	Review date extended
2.0	23 July 2008	July 2008	Clinical Governance Committee	Working review
3.0	15 July 2009	July 2009	Clinical Governance Committee	Review following organisational changes
3.1	07 August 2009	August 2009	Governance Committee	Review deadline amended to reflect the move to a 2 year review cycle; Equality & Human Rights Impact Statement updated.
3.2	09 November 2009	November 2009	Director of Nursing & Quality	Section 11.1 expanded to include reference to National Patient Safety Agency guidance
3.3	18 November 2009	November 2009	Director of Nursing & Quality	Appendices revised to reflect current practice
3.4	19 November 2009	November 2009	Director of Nursing & Quality	Correction of error on colour coding (section 11)
3.5	01 December 2009	December 2009	Director of Nursing & Quality	Decontamination Procedures added to Links To section. Sections on Dealing with Spillages, Vehicle Cleaning, Decontamination of Equipment, Vehicles and Air Ambulance have been extracted and published in separate document. Amendments made to Section 10
3.6	21 July 2010	July 2010	Director of Nursing & Quality	amended to ensure compliance with NHSLA Risk Management Standards
4.0	30 June 2010	June 2010	Infection Prevention & Control Group	Addition of invasive interventions narrative at section 24.
4.1	12 October 2010	October 2010	Director of Nursing & Quality	Make Ready Cleaning schedule check lists added to appendices

<i>Infection Prevention and Control Procedures</i>		Page:	Page 2 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

5.0	22 February 2011	February 2011	Infection Prevention & Control Group	Section 5.5 new hand washing poster, Section 6.0 addition of sleeve protectors, Section 8.0 additional text regarding use of temporary closure on sharps bins, Section 9.0 amended flow diagram 'Action to be taken in the event of sharps injury'. Appendix 2 Communicable diseases information replaced. Appendices 3 and 4 added.
6.0	26 June 2012	June 2012	Strategic IPC Group	Terminology changed to reflect current terminology "sharps" to "inoculation injuries" and "make ready" to "Deep Clean" and universal in brackets removed from Standard Precautions. Mention is made of the use of sleeve protectors and the appropriate times for use. In 6.4 added definitions of glove use have been included. Throughout the document the terminology has been updated to reflect the current healthcare waste terminology used in the Guidance for disposal of healthcare waste used on vehicles. – Section 6 Under MDRTB - mask wearing has been clarified; Section 7 Under aseptic non-touch technique terminology clarified; Section 9.3 in Occupational Health inoculation injury flow chart the terminology has been changed to reflect the generic name of the service removing the company name; Section 10 clarifies detergent and hot water use and PPE for cleaning; Section 20 Infestation – clarifies the contact for notifying exposure as IPC or Occupational Health; Section 24 under invasive interventions Catheterization has been removed, Intra Osseous Device has been referred to and signposted to the SOP; In the section on deep cleaning of specific equipment and vehicles timeframes according to current decontamination guidance have been specified. The National Ambulance group flow chart for Diarrhoea and Vomiting has replaced the previous version.
6.1	29 October 2013	October 2013	Strategic IPC Group	Reviewed the references in line with the IPC Policy references Included clarification of details of Category 4 diseases Revision of Norovirus isolation precautions in Appendix 2 6.4 (6.42) glove use – "at the point of care" inserted.

<i>Infection Prevention and Control Procedures</i>		Page:	Page 3 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

7.0	14 September 2015	17 September 2015	Infection Prevention and Control Group	<p>Linen and laundry procedure have been reviewed and incorporated into section 19</p> <p>The decontamination procedures have been reviewed and incorporated into section 15, 16, 17 and 18</p> <p>Addition of aseptic non-touch technique for wound care, intubation, catheterisation, intraosseous cannulation, has been included in section 11</p> <p>Addition of donning and doffing PPE into section 10</p> <p>Addition of transportation and consumption of food in vehicles in section 26</p> <p>The obtaining of IPC advice has been updated in section 6</p>
-----	-------------------	-------------------	--	---

<i>Infection Prevention and Control Procedures</i>		Page:	Page 4 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

Infection Prevention and Control Operational Procedures

Contents	Page
1. Introduction	6
2. Objectives	6
3. Scope	6
4. Definitions	7
5. Responsibilities	7
6. Obtaining IPC advice	8
7. The chain of infection	8
8. Standard IPC precautions	12
9. Hand decontamination	12
10. Personal protective equipment	18
11. Aseptic technique	24
12. Safe management of sharps	29
13. Inoculation and/or contamination injuries	31
14. Exposure prone procedures	35
15. Cleaning and decontamination	35
16. Blood and body fluids spillage management	37
17. Premises cleaning	38
18. Decontamination of medical devices and consumables	39
19. Management of linen and laundry	41
20. Management and care of uniform	43
21. Care of the deceased	45
22. Communication of IPC related information	45
23. Care of the infectious patient	47
24. Highly infectious diseases and biological warfare	47
25. Provision of IPC related occupational health advice	48
26. Transportation and consumption of food in vehicles	49
27. Consultation	50
28. References	50
29. Monitoring Compliance and Effectiveness	50

Appendix 1 – Dissemination Plan

<i>Infection Prevention and Control Procedures</i>		Page:	Page 5 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

1. Introduction

- 1.1.** The Trust is committed to the provision of a clean safe environment for the delivery of healthcare, patients, employees and the public.
- 1.2.** Health care associated infections (HCAIs) impact on the high quality care the NHS strives to provide for patients. HCAIs are infections resulting from patients receiving a medical treatment or interventions in a range of healthcare settings which may be acquired by or transmitted to a patient in or out of hospital. Many HCAIs are avoidable and everyone involved in patient care can contribute to the reduction in HCAIs.
- 1.3.** These procedures have been developed to support Trust staff, and those undertaking activity on behalf of the Trust, including volunteers and Community First Responders (CFRs), to reduce the risk of transmission of infection to patients, themselves and their colleagues.

2. Objectives

- 2.1.** The objectives of this procedure are to:
 - Ensure compliance with current legislation.
 - Adhere to best practice guidance issued by the Department of Health and other national guidance.
 - Provide person-centred care focused to meet the needs of the individual.
 - Manage the risks to patients and employees arising from preventable infections.
 - Promote evidence-informed clinical practice.
 - Ensure cost effective procurement.
 - Use systems that make the best use of the skills and capacity of clinical staff to ensure effective working practices

3. Scope

- 3.1.** This document is for the use of all staff and contracted agencies, including volunteers and CFRs, working on behalf of East Midland Ambulance Service NHS Trust
- 3.2.** This document, and the requirements within it, are intended to provide the Trust Board with assurance that the standards of infection prevention and control (IPC) are met, by respecting the patient's right to a clean, safe environment and by our staff's right to safe working conditions by following evidence informed, best practice guidance.
- 3.3.** The principles which govern the management of a clean safe environment must be applied to all health care and associated activities.

<i>Infection Prevention and Control Procedures</i>		Page:	Page 6 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

4. Definitions

- 4.1. Due to the length of this procedure all definitions have been included in the relevant sections.

5. Responsibilities

5.1. Chief Executive

- 5.1.1. The Chief Executive is the accountable officer and has overall Trust responsibility for IPC and as such will be a strong advocate for IPC.

5.2. Director of Infection Prevention and Control (DIPC)

- 5.2.1. The role of Director of Infection Prevention and Control is assigned to the Executive Director of Nursing and Quality, who is nominated by the Board to have executive responsibility for IPC and cleaning within the Trust. The post holder has responsibility for overseeing the Infection Control Group, Infection Prevention and Control Policy and Annual Programme, and is an integral member of the Quality and Governance Committee (incorporating Clinical Governance), reporting directly to the Chief Executive.

5.3. The Infection Prevention and Control Team

- 5.3.1. The IPC team are responsible for providing expert advice and guidance in accordance with this procedure and for supporting staff with its implementation ensuring that this remains consistent with evidence based practice.

5.4. Director of Operations

- 5.4.1. The Director of Operations is the designated decontamination lead for the Trust. The day to day responsibility is devolved to the Assistant and Associate Directors of Operations and the General Managers.

5.5. Assistant and Associate Directors of Operations and General Managers

- 5.5.1. The Assistant Directors of Operations are designated as decontamination leads in their respective divisions. They are responsible, and accountable, for ensuring compliance with the decontamination procedures and that auditing and monitoring against standards takes place in line with the annual IPC audit programme.

5.6. Senior Managers

- 5.6.1. All senior managers are responsible, and accountable, for ensuring implementation of and compliance with the IPC policies and procedures.

<i>Infection Prevention and Control Procedures</i>		Page:	Page 7 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

5.6.2. All managers are responsible for challenging poor practice and non-compliance with the policies and procedures.

5.6.3. Senior managers are responsible for ensuring the cleanliness of the vehicles, premises and equipment to achieve the Trust's high standard of cleanliness through a visible presence and support of the Clinical Team Mentors and Team Leaders in their areas.

5.7. Trust staff and Clinicians

5.7.1. The responsibility for IPC is devolved to all staff and clinicians, including volunteers and CFRs, within the Trust. All staff have a responsibility to attend IPC training and implement the policies and procedures.

5.7.2. The Trust empowers staff to challenge and report poor practice with respect to infection prevention and control.

6. Obtaining Infection Prevention and Control Advice

6.1. Expert infection prevention and control advice is available to staff at all times.

6.2. In hours and routine requests for advice should be directed to the Infection Prevention and Control Team via email to ipc.team@emas.nhs.uk or telephone:

Kirsty Morgan	Head of IPC	07814 051714
Kathy Fleming	IPC Nurse Specialist	07786 914016
Gaynor Moss	IPC Adviser	07800 827326

6.3. Outside of hours IPC advice should be obtained through the Emergency Operations Centre who will be able to provide the advice or contact the most appropriate service/clinician on call to provide the advice, either through the clinical on call rota or the Public Health England East Midlands on call rota.

6.4. The IPC insite area provides a comprehensive source of procedural advice and an A to Z of infectious disease specific precautions.

7. The chain of infection

7.1. A clear understanding of the chain of infection is essential in order to implement appropriate transmission based precautions and prevent the spread of infection

7.2. This procedure is set out to provide an overview of the chain of infection to enable crews to recognise how to break the chain and protect themselves and their patients

7.3. Definitions

<i>Infection Prevention and Control Procedures</i>		Page:	Page 8 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

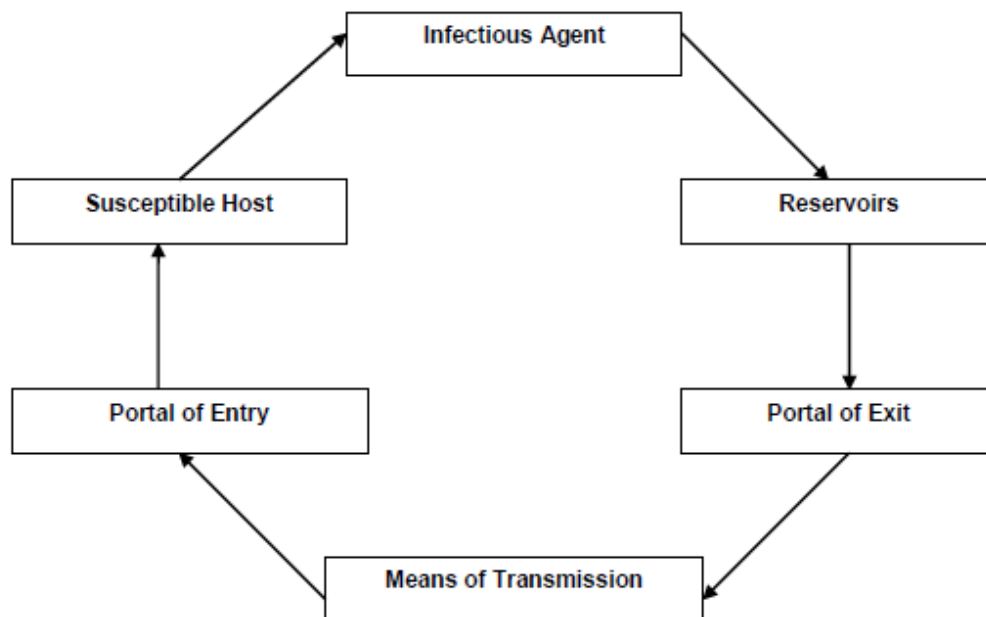
7.3.1. The chain of infection refers to the process by which infection can be spread from one susceptible host to another.

7.3.2. A primary pathogen is any disease producing microorganism.

7.3.3. A commensal is an organism that generally resides on the human body without causing harm. Otherwise known as colonisation.

7.4. The Chain of Infection

Figure 1: Chain of Infection



7.5. Infectious Agents

7.5.1. An infectious agent can be a primary pathogen or a commensal given the right opportunity.

7.5.2. The greater the organisms virulence (ability to grow and multiply), invasiveness (ability to enter the host) and pathogenicity (ability to cause disease) the greater the possibility of that microorganism causing an infection

7.5.3. Microorganisms can be split into the following groups:

- Bacteria - minute organisms that are, to a greater or lesser extent, susceptible to antibiotics
- Viruses - smaller than bacteria and known to survive outside the body but can only grow within cells, not susceptible to antibiotics
- Fungi - can be either moulds or yeasts, not all are infectious

Infection Prevention and Control Procedures		Page:	Page 9 of 48
Document ID:	NS/07.04	Version:	7
Date of Approval:	14 September 2015	Status:	Final
Approved by:	Infection Prevention and Control Group	Next Review Date:	September 2017

- Protozoa - single celled organisms that commonly show characteristics associated with animals, they are motile and able to survive in the environment.
- Parasites - organisms that live on or in a host and get their food at the expense of the host.
- Prions - infectious agents primarily composed of proteins

7.6. Reservoirs

7.6.1. A reservoir is somewhere microorganisms can thrive and reproduce.

7.6.2. Reservoirs are those which have been proven by epidemiological and microbiological investigations to be the origin of infection.

7.6.3. Reservoirs can include

- Patients
- Staff
- Equipment and Vehicles
- Environment including soil and dust
- Animals and Insects
- Food and Water

7.7. Portal of Exit and Portal of Entry

7.7.1. In order to cause disease a pathogen must have a way to enter the body – a portal of entry

7.7.2. To transmit to another host the microorganism must be able to leave the body – a portal of exit

7.7.3. The route of exit and entry may be different such as in enteric infections which enter via the mouth and leave via the rectum in faeces

7.7.4. The route of exit and entry may be the same such as in respiratory infections where droplets are exhaled by the infectious host and then inhaled by the susceptible host

7.7.5. Interventions which breach mucous membranes such as insertion of invasive devices (intravenous cannulation) can also provide portals of entry and exit.

7.7.6. Different microorganisms can use one or different routes to find new hosts:

- Respiratory Tract – through the inhalation of organisms, including legionnaire's disease (legionella) Open Tuberculosis, Chicken pox and Influenza
- Alimentary Tract – through ingestion of contaminated food or water including norovirus, salmonella, and clostridium difficile
- Skin and Mucosa – through damaged skin or by inoculation including the transmission of Human Immunodeficiency Virus (HIV), Hepatitis B and Hepatitis C

<i>Infection Prevention and Control Procedures</i>		Page:	Page 10 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

7.8. Means of Transmission

7.8.1. The one feature which distinguishes infection from all other disease is that it can be spread, one person can catch it from another or via a vector; they can also be caused from the environment.

7.8.2. Infections can be transmitted by

- Direct contact
- Indirect contact
- Aerosols
- Ingestion
- Inoculation
- Absorption
- Vectors

7.8.3. Direct contact is physical contact with the infectious site, for example contact with discharge from wounds or skin lesions.

7.8.4. Indirect contact through coughing or sneezing or when an immediate carrier is involved in the spread of pathogenic microbes from one source of infection to another person, for example on the hands of healthcare workers or any equipment which becomes contaminated and is then used on another patient without being decontaminated.

7.8.5. Aerosols produced by sneezing or in the dispersal of skin scales can spread through the air and infect other such as in chickenpox, measles and mumps.

7.8.6. Ingestion infection can occur when organisms capable of infecting the gastrointestinal tract are ingested. When these organisms are excreted faecally by an infected person faecal-oral spread is said to occur.

7.8.7. Inoculation infections occur when microorganisms are inoculated directly into the blood stream. Inoculation injuries include; bites and scratches that break the skin, splashes of blood or body fluids to the eyes, nose or mouth as well as needle stick injuries.

7.8.8. Vectors are any intermediate agent which can carry an infection between humans/animal for example mosquitoes.

7.8.9. Absorption is a route of entry for a few tropical diseases.

7.9. Susceptible Host

7.9.1. A susceptible host is a person who cannot resist a microorganism invading the body, multiplying and resulting in an infection

<i>Infection Prevention and Control Procedures</i>		Page:	Page 11 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

- 7.9.2. The host is susceptible to the disease, lacking immunity or physical resistance to overcome the invasion by the pathogenic microorganism
- 7.9.3. Susceptible hosts come in all shapes and sizes and are not always easy to identify. They can be:
- Very young
 - Frail and elderly
 - Those patients on steroids, dialysis or chemotherapy and with pre-existing conditions
 - Patients with severe shock and trauma, this could be physical or psychological, both will have an adverse impact on the patients susceptibility to infection

8. Standard Infection Prevention and Control Precautions

- 8.1. Standard precautions is an umbrella term used to encompass eight key elements that, when implemented appropriately, will prevent the spread of infection. This includes:
- Hand Hygiene
 - Personal Protective Equipment
 - Sharps disposal
 - Waste disposal
 - Management of clean and soiled linen
 - Management of Blood and Body Fluid Spills
 - Decontamination of equipment and the environment
 - Immunisation and vaccination
- 8.2. These precautions should be taken with all patients to reduce the risk of transmission of microorganisms and apply to blood, and other body fluids, secretions and excretions (with the exception of sweat), non-intact skin and mucous membranes.
- 8.3. Other fundamental issues that are required to prevent the spread of infection include, but are not limited to:
- Education of employees, operational and enabling staff
 - Immunisation of healthcare workers
 - Monitoring the implementation of and compliance with Infection Prevention and Control Policy and procedures.
 - Appropriate communication of infection risk between healthcare workers

9. Hand decontamination

9.1. Introduction

- 9.1.1. Hand decontamination is widely recognised as the single most effective measure for the prevention and control of infection and is vital for ensuring patients receive clean safe care.

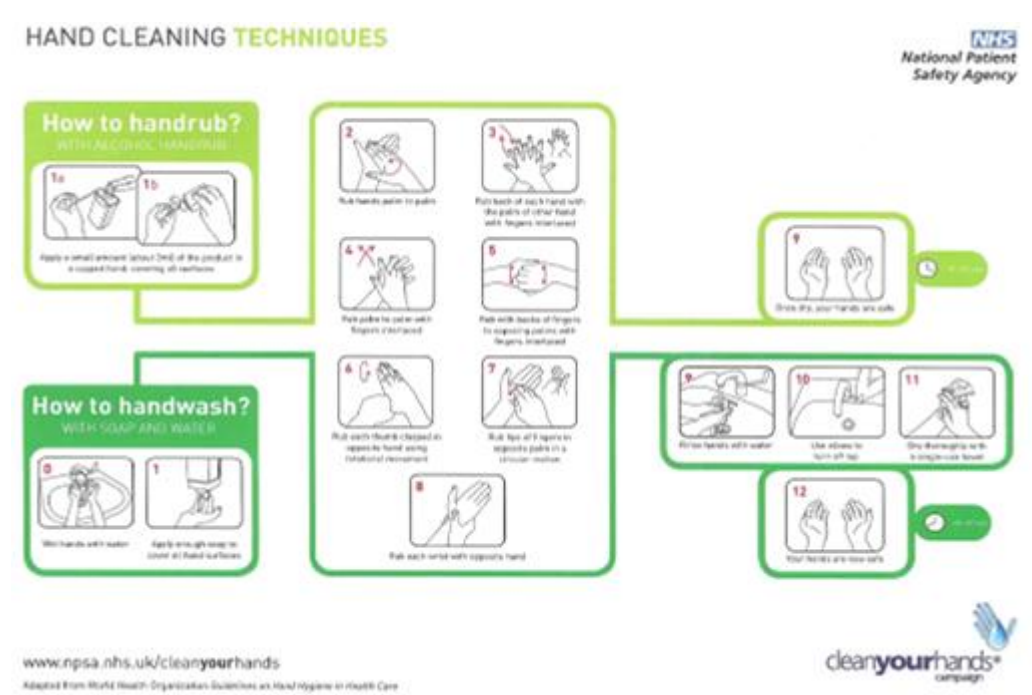
<i>Infection Prevention and Control Procedures</i>		Page:	Page 12 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

9.1.2. The Trust currently has three options for hand decontamination:

- Hand Washing
- Alcohol Based Hand Rub
- Hand Wipes (detergent/disinfectant universal sanitising wipes)

9.1.3. Hand washing with liquid soap and water is the gold standard for infection prevention and control and must be undertaken on a regular basis. In the pre-hospital, emergency and urgent care environment it should be undertaken when there is access to appropriate hand wash facilities, such as on return to station and in hospital departments. Hands should be washed as shown in the hand decontamination technique (Figure 2). If there is access to hand wash facilities these should be utilised when hands are visibly soiled.

Figure 2 – Hand decontamination techniques



9.1.4. Alcohol based hand rubs inactivate microorganisms and/or temporarily suppress their growth; they are only effective on physically clean hands as they are unable to penetrate through physical soiling. Alcohol based hand rub is not recommended when patients have symptoms of, or are diagnosed with norovirus, Clostridium difficile or other diarrhoeal illnesses- use detergent/disinfectant wipes prior to application.

9.1.5. 5 - 10 mls of alcohol based hand rubs should be applied to visibly clean hands and rubbed in as shown in the hand decontamination technique (figure 2). Alcohol based hand rubs should be rubbed in until the solution has evaporated and the hands are dry.

9.1.6. The detergent/disinfectant wipes used within the Trust are also suitable for hand decontamination. When staff do not have ready access to hand washing

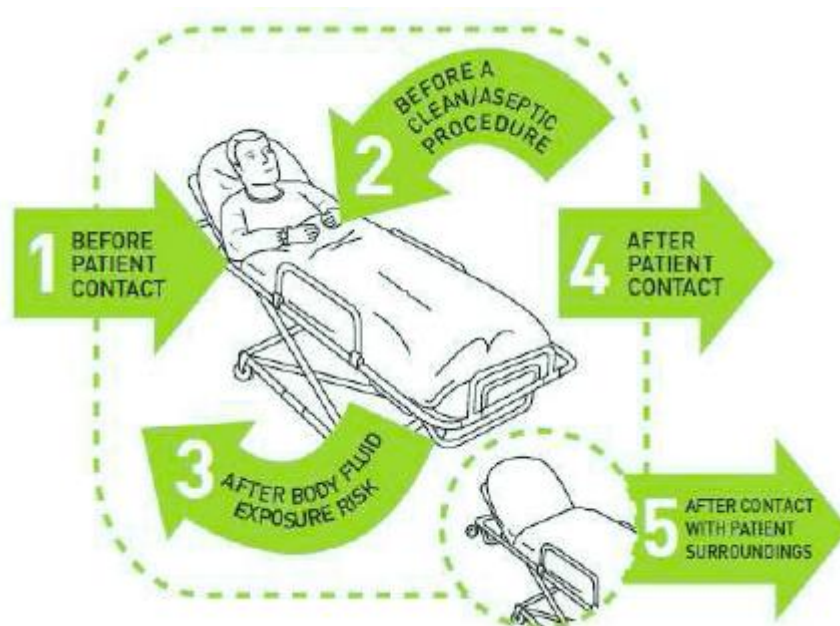
Infection Prevention and Control Procedures		Page:	Page 13 of 48
Document ID:	NS/07.04	Version:	7
Date of Approval:	14 September 2015	Status:	Final
Approved by:	Infection Prevention and Control Group	Next Review Date:	September 2017

facilities, they can be used to remove as much of the contamination as possible and always be followed by alcohol hand rub. They must also be used prior to alcohol hand rub following contact with a patient who is symptomatic with diarrhoeal illnesses.

9.2. Opportunities for hand decontamination

- 9.2.1. The opportunities for hand decontamination are described as the fundamental reference points for healthcare workers in a time - space framework that designates the moments when hand decontamination is required to effectively interrupt microbial transmission during care.
- 9.2.2. The opportunities for hand decontamination (hand hygiene) used by the Trust were established by the World Health Organisation in 2005 and have been integrated into all United Kingdom (UK) ambulance services and more than 400 hospitals worldwide.
- 9.2.3. These “5 moments” aim to offer healthcare workers clear advice on how to integrate hand hygiene in the complex task of care. The “5 moments” for hand decontamination can most easily be represented by the Figure 3 (below) although this will not cover every opportunity that will present itself during the working day.

Figure 3 - WHO Five Moments



- 9.2.4. In addition to those opportunities listed in figure one, other opportunities to decontaminate hands include (but are not exclusive to):
- Before preparing, eating, drinking or handling food
 - Before and after going to the toilet
 - Before starting work and after finishing work

Infection Prevention and Control Procedures		Page:	Page 14 of 48
Document ID:	NS/07.04	Version:	7
Date of Approval:	14 September 2015	Status:	Final
Approved by:	Infection Prevention and Control Group	Next Review Date:	September 2017

- Before putting on and after the removal of personal protective equipment
- After handling dirty linen or waste
- After cleaning equipment or environment
- After handling contaminated items, including dressings, bedpans, urine drainage bags

9.3. Bare below the elbows

9.3.1. The Trust supports the Department of Health led research which has resulted in the introduction of “bare below the elbows” into healthcare organisations, this initiative aspires to remove the barriers to hand decontamination and reduce the risk of infection from contaminated sleeves and jewellery.

9.3.2. Prior to the commencement of the shift all operational staff (accident and emergency, patient transport services, Hazardous Area Response Team, community first responders, co-responders, ambulance support team and doctors) are required to be compliant with bare below the elbows. This includes the removal of:

- Wrist watches
- Wrist and finger jewellery – apart from a plain wedding band
- Long nails – nails should be natural and short in length
- Nail varnish (clear and coloured)
- Nail extensions (including gel nails)
- Nail adornments
- Long sleeves (by shortening sleeves or wearing sleeve protectors)

These items are all capable of harbouring pathogens even after hand decontamination has been performed. The exception to this is when long sleeves are required as part of personal protective equipment (PPE), such as wearing high visibility jackets, air ambulance suit or other Trust issue PPE, sleeve protectors should be worn as appropriate in these situations. A further exception is for the wearing of jewellery for cultural/religious reasons and a plain wedding band.

9.3.3. Shell/fleece/jacket sleeves will easily become contaminated, and must not be worn when carrying out patient care activities unless adverse weather conditions dictate otherwise, in this instance sleeves should be rolled up above the elbow or sleeve protectors must be worn.

9.3.4. When entering healthcare premises staff are expected to be comply with bare below the elbows and ensure sleeves are rolled up or long sleeve coats/jackets/fleeces are removed, unless transferring a patient whose condition presents an immediate threat to life.

9.3.5. Long sleeved coats should always be removed, or the sleeves rolled up to ensure effective hand decontamination can be achieved.

9.3.6. “Responding” managers should remove their neck ties and any wrist or finger jewellery prior to carrying out any patient care.

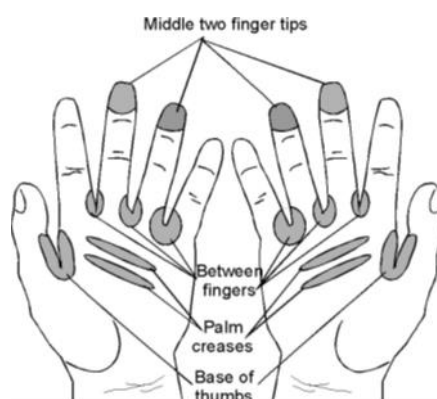
<i>Infection Prevention and Control Procedures</i>		Page:	Page 15 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

- 9.3.7. Bare below the elbows also applies to operational staff in training schools, in order to instil best practice and promote compliance with this initiative.

9.4. Hand decontamination technique

- 9.4.1. Correct technique for hand decontamination is vital for ensuring adequate decontamination. Incorrect techniques can cause areas of the hand to be missed resulting in the hands remaining contaminated and risk spreading microorganisms. The diagram below (figure 4) shows the areas of skin that are commonly missed when hands are not decontaminated using a correct technique.

Figure 4 – Areas frequently missed during hand decontamination

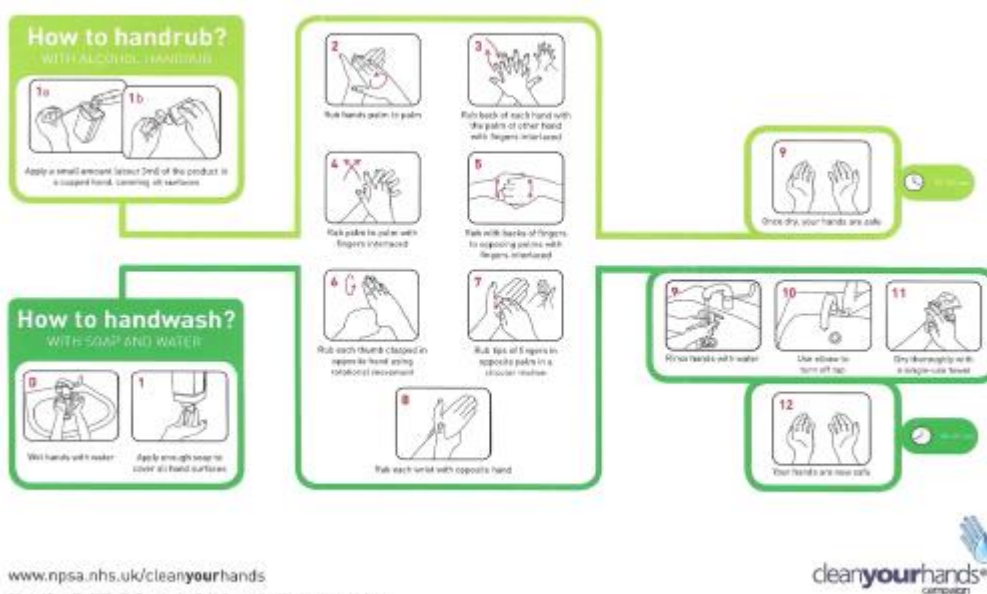


- 9.4.2. When washing hands, hands should be wet with running water before applying liquid soap. The technique displayed on the posters (figure 2) at hand wash basins should be followed and hand washing should take 15- 30 seconds. Particular attention should be paid to finger tips, thumbs, in-between fingers (especially on the dominant hand) and to wrists. Hands should be rinsed in running water and thoroughly dried with disposable paper hand towels.
- 9.4.3. Where hand wash basins do not have elbow operated taps, disposable paper towels should be utilised to turn the taps off after hand washing.

Figure 2: Hand Cleaning Techniques

Infection Prevention and Control Procedures		Page:	Page 16 of 48
Document ID:	NS/07.04	Version:	7
Date of Approval:	14 September 2015	Status:	Final
Approved by:	Infection Prevention and Control Group	Next Review Date:	September 2017

HAND CLEANING TECHNIQUES



9.5. Skin care

9.5.1. Healthy, intact skin provides an effective barrier against infection. It is important to keep the skin in good condition by using the correct hand washing method, drying hands thoroughly, rubbing alcohol hand gel in until it dries and regularly using hand moisturising cream.

9.5.2. Cuts and abrasions must be covered with waterproof dressings which must be checked regularly and replaced as necessary whilst on clinical duty.

9.5.3. Any member of staff with extensive skin lesions, such as eczema or dry skin conditions where skin integrity is compromised, must be referred to Occupational Health for advice and guidance.

9.5.4. Hands must be moisturised regularly after hand cleaning to reduce the risk of dry skin, dry skin is more susceptible to crack and lesions. The moisturiser will help to prevent dry skin, which in turn will reduce the risk of skin cracking and lesions developing.

9.5.5. Moisturiser should either be personal issue or from a pump operated dispenser. Personal moisturisers should not be shared. The Trust provides moisturiser on the entrances to buildings, at hand wash basins and on vehicles.

9.6. Hand washing facilities

9.6.1. Hand washing facilities must be dedicated for hand washing only, there are dedicated hand washing facilities available on all Trust premises.

Infection Prevention and Control Procedures		Page:	Page 17 of 48
Document ID:	NS/07.04	Version:	7
Date of Approval:	14 September 2015	Status:	Final
Approved by:	Infection Prevention and Control Group	Next Review Date:	September 2017

- 9.6.2. All hand wash basins must be equipped with the following:
- Liquid Soap
 - Moisturiser
 - Disposable paper towels
 - Foot operated, lidded domestic waste bin
 - Hand decontamination technique poster
- 9.6.3. Health Technical Memorandum (HTM) 64 requires hand washing facilities in clinical areas to be equipped as follows:
- No plug
 - No overflow
 - Water from the taps must not be situated directly above the plug hole
 - Elbow operated or non-touch taps.

Whilst the Trust does not provide clinical areas for the assessment and management of patients within Trust premises, it is committed to meeting the requirements of HTM 64 as premises are refurbished and in new builds.

10. Personal Protective Equipment

10.1. Introduction

10.1.1. Personal Protective Equipment (PPE) at Work Regulations (1992) requires that PPE is to be supplied and used at work wherever there are risks to health and safety that are unable to be controlled in other ways. Whilst these regulations are concerned with protecting workers, in the health service PPE is also used to prevent the spread of infection to patients, colleagues and members of the public.

10.1.2. These regulations require that PPE is:

- Properly assessed before use to ensure it is suitable
- Maintained and stored properly
- Provided with instructions on how to use it safely
- Used correctly by employees

10.1.3. For the purposes of this procedure PPE refers to clinical PPE and includes all equipment which is intended to be worn or held by a person at work in order to protect against the transmission of microorganisms.

10.1.4. PPE should be available on all vehicles and includes, but is not limited to:

- Gloves
- Aprons
- Sleeve protectors
- Protective suits (coveralls)
- Facemasks – surgical
- Eye protection/goggles
- Operational staff must carry their personal issue FFP3 mask when on duty

<i>Infection Prevention and Control Procedures</i>		Page:	Page 18 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

- Operational staff must carry their personal issue eye protection when on duty

10.1.5. The following body fluids may pose a transmission risk and should be handled with the same precautions as blood:

- Faeces
- Vomit
- Urine
- Amniotic fluid
- Cerebrospinal fluid
- Peritoneal fluid
- Breast milk
- Pleural fluid
- Synovial fluid
- Semen
- Vaginal secretions
- Unfixed tissues and organs

10.2. Dynamic risk assessment for selection of PPE

10.2.1. Selection of appropriate PPE must be based on an assessment of the risk of transmission of microorganisms to the patient or clinician and the risk of contamination of the clinicians clothing and/or skin by the patient's body fluids.

10.2.2. Many clinical activities do not involve direct contact with body fluids and consequently do not require the use of PPE. For example taking and recording observations or pushing a wheelchair/stretchers.

10.2.3. Clinicians are required to use their judgement when determining the level of PPE required for each case, following a dynamic risk assessment (figure 5) considering the risk of exposure of body fluids during particular activities.

Figure 5 - Risk assessment matrix for PPE

No exposure to blood, body fluids, secretions or excretions anticipated	No protective clothing required
Exposure to blood or body fluids anticipated but LOW risk of splashing	Gloves and aprons required
Exposure to blood or body fluids anticipated but HIGH risk of splashing	Gloves, aprons, sleeve protectors, eye/mouth/nose protection (goggles and mask)

Infection Prevention and Control Procedures		Page:	Page 19 of 48
Document ID:	NS/07.04	Version:	7
Date of Approval:	14 September 2015	Status:	Final
Approved by:	Infection Prevention and Control Group	Next Review Date:	September 2017

10.3. Gloves

- 10.3.1. The Trust has a latex free policy and consequently all gloves purchased and used within the Trust must be latex free. Nitrile gloves are the gloves of choice for the Trust. Persons who feel they may be allergic to Nitrile gloves or who are experiencing skin conditions as a result of wearing gloves should contact their team leader for a referral to the Occupational Health Team.
- 10.3.2. Gloves should not be worn unnecessarily; a dynamic risk assessment should inform the necessity of gloves. Gloves should be worn whenever there is expected contact with blood, mucous membranes and non-intact skin and when in contact with a patient with a known or suspected infection or contaminated equipment.
- 10.3.3. Gloves should be donned (put on) immediately before an episode of patient treatment where contact with blood or other body fluids is anticipated and doffed (removed) as soon as the activity is completed, this must always be followed by hand decontamination.
- 10.3.4. Gloves must be changed between caring for different patients or between different care/treatment activities for the same patient.
- 10.3.5. Gloves must be worn as single use items and disposed of in the appropriate waste stream, in line with the activity that has been undertaken. Gloves must not be washed or decontaminated with alcohol hand gel as this affects the integrity of the gloves and is not effective at removing microorganisms and breaches the manufacturer's guidance on use.
- 10.3.6. Gloves must not be worn when driving, travelling to a call or pushing wheelchairs/stretchers or carrying Tough books they should be donned at the point of care.
- 10.3.7. Hand decontamination should accompany the removal/disposal of gloves.

10.4. Aprons

- 10.4.1. Disposable single use plastic aprons must be worn when close contact with the patient, materials or equipment are anticipated and there is a risk clothing may become contaminated with pathogenic microorganisms or body fluids.
- 10.4.2. Disposable single use plastic aprons should be worn for the decontamination of the vehicles and equipment. They should also be worn when cleaning premises, if there is a risk of clothing becoming contaminated.
- 10.4.3. Aprons must be used as single patient use items and disposed of in an appropriate waste stream following use.

10.5. Sleeve protectors

- 10.5.1. Sleeve protectors can be worn as PPE to protect the wearer from the wrist to the elbow.

<i>Infection Prevention and Control Procedures</i>		Page:	Page 20 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

- 10.5.2. Sleeve protectors are not a replacement for removing or rolling up long jackets/sleeves/fleeces during clinical interventions, but can be used in situations where compliance with bare below the elbows is not possible i.e. when high visibility jackets are unable to be removed, this includes inclement weather conditions.
- 10.5.3. Sleeve protectors can be worn where there are multiple patients at one location and there is a high risk of contamination from body fluids, they must be changed between patients.
- 10.5.4. Sleeve protectors are single patient/intervention use items and should be disposed of in the appropriate waste stream after use.
- 10.5.5. Sleeve protectors can be worn to protect the member of staff whilst the staff members forearm is healing following medical procedures, tattoo's or tattoo removal.

10.6. Eye protection/visors

- 10.6.1. Eye protection/visors are required to be worn when a particular procedure is likely to cause splashing of body fluids, particularly blood or tissue, into the eyes or face of the clinician.
- 10.6.2. Eye protection/visors are recommended when caring for patients suspected to be suffering of infectious illnesses spread through the airborne or large droplets, such as Severe Acute Respiratory Syndrome, Coronaviruses and Pandemic influenza.
- 10.6.3. The Trust issues personal issue eye protection, this is required to be decontaminated with detergent/disinfectant wipes after use and before being stored in its protective casing.
- 10.6.4. Single use eye protection is available on vehicles; these must be disposed of in the appropriate waste stream following use.

10.7. Surgical facemasks

- 10.7.1. The use of surgical style facemasks is recommended during procedures when there is likely to be splashing of bodily fluids or tissue into the mouth. It is also recommended when dealing with a patient who is having episodes of coughing or sneezing.
- 10.7.2. Where patients have an uncontrolled productive cough and are unable to cough into a tissue, consideration should be given to encouraging the patient to wear a surgical style facemask.
- 10.7.3. Facemasks are single use and should be disposed of into an appropriate waste stream following use.

<i>Infection Prevention and Control Procedures</i>		Page:	Page 21 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

10.8. FFP3 facemasks

10.8.1. High efficiency masks or respirators with filtering efficiency of the European Standard CEN FFP3 are provided as personal issue within the Trust, and should be utilised when caring for patients suffering from airborne infections or high risk infections (i.e. Viral Haemorrhagic Disease) or when undertaking aerosol generating procedures.

10.8.2. FFP3 masks require fit testing prior to being issued and re-testing in accordance with the FFP3 Standard Operating Procedure (SOP). Masks should be tight fitting with no gaps and the fit should be checked each time the mask is donned.

10.8.3. FFP3 masks are re-usable and require decontamination after use, this should be completed in line with the guidance in the SOP, unless the mask has been used when treating/transporting a patient with a high risk infection, in this case the mask should be disposed of in the appropriate waste stream.

10.8.4. Further information on FFP3 masks, including fit testing, decontamination and storage can be found in the FFP3 SOP.

10.9. Protective suits (coveralls)

10.9.1. Protective suits (coveralls) are not routinely required except when there is a risk of extensive splashing of bodily fluids onto the skin or clothing of the healthcare worker, where disposable aprons are not sufficient.

10.9.2. Protective suits (coveralls) are also required when dealing with infections caused by more hazardous microorganisms (viral haemorrhagic diseases) or when dealing with chemical spills.

10.9.3. In the pre-hospital setting protective suits (coveralls) may be required instead of aprons when trying to transfer a patient, who is heavily contaminated with bodily fluids, into the vehicle. Consideration should be given to the manoeuvrability offered by the suits when compared to the disposable aprons.

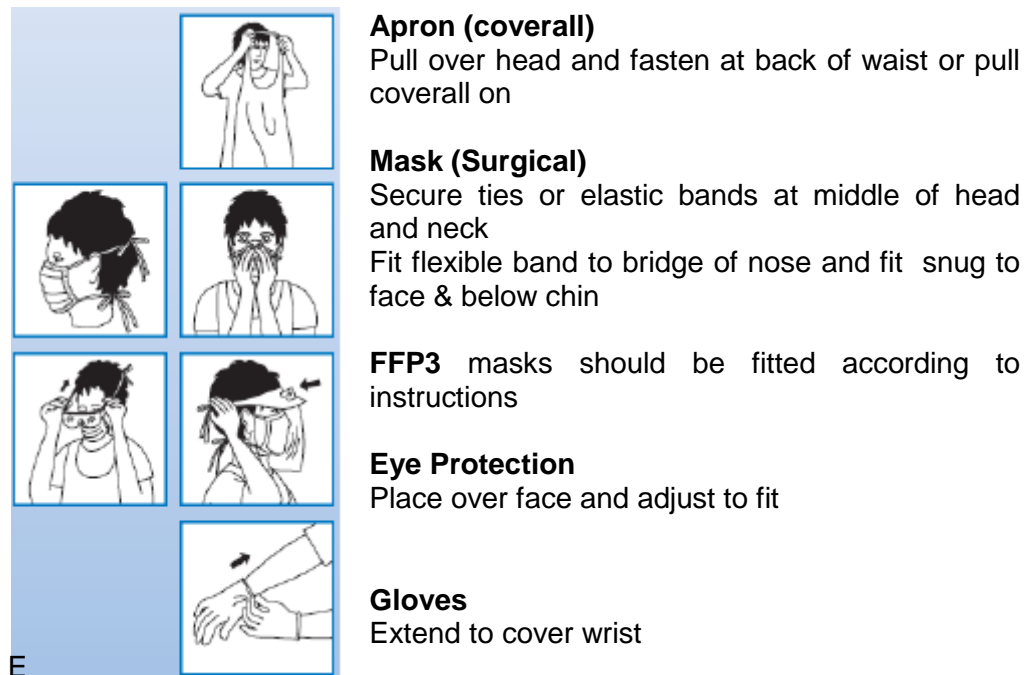
10.9.4. Protective suits (coveralls) must be worn as single use items, for one procedure or episode of patient care and discarded into the appropriate waste stream.

<i>Infection Prevention and Control Procedures</i>		Page:	Page 22 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

10.10. Application and removal of PPE

- 10.10.1. PPE must be applied in the following order; apron, mask, eye protection and then gloves. As demonstrated in figure 6 below.

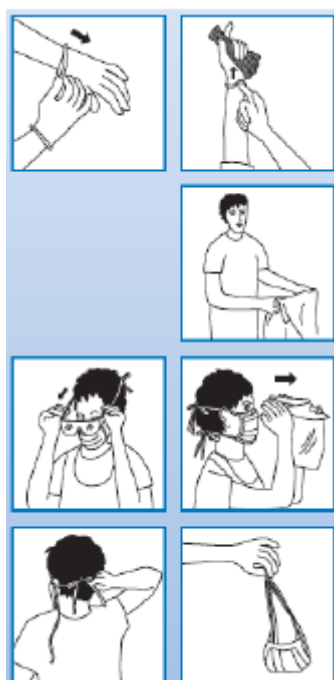
Figure 6 – donning PPE



- 10.10.2. PPE must be removed in such a way to limit the potential for cross contamination, hand should be decontaminated after the removal and disposal of each piece of PPE. All PPE should be disposed of in the appropriate waste stream.
- 10.10.3. The order for removing PPE is; gloves, aprons, eye protection, facemask. As demonstrated in the figure 7 below.

Infection Prevention and Control Procedures		Page:	Page 23 of 48
Document ID:	NS/07.04	Version:	7
Date of Approval:	14 September 2015	Status:	Final
Approved by:	Infection Prevention and Control Group	Next Review Date:	September 2017

Figure 7 – doffing PPE



Gloves:

Grasp the outside of the glove with the opposite gloved hand; peel off

Hold the removed glove in the gloved hand, slide fingers of the un-gloved hand under the remaining glove wrist. Peel the second glove over the first

Apron (Coverall)

Unfasten or break ties, pull away from neck and shoulders, touching only the inside.

Fold or roll into a bundle.

Eye protection

Handle only by the headband or sides

Surgical mask

Unfasten the ties – first at the bottom and then the top

Pull the mask away from the face without touching the front of the mask.

Do not pull up over eyes.

11. Principles of Aseptic Non Touch Technique for Interventions

11.1. Introduction

11.1.1. Asepsis is defined as the absence of pathogenic organisms. Aseptic non-touch technique (ANTT) is the clinical procedure developed to prevent the contamination of susceptible body sites by using sterile equipment and fluids during invasive medical procedures and by avoiding contamination of the equipment by adopting a non-touch technique. Aseptic non-touch technique therefore keeps the procedures as free from pathogenic microorganism as possible.

11.1.2. The principles of aseptic non-touch technique play a vital role in preventing the transmission of infection in any environment. It is the responsibility of each clinician to understand these principles and incorporate them into every day practice.

11.1.3. The principles of aseptic non-touch technique are:

- Keeping exposure of susceptible sites to a minimum
- Ensuring appropriate hand decontamination prior to the procedure
- Using gloves – sterile or non-sterile depending on the nature of the site. If using non-sterile gloves they should be clean and donned immediately prior to the procedure
- Ensuring that **all** fluids and materials used are sterile

Infection Prevention and Control Procedures		Page:	Page 24 of 48
Document ID:	NS/07.04	Version:	7
Date of Approval:	14 September 2015	Status:	Final
Approved by:	Infection Prevention and Control Group	Next Review Date:	September 2017

- Checking that all packs are sterile, show no signs/evidence of damage or contamination and are in date.
- Ensuring that contaminated and non-sterile items are not placed on the sterile field
- **Not** re-using single use items
- Reducing staff and/or bystander activity (whenever possible) in the immediate vicinity of where the procedure is performed.

11.1.4. If aseptic non-touch technique cannot be applied, because of the nature of the emergency or environmental factors for example, this must be handed over to the staff at the receiving hospital and clearly documented on the patient report form (paper or electronic).

11.1.5. Indications for using an aseptic non-touch technique are:

- Routine insertion of intravenous cannula
- Urinary catheterisation
- Wounds healing by primary intention (before the skin has healed) e.g. traumatic or surgical wounds requiring suturing or gluing
- Intubation
- Intraosseous access
- Accessing invasive devices

11.2. Intravenous Cannulation

11.2.1. Peripheral intravenous cannulation is a commonly performed procedure and has an associated risk of infection because of the potential for direct microbial entry into the blood stream.

11.2.2. Due to the increased risk of infection with pre-hospital cannulation, patients should only be cannulated when there is a clinical need. Unjustified prophylactic cannulation and cannulation purely on the basis that it has come to be expected by the hospital must not occur.

11.2.3. As a general guide cannulation would be considered appropriate where a drug or fluid is likely to or needs to be administered on route to hospital or where the patient condition is unstable and likely to deteriorate.

11.2.4. The choice of cannula must reflect the size of the vein and the maximum flow rate required. Most drugs can be administered through a 22g (Blue) or 20g (Pink) cannula. An 18g (Green) cannula is not generally required for the routine administration of drugs.

11.2.5. Inserting a cannula which is too large for the size of the vein increases endothelial damage, leading to an increased risk of phlebitis. Venous return cannot take place because the vein itself is actually occluded by the cannula (known as the haemodilution effect). Therefore using the smallest suitable cannula, that will deliver the required flow rate, not only reduced the risk of phlebitis, but increases the uptake of drug into the circulation.

<i>Infection Prevention and Control Procedures</i>		Page:	Page 25 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

- 11.2.6. Intravenous cannulation must be carried out aseptically whenever the patients' clinical condition allows a routine insertion, such as stable patients' requiring the administration of IV pain relief.
- 11.2.7. Good practice for intravenous cannulation is broken down into two main areas of concern, the initial insertion and the ongoing care.
- 11.2.8. Intravenous cannulation insertion should be undertaken as follows:
- Decontaminate hands
 - Apply single use, disposable tourniquet
 - Palpate the vein
 - Decontaminate hands
 - Clean the site using 2% Chlorhexidine gluconate in 70% isopropyl alcohol using a cross hatch “#” motion for 30 seconds
 - Leave the skin to dry for 30 seconds
 - Choose cannula, open pack and place cannula aseptically in the sterile field – if this is not possible another clinician should open the cannula packaging and present the cannula so it can be grasped by the cannulating clinician.
 - Decontaminate hands and don gloves
 - Insert cannula – ensure that the site is not touched
 - Use a sterile, semi-permeable transparent dressing to secure the cannula
 - Record the date and time of insertion on the label and stick to the dressing – without obscuring the view of the insertion site.
 - Dispose of any used items in the appropriate waste receptacles and remove gloves.
 - Decontaminate hands
 - Record the date and time of insertion on the patient report form.
- 11.2.9. If any of the above steps cannot be performed due to circumstances, such as life threatening emergencies or environmental conditions, the inserted devices must be classified as **EMERGENCY INSERTED**. This must be recorded on the patient report form, the red sticker applied to the dressing and the information must be handed over to the receiving hospital.
- 11.2.10. Always ensure that giving sets and syringes are handled aseptically. For certain procedures, such as when titration of medication is required a sterile field should be retained to hold the syringes between doses, either by use of the syringe packaging or a bung for the end of the syringe. Syringes should not be store in pockets or on the patients lap between the administration of doses.
- 11.2.11. Ongoing access of the intravenous device should always be undertaken using an aseptic non-touch technique.
- Hands should be decontaminated
 - Clean the access port using 2% Chlorhexidine gluconate in 70% isopropyl alcohol for 30 seconds
 - Allow to dry
 - Decontaminate hands and don gloves

<i>Infection Prevention and Control Procedures</i>		Page:	Page 26 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

- Access the device
- Dispose of used items in the waste receptacles and remove gloves
- Decontaminate hands

11.3. Catheter Care

11.3.1. Urinary Tract infections are the second largest group of healthcare associated infections in the UK, with 60% of these infections attributed to the presence and length of duration of an indwelling urinary catheter.

11.3.2. EMAS staff do not undertake catheterisation however, patients with catheters insitu are cared for and transported, therefore staff need to be aware of the use of asepsis in ongoing catheter care and maintenance.

11.3.3. Gloves and aprons are required when providing catheter care. Hand decontamination must be performed before donning PPE and after removal of PPE.

11.3.4. All staff need to be aware of the risk of infection for the patient is catheter bags are not correctly cared for and managed during transportation.

- Catheter drainage bags should not be disconnected from the catheter unless clinically indicated (i.e. to change the bag)
- Position the drainage bag below the level of the bladder to prevent back flow.
- Do not allow the catheter bag to contact the floor – secure leg bags appropriately and night bags to a catheter stand.
- Empty the catheter before it is three quarters ($\frac{3}{4}$) full, using a single use container.

11.4. Wound Care

11.4.1. Wound care must be undertaken using sterile equipment, including sterile wound care packs. Gloves and aprons are required when closing wounds. Sterile wound care packs must be available to clinicians who are qualified to glue and suture wounds.

11.4.2. The key principles must be applied throughout the procedure

- Keeping exposure of susceptible sites to a minimum by preparing equipment prior to undertaking wound care
- Ensuring appropriate hand decontamination prior to the procedure
- Using gloves – sterile or non-sterile depending on the nature of the site. If using non-sterile gloves they should be clean and donned immediately prior to the procedure
- Ensuring that **all** fluids and materials used are sterile
- Checking that all packs are sterile, show no signs/evidence of damage or contamination and are in date.
- Ensuring that contaminated and non-sterile items are not placed on the sterile field

<i>Infection Prevention and Control Procedures</i>		Page:	Page 27 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

- **Not** re-using single use items
- Reducing staff and/or bystander activity (whenever possible) in the immediate vicinity of where the procedure is performed.

11.4.3. Where possible hands should be washed with liquid soap and dried with paper towels prior to wound care, when this is not possible a detergent wipe must be used prior to the alcohol based hand rub. Hands must be decontaminated when donning and doffing gloves.

11.4.4. Wound care for a severed limb should follow the principles of asepsis, trauma dressing wet with saline should be used to cover the severed ends and covered in cling film to retain the dressing and moisture. Severed limbs should be splinted to protect from further damage.

11.4.5. Severed limbs and other body parts should then be put into clear bags or patient property bags and transported with the patient. These should never be put into a clinical waste bag, glove or sharps bin.

11.5. Intubation

11.5.1. Endotracheal intubation must always be performed using an aseptic non-touch technique. Equipment must be sterile at the point of use and in date, the equipment must not be used if the packaging is not intact or is contaminated.

11.5.2. The key principles of aseptic non-touch technique must be applied throughout the procedure:

- Keeping exposure of susceptible sites to a minimum
- Ensuring appropriate hand decontamination prior to the procedure
- Using gloves – sterile or non-sterile depending on the nature of the site. If using non-sterile gloves they should be clean and donned immediately prior to the procedure
- Ensuring that **all** fluids and materials used are sterile
- Checking that all packs are sterile, show no signs/evidence of damage or contamination and are in date.
- Ensuring that contaminated and non-sterile items are not placed on the sterile field
- **Not** re-using single use items
- Reducing staff and/or bystander activity (whenever possible) in the immediate vicinity of where the procedure is performed
- Record on the PRF

11.6. Intraosseous Access

11.6.1. Introduction of an intraosseous (IO) device should always be performed as an aseptic technique. Equipment must be sterile and in date, packaging must be checked for integrity and contamination. The device should not be used if the packaging is not intact or is contaminated, for more information on the device please refer to the IO SOP

11.6.2. Good practice guidelines for the insertion of IO are:

<i>Infection Prevention and Control Procedures</i>		Page:	Page 28 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

- Locate the appropriate insertion site
- Decontaminate hands
- Clean the site using 2% Chlorhexidine gluconate in 70% isopropyl alcohol using a cross hatch “#” motion for 30 seconds
- Leave the skin to dry for 30 seconds
- Prepare infusion system and ensure driver and needle are securely seated.
- Decontaminate hands and don gloves
- Insert IO– ensure that the site is not touched
- Use dressing to secure the IO and secure the tubing
- Dispose of any used items in the appropriate waste receptacles and remove gloves
- Decontaminate hands
- Record the date, time and site of insertion and aseptic technique used on the patient report form

12. Safe Management of Sharps

12.1. Inoculation/sharps injuries are second only to back injuries as a cause of occupational injury (Safer Needles Network, 2015). It is estimated that there are 100,000 needlestick injuries every year, with only a fraction of these being reported.

12.2. Sharps include:

- Needles
- Scalpels
- Stitch cutters
- Glass ampoules
- Sharp instrument
- Razors
- Bits of bone or teeth
- Any article that can cut or puncture the skin by having a fine edge or point

12.3. When they are not handled and disposed of correctly sharps become dangerous and staff should take extreme care when using and disposing of sharps. Contaminated needles can transmit more than 20 dangerous blood-borne pathogens, including Hepatitis B, Hepatitis C and Human Immuno-deficiency Virus (HIV), the effects can be devastating for the injured party and their family.

12.4. Any incident where adequate and appropriate measures have not been taken to dispose of sharps, and thereby putting staff at risk of injury, should be reported as an incident, regardless of actual harm being caused.

12.5. Preventing sharps injuries

12.5.1. The Trust is committed to reducing the number of inoculation injuries to staff and recognises that exposure prevention is the primary strategy to reduce these injuries. Needle-safe cannula and lancets for blood glucose monitoring

<i>Infection Prevention and Control Procedures</i>		Page:	Page 29 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

are in use and as more “safety” sharps are available these are explored and considered for implementation.

- 12.5.2. All clinicians should attend appropriate training and refresher sessions and only use devices if they have been trained to do so. Needle safe devices should be used where available and if trained to do so. Where alternatives are available to eliminate the use of sharps this should be considered i.e. the use of mucosal atomisation devices for the delivery of naloxone.
- 12.5.3. Clinical sharps must be single use and stored within their designated containers on vehicles or in the appropriate bags when they are not in use.
- 12.5.4. Sharps must be disposed of immediately after use and not passed hand to hand, handling must be kept to a minimum and the sharps bins should be positioned to promote this practice. Sharps should only be handled by one person at a time and clinicians should always dispose of their own sharps and never expect anyone else to dispose of them on their behalf. A single handed technique should be used for disposing of sharps, do not hold the sharps container or ask someone else to do so when disposing of the sharp.
- 12.5.5. All devices should be assembled with care and disposed of as a single unit, needles should never be cut, bent or broken prior to use or before disposal. If disassembling devices is unavoidable commercial devices should be used for this purpose.
- 12.5.6. Needles and cannulas must **never** be re-sheathed and the needles should only be removed from their sheaths when the patient has been prepared and the needle is ready to be used.
- 12.5.7. All clinical staff should be extra vigilant during emergency procedures as there is an increase in risk of inoculation injury in this situation. Procedures involving sharps should only be attempted in a stationary vehicle.
- 12.5.8. Clinicians must conduct a dynamic risk assessment and take extreme care when treating restless or aggressive patients and, where possible, should ask for assistance when cannulating, giving injections or setting up fluid therapy if the patient is uncooperative.

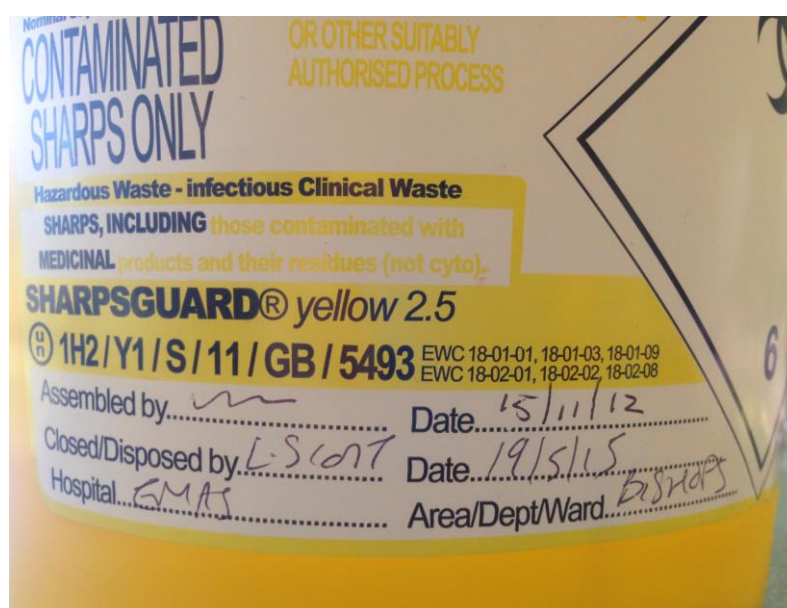
12.6. Safe use of sharps bins

- 12.6.1. Sharps bins must be compliant with UN3291 and BS7320 standards, all bins procured by the Trust must meet these standards
- 12.6.2. When assembling the sharps container ensure the lid is securely fitted to the base, this should be checked before the sharps bins are used for the first time. Check the exterior of the bin is clean, if needed clean with a detergent/disinfectant wipe
- 12.6.3. The identification label must be completed with the name of the organisation and station/base and must also be signed and dated by the person assembling the sharps bin

Infection Prevention and Control Procedures		Page:	Page 30 of 48
Document ID:	NS/07.04	Version:	7
Date of Approval:	14 September 2015	Status:	Final
Approved by:	Infection Prevention and Control Group	Next Review Date:	September 2017

- 12.6.4. The temporary closure mechanism must be deployed on the sharps bin whenever the sharps bin is not in use.
- 12.6.5. Vehicle based sharps bins must be secured in an appropriate bracket within the vehicle, these needs to be below shoulder height and, where possible, out of the reach of children. Sharps bins must **never** be placed into clinical waste bags and consideration to appropriate placement on the vehicles must be given with consultation of the IPC Team.
- 12.6.6. Sharps bins should never be disassembled or emptied of its contents; staff should never attempt to retrieve items from the sharps bin. If the sharps container becomes damaged it must be placed into a larger sharps container and appropriately labelled, it must **never** be placed into a clinical waste bag.
- 12.6.7. Sharps bins should be locked and disposed of when they reach the fill line on the sharps container or after they have been in use for three months and when the vehicles are being sent to workshops for repair. The closed/disposed section of the label must be completed with staff signature and date prior to disposing of the sharps bin in the appropriate waste stream.

Figure 8



13. Management of inoculation and contamination injuries

- 13.1. The risk of transmission of infection from an inoculation or contamination injury is low, however it is important for all staff to follow the procedure below if they sustain an inoculation injury.
- 13.2. An inoculation injury is defined as:
- Inoculation of blood by a needle or other sharp.
 - Contamination of broken skin with blood.
 - Blood splashes to mucous membrane e.g. eyes or mouth.

Infection Prevention and Control Procedures		Page:	Page 31 of 48
Document ID:	NS/07.04	Version:	7
Date of Approval:	14 September 2015	Status:	Final
Approved by:	Infection Prevention and Control Group	Next Review Date:	September 2017

- Swallowing a person's blood e.g. after mouth-to-mouth resuscitation.
- Contamination where clothes have been soaked by blood.
- Body exudates or secretions through a wound or sore.
- Human bites or scratches or animal bites.

13.3. Immediate Action

13.3.1. To reduce the risk of transmission of blood borne viruses the immediate priority following an inoculation or contamination injury is first aid. However, all inoculation and contamination

13.3.2. injuries should be managed in accordance the process detailed below, a quick reference for this process can be found in figure 9

13.3.3. The first aid required following an inoculation injury is:

- Encourage the wound to bleed but do not suck the wound.
- Wash the wound with warm running water and soap
- If running water is not available use an Iripod or bag of saline
- Cover wound with a dressing

13.3.4. Following a contamination or splash injury irrigate the area with copious amounts of tap water.

13.4. Follow up and on-going actions

13.4.1. It is important that action is taken **within one hour** of the incident occurring.

13.4.2. **In Hours (08:30-16:30)** Staff should contact occupational health for advice and to be risk assessed to ascertain if post exposure prophylaxis is required. Occupational Health will arrange for appropriate blood samples to be taken

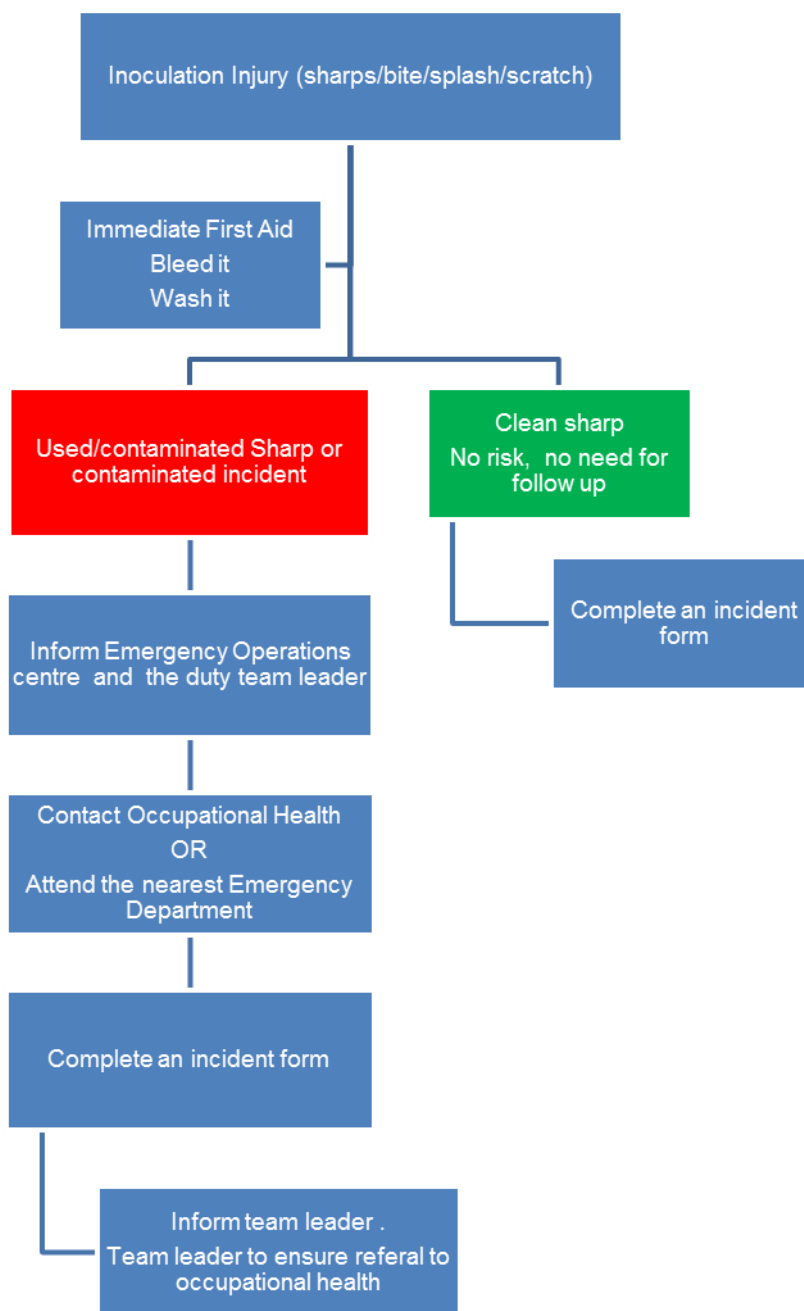
13.4.3. **Out of Hours or if occupational health are unavailable:** Staff should attend the nearest / receiving emergency department or minor injury unit where this is available and appropriate, to be risk assessed to ascertain if post exposure prophylaxis is required and to have blood samples taken.

13.4.4. Bloods should be requested from the source patient (where known) and taken by a third party (someone not directly involved in the incident). The patient must give informed consent following information about the implications, prior to having blood samples taken to establish if they have any blood borne viruses. The patient has a right to decline to provide blood samples.

13.4.5. All inoculation injuries must be reported to occupational health as soon as possible after the incident, including those reported to the emergency department. This is reported through the helpline number (on insite) by the member of staff or the online reporting system by the line manager.

Figure 9

<i>Infection Prevention and Control Procedures</i>		Page:	Page 32 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>



13.4.6. While extremely remote, there is the possibility staff will be exposed, thorough a blood exposure incident to a “high risk” Human Immunodeficiency Virus (HIV) patient. There are four factors associated with an increased risk of occupationally acquired HIV infection

- Deep penetrating injury
- Physical blood on the device causing the injury
- Injury with a hollow bore instrument that has been placed in the source patients artery or vein
- Terminal HIV related illness in the source patient

<i>Infection Prevention and Control Procedures</i>		Page:	Page 33 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

- 13.4.7. In such circumstance, and where indicated by the risk assessment, the staff member will be offered a course of medication to reduce the risk of transmission of HIV, this is known as post exposure prophylaxis (PEP).
- 13.4.8. In order to be most effective this course of treatment needs to be commenced as soon as possible following the incident, the decision on whether or not to start the course of treatment must be made by the effected member of staff in conjunction with the clinician providing the advice.
- 13.4.9. Follow up testing for blood borne viruses is normally undertaken at regular intervals in line with the incubation periods for the blood borne viruses, the testing required will be based on the risk assessment. This includes:
- 6 weeks Hepatitis B antigen and Hepatitis C
 - 12 weeks Hepatitis B antigen, Hepatitis C and HIV
 - 24 weeks Hepatitis B antibodies, Hepatitis C and HIV
- 13.4.10. Additional counselling or support following the incident is available to staff through occupational health or the alternative support measures in place in the Trust, including peer to peer and chaplaincy, the details for these can be found at the end of each chief executives bulletin or on insite.
- 13.4.11. Line and duty managers have a responsibility to ensure the injured person receives appropriate and immediate assistance from Occupational Health or the emergency department and that all relevant details are documented, including completion of an incident form.

13.5. Inoculation Injuries in Members of the Public

- 13.5.1. Following contamination, inoculation or needle stick injuries sustained by a member of the public either through bystander interventions or incident when assisting Trust please advise them to:
- Encourage any wound to bleed. Do not suck the wound
 - Clean the wound or irrigate the contaminated area
 - Apply a waterproof dressing to the wound
- 13.5.2. The member of the public should then be advised to go immediately to the Emergency Department (ED) for risk assessment and treatment if required. If post exposure prophylaxis is required, the time frame for commencing treatment is 72 hours; the optimum time for treatment to commence is within one hour. There should be no difference in immediate treatment between the member of the public and a member of staff. The member of the public will require follow up through their own general practitioner or the Genito-Urinary Medicine/Sexual Health clinic. This advice should be documented on a PRF.
- 13.5.3. If this incident was as a result of assisting the Trust, i.e. a member of EMAS staff or an agent acting on behalf of EMAS, is undertaking interventions which resulted in the incident – member of the public sustained a needlestick injury from a cannula, this will need to be reported as an incident using the Trust incident reporting procedures.

<i>Infection Prevention and Control Procedures</i>		Page:	Page 34 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

14. Exposure Prone Procedures

- 14.1.** Exposure Prone Procedures (EPP) are defined as those invasive procedures where there is a risk that an injury to the worker may result in the exposure of the patients open tissue to the blood of the healthcare worker. Including where the workers gloved hands maybe in contact with sharp instruments, needle tips or sharp tissue (i.e. spicules of bone or teeth) inside a patients open body cavity, wound or confined anatomical space where the hands or fingertips are not completely visible at all times. This includes situations such as pre-hospital trauma, which includes road traffic collisions which involve torn metal, broken glass and injuries which include severe open wound, and care of patients where there is a regular and predictable risk of biting.
- 14.2.** Staff who perform EPP need to be aware of their obligations to declare if they know they have been at risk of exposure to a BBV, this includes situations that fall outside of work as well as during working hours. All new starters applying for posts which may involve EPP must have specific screening in accordance with national guidance, this includes testing for BBVs.
- 14.3.** All staff infected with a BBV will need to be reviewed on a case by case basis commencing with a referral to OH. If required, further advice can be obtained from United Kingdom Advisory Panel for Healthcare Workers Infected with Bloodborne Viruses (UKAP). The final decision about the type of work that may be undertaken by a healthcare worker infected with a BBV should be made on an individual basis taking into account the specific working practices of the worker concerned, this decision will be undertaken by the Trust and reviewed in accordance with the restriction of practice policy. Specialist advice will be sought from OH and UKAP as required.
- 14.4.** If a member of patient facing staff is diagnosed with a blood borne virus the Trust will review all of the incidents that the staff member has attended, since their last negative test, to identify any potential exposure prone procedure risks to patients. Any patients who have potentially been exposed will be contacted by the Trust to inform of the risk and provide guidance on the next steps required.

15. Cleaning and decontamination

15.1. Introduction

- 15.1.1.** It is essential that high standards of cleanliness are maintained to prevent and control infections. All staff have a responsibility to maintain vehicles, stations and equipment in a clean condition, thus reducing the risk of cross infection to themselves, their patients, their colleagues and members of the public.

15.2. Colour Coding

- 15.2.1.** The national colour coding for ambulance services aims to prevent cross infection and to reduce the risk of cross contamination.

<i>Infection Prevention and Control Procedures</i>		Page:	Page 35 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

Figure 10 – National Colour Coding

Red Showers, toilets and sluice	Blue General areas
Green Kitchen and dining areas	Yellow Ambulance interior

15.2.2. All cleaning items, for example cloths, mops and buckets must follow the colour coding and must not be transferred between different areas.

15.2.3. Cleaning equipment must be stored clean and dry between uses. Mops and cloths must not be stored in cleaning, detergent or disinfectant solutions.

15.3. Mop heads

15.3.1. All mop heads for vehicle cleaning are single use, once they have been used to clean a vehicle they must be disposed of into the appropriate waste stream; they are not to be transferred between vehicles.

15.3.2. Mop heads used for station cleaning must be disposed of a minimum of once a week (on a Monday) and recorded on the mop head change sheet. If they are visibly soiled or used to clean up blood or bodily fluids the mop head must be disposed of in the appropriate waste stream immediately.

15.3.3. The re-usable station mop heads must not be stored in cleaning solutions, water or disinfectant.

15.3.4. Mop buckets must be stored clean and dry, the cleaning of mop buckets must be recorded on the weekly mop head change sheet

15.4. Cleaning – Using Detergent

15.4.1. Cleaning is a prerequisite of decontamination to ensure that effective disinfection or sterilisation can be carried out.

15.4.2. The physical act of cleaning removes contamination but does not destroy microorganisms.

15.4.3. Precautions should be taken against splash and repeated exposure to detergents, personal protective equipment should be donned following a dynamic risk assessment.

15.4.4. If there is a need to scrub items when cleaning by hand, a sink is needed which is deep enough to completely immerse the items to be cleaned as scrubbing can generate aerosols which may convey infective agents. When scrubbing is needed it must be carried out with the equipment and brush below the surface of the water.

Infection Prevention and Control Procedures		Page:	Page 36 of 48
Document ID:	NS/07.04	Version:	7
Date of Approval:	14 September 2015	Status:	Final
Approved by:	Infection Prevention and Control Group	Next Review Date:	September 2017

15.5. Cleaning – Using Disinfectant

- 15.5.1. If required, disinfection should only be carried out after a detergent clean.
- 15.5.2. Disinfection is a process used to reduce the number of viable microorganisms; harmful microorganisms can be destroyed by chemical, such as a chlorine releasing agent, or by immersion in hot water, above 70°C.
- 15.5.3. When disinfection is required, a dynamic risk assessment will be needed to ascertain the level of PPE required, and staff should ensure there is adequate ventilation when they are using disinfectants.
- 15.5.4. Many disinfectants deteriorate after dilution; solutions should be labelled with the date, time and signature of the person making the solution. Solutions should be made immediately prior to use and discarded within 24 hours.
- 15.5.5. Disinfectant chemicals should always be made following the manufacturer's instructions and should not be mixed with any other chemicals.

16. Blood and Body Fluid Spillages

- 16.1. Effective management of blood and body fluid spillage is a crucial factor in controlling the spread of infection. Exposure to any such fluid constitutes a risk to all staff and others within the immediate environment. These risks can be minimised by dealing promptly with the spillage through appropriate cleaning and disinfection.
- 16.2. In general, the volumes of most blood or bodily fluid spills that occur are not excessive, i.e. blood smeared on sharps boxes or pieces of equipment. These can be managed by wiping with a detergent/disinfectant wipe.

16.3. For body fluid spills on flat surfaces:

- 16.3.1. Don appropriate PPE
- 16.3.2. Sprinkle the Haz-Tab granules over the spill until all moisture is absorbed
- 16.3.3. Leave for no more than 2 minutes
- 16.3.4. Using blue paper towels collect the granules and spill mixture
- 16.3.5. And follow the guidance for splashes and drips below

16.4. For splashes or drips on vertical surfaces

- 16.4.1. Don appropriate PPE
- 16.4.2. Make up 10,000ppm chlorine solution by adding 4 Haz-Tab tablets to the small 1litre bottle and fill to the line with **COLD** water

<i>Infection Prevention and Control Procedures</i>		Page:	Page 37 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

- 16.4.3. When the tablets have dissolved screw down the top and mix gently by inversion, do not shake.
- 16.4.4. Whilst waiting for the tablets to dissolve, clean the area with a detergent wipe.
- 16.4.5. Once the solution has dissolved, transfer into a yellow bucket and clean the area with a yellow cloth.
- 16.4.6. Discard the remaining solution and keep the bottle for next use
- 16.4.7. Remove PPE and decontaminate hands.

17. Premises Cleaning

- 17.1. The premises within the Trust play a role in transmitting infection; dust, dirt and residue of liquids increase the risk of this transmission and therefore should be kept to a minimum through regular cleaning and by good design features of equipment, fixtures and fittings.
- 17.2. Written cleaning schedules have been developed and are available on all Trust premises to ensure frequencies of cleaning and cleaning methods are available at the point of use.
- 17.3. Work surfaces and floors should be smooth-finished, intact, durable, and washable. Surfaces should be impervious to liquids and not allow pooling of liquids.
- 17.4. Staff are expected to wash their cutlery and crockery after use and dry it with a paper towel.
- 17.5. Staff are expected to clean ovens, microwaves and toasters after each use and ensure spillages in fridges/freezers are cleaned up immediately. Refrigerators should be cleaned weekly or after any spillages and defrosted and cleaned in accordance with the manufacturer's instructions.
- 17.6. Cork shower mats are not permitted for use within any Trust premise, shower mats that are in use must be anti-slip and are required to be washed with hot water and detergent and hung to dry after each use. Shower mats should be replaced annually.
- 17.7. Toilets should be cleaned with a toilet brush, using toilet descaling fluid. Toilet brushes should be cleaned by flushing the cistern and rotating the brush as the clean water comes through, tap on the edge of the toilet to remove excess water and store in a clean, dry brush holder. If the toilet brush is worn or soiled and unable to clean it must be disposed of and replaced.
- 17.8. The internal and external aspects of the waste bins should be cleaned at least weekly. With the lid wiped clean on a daily basis.

<i>Infection Prevention and Control Procedures</i>		Page:	Page 38 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

18. Decontamination of medical devices and consumables

18.1. The aim of decontaminating equipment is to prevent potentially harmful pathogenic organisms reaching a susceptible host and establishing an infection.

18.2. Single use Equipment

18.2.1. Certain items of equipment are classified as single use only. Single use means that the manufacturer:

- Intends for the equipment to be used once and then thrown away
- Considers them unsuitable for use on more than one occasion
- Has insufficient evidence to confirm that re-use would be safe

18.2.2. The consumer Protection Act 1987, will hold a person liable if a single use item is re-used against the manufacturers recommendations

18.2.3. Single use items are easily identifiable by the following symbol:



18.3. Single patient use

18.3.1. Single patient use items can be used more than once on the same patient, such items include oxygen tubing and masks. These items must be discarded once the patient no longer requires them; they can be handed over to the hospital with the patient for on-going treatment.

18.4. Sterile and clean items

18.4.1. Any equipment supplied within sealed packaging designed to keep the item sterile or clean must remain stored within the packaging.

18.4.2. Sterile and clean items must not be removed from their packaging for storing in response bags.

18.5. Reusable equipment

18.5.1. Reusable equipment should be appropriately decontaminated between each patient use.

18.5.2. The choice of process for decontamination depends on a number of factors:

<i>Infection Prevention and Control Procedures</i>		Page:	Page 39 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

- The type of equipment
- The organism involved
- The time required for reprocessing
- The risk to patients and staff
- The manufacturers written instructions

18.5.3. Figure 11 is designed as a risk assessment model to aid staff in identifying the most appropriate method of decontamination.

Risk	Application of Item	Minimum standard
Minimal	Items / surfaces not in contact with the patient e.g. floors, walls	Clean and dry
Low	Items / surfaces that come into contact with healthy skin e.g. mattresses, rails	Clean and dry but, if contaminated with blood, body fluids or suspected transmissible organisms - disinfect
Medium	In contact with intact mucous membranes, or if contaminated with virulent or readily transmissible organisms. e.g. respiratory equipment, ear pieces, thermometers	Disinfect or single use
High	In contact with a break in the skin or mucous membrane, or for introduction into normally sterile body areas e.g. cannula, forceps, dressings	Sterilise or single use

18.6. Returning medical devices for service, inspection or repair

18.6.1. Medical equipment that requires inspection, repair or servicing must be cleaned by the user prior to being sent. The level of cleaning required will be based on the level of contamination on the medical device.

18.6.2. If a piece of equipment is so heavily contaminated it is impossible to remove the contamination using simple cleaning methods, staff should store the piece of kit safely and seek advice from the Trust Infection Prevention and Control Team.

18.6.3. After cleaning the equipment staff must complete a decontamination certificate (these are located in the infection prevention and control toolkit). The decontamination certificate must be fully completed otherwise the piece of equipment will not be collected or inspected/repaired.

18.7. Management of contaminated tough books

<i>Infection Prevention and Control Procedures</i>		Page:	Page 40 of 48
Document ID:	NS/07.04	Version:	7
Date of Approval:	14 September 2015	Status:	Final
Approved by:	Infection Prevention and Control Group	Next Review Date:	September 2017

18.7.1. Toughbooks require decontamination after each patient use, this is achieved through the use of the detergent/disinfectant wipes.

18.7.2. On occasion the Toughbook may be used on a patient with an infectious disease or the Toughbook may become contaminated with blood and body fluids. When this happens the following process must be followed:

- Clean the Toughbook with a detergent/disinfectant wipe
- Place the Toughbook in a clear bag and complete a decontamination certificate
- Take the Toughbook to IM&T during office hours or to the Emergency Operations Centre out of hours where a replacement Toughbook will be issued
- The Toughbook will then be collected by the IPC team to thoroughly decontaminate and swab with the ATP swabs to ensure adequate decontamination has been achieved.
- The Toughbook will be returned to IM&T for function testing and then put back into circulation.

19. Management of Linen and Laundry

19.1. All laundry must be fit for purpose, visibly clean, made from the right material and not damaged or discoloured. This section refers to linen used during the treatment or care of patients (for staff uniform advice see the next section)

19.2. Linen used for patient care is not laundered within the Trust, there is a separate agreement for laundering provision provided by an external contractor, and expert advice for these contracts and specifications for laundry services is provided by the IPC team in line with current guidance.

19.3. Clean Linen

19.3.1. Clean linen is defined as the freshly laundered linen which is stored on stations or held on vehicles but has not yet been in contact with a patient.

19.3.2. Linen storage areas should be dedicated for linen storage and not used for other activities, these cupboards should have all linen removed and be cleaned at least quarterly.

19.3.3. The rooms/cupboards should be equipped with shelving that can be easily cleaned and allow the free movement of air around the stored linen. Linen should be stored away from direct sunlight and water in a secure, dry and cool environment.

19.3.4. Where it is not possible to store linen in a designated cupboard on station laundry shrouds must be in place over the linen cages and the shrouds must remain closed when not accessing the linen.

19.3.5. Any linen that is stored in the garage area of a station must have a shroud over the linen cage and discussion with estates and IPC team to ascertain a more permanent store solution where possible and further mitigation.

<i>Infection Prevention and Control Procedures</i>		Page:	Page 41 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

19.3.6. Storage of clean linen on vehicle should be within a designated cupboard on the vehicle and should not be stored with other items, all items must be removed from the cupboard during the deep clean process to enable appropriate cleaning.

19.4. Used and Infectious Linen

19.4.1. Segregation of linen is undertaken to protect the health care workers and the linen and laundry workers from the potential for handling contaminated waste. The linen is segregated into two main streams used linen or infectious linen.

19.4.2. Used linen includes all soiled and foul linen, irrespective of state but on occasion contaminated with blood or body fluids.

19.4.3. Infectious linen applies to all linen from patients who are known or suspected to have an infectious disease, including linen contaminated with blood or body fluids from a patient with a blood borne virus, linen from patients with diarrhoea or other infectious disease (i.e. varicella zoster, measles). Infectious linen also includes linen from patients who are known or suspected to have an infestation (i.e. scabies, lice or fleas)

19.4.4. Linen from patients with a hazard group four (category three) organism, such as viral haemorrhagic disease should not be returned to the laundry but should be disposed of as highly infectious waste.

19.5. Handling Linen

19.5.1. When handling soiled linen:

- Cover cuts and abrasions with waterproof dressings
- Wear an apron and gloves
- Dispose of used linen promptly into the appropriate linen bag
- Handle linen with care when removing it, linen should be folded individually during removal
- Do not put soiled linen onto a clean surface or onto clean equipment
- Remove personal protective equipment (PPE) and wash hands after use and before returning to other duties


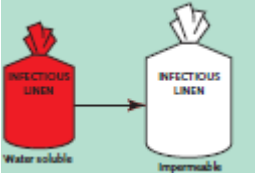
19.5.2. Infectious/infested linen should be placed into a water soluble (alginate) bag and then into an impermeable bag immediately after removal.

19.5.3. Used linen should be placed into an impermeable bag immediately after removal, if linen is heavily contaminated with blood or bodily fluids this should be placed into a water soluble (alginate) bag.

19.5.4. All staff are requested to make themselves familiar with local hospital procedures to ensure correct segregation when disposing of linen at the hospital on patient handover.

<i>Infection Prevention and Control Procedures</i>		Page:	Page 42 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

Figure 12 – Used laundry segregation

Used linen	White bag 	All used linen irrespective of state, but on occasions contaminated with blood or body fluids
Infectious/Infested line	Alginite bag and designated bag as per locality. 	Linen from patients with a known or suspected infectious condition (i.e. measles, MRSA, C.diff, diarrhoea) Used linen from patients with infestations (i.e. scabies, lice and fleas)

19.5.5. Particular care should be taken when handling linen in case clinical waste or sharps have accidentally been concealed within. Items other than linen must not be placed into linen bags. Sharps are a hazard to laundry workers and can cause damage to the linen and the machines.

19.5.6. Once linen has been bagged for collection it should not be handled again, bags should be securely tied with a knot when two thirds full and stored in a secure area away from the public.

19.6. Used linen and the non-conveyed patient

19.6.1. There may be occasion when staff use linen during the treatment/assessment of patients who are not conveyed, or when transporting patients from the hospital to their own residence. The linen generated during this process must be bagged in an appropriate linen bag, as detailed above and the bag must then be sealed.

19.6.2. Once bagged the linen must be carefully stored away from any future patients and any accompanying escorts and deposited at the nearest station or hospital at the next opportunity.

19.6.3. Used or infectious linen must be removed from the vehicle at the end of the shift.

20. Management and care of uniforms

20.1. All staff should have sufficient uniform to wear clean clothing each shift and at least one spare set of uniform on station in case their uniform becomes contaminated during the shift.

Infection Prevention and Control Procedures		Page:	Page 43 of 48
Document ID:	NS/07.04	Version:	7
Date of Approval:	14 September 2015	Status:	Final
Approved by:	Infection Prevention and Control Group	Next Review Date:	September 2017

20.2. When there is reasonable likelihood a clinically qualified responding manager will be delivering patient care during their shift, they should consider wearing their uniform. When responding to an incident without being in full uniform managers must remove their tie and where practical, should wear their high-visibility jacket.

20.3. Although best avoided, if you wear your fleece or soft shell jacket during clinical care all measures should be taken to avoid the contamination, including rolling sleeves up or using sleeve protectors.

20.4. Contaminated uniform

20.4.1. For situations where contamination may be extensive and foreseeable, a protective suits (coveralls) should be worn as an outer garment as well as any other PPE required. After use the protective suit (coverall) must be disposed of in the appropriate waste stream.

20.4.2. If staff uniform does become contaminated the following procedure should be followed:

- Report the situation to Emergency Operational Control (EOC) and seek permission to return to station to change uniform
- Ensure that other items of clothing or equipment are not contaminated, take care to protect the vehicle seats when returning to station.
- Remove uniform and place into Staff uniform bag, ready to take home for laundering (see section 19.6)
- If shoes are contaminated these should be washed with soap and water, dried and cleaned in the normal manner.

20.5. Laundering Uniform

20.5.1. Uniforms should be washed at the hottest temperature suitable for the fabric and utilising detergent. Uniforms must be washed with a detergent at 60°C or above for a minimum of 10 minutes, do not use a short wash cycle. If the uniform is dirty a cold-water pre-wash is advised.

20.5.2. High-visibility jackets are to be washed with detergent at 40°C (or highest temperature specified on the garment) for a minimum of 10 minutes. Do not use a short wash cycle.

20.5.3. Keeping washing machines and tumble dryers clean and well maintained will protect the machines efficiency as dirty or underperforming machines can result in poor wash cycles. In order to avoid overloading your machine, uniform should be washed separately to other clothing.

20.5.4. Uniforms should be steam ironed to further reduce the levels of microorganisms, and should be stored in a manner that reduces the risk of contamination.

20.6. Staff contaminated uniform bag

<i>Infection Prevention and Control Procedures</i>		Page:	Page 44 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

- 20.6.1. Staff are expected to take their uniforms home for laundering as facilities are not provided on stations for operational staff.
- 20.6.2. Uniform bags are available to all staff taking uniforms home for washing. Uniforms are placed into the bag and sealed with the tape, thus eliminating any unnecessary handling of soiled garments. The bag is placed unopened into the washing machine, during the wash cycle the soluble membrane and tie tape will dissolve, releasing the contents of the bag for washing. Once the cycle is complete the bag should be removed and discarded into the domestic waste. These easy to follow instructions are printed onto each bag. These bags are provided as an option for staff and are not obligatory.
- 20.6.3. Hospital style soluble bags are not designed for use in a domestic washing machine and will not dissolve effectively; this may result in damage to the washing machine.
- 20.6.4. Provided guidance is adhered to there is no evidence uniform or other work clothes, pose a significant hazard in terms of spreading infection.
- 20.6.5. If uniform is heavily contaminated with body fluid, the most appropriate course of action might be to dispose of your uniform as clinical waste, utilising the appropriate clinical waste stream.

21. Care of the deceased

- 21.1. Where staff need to move a deceased patient standard infection prevention and control precautions will need to be followed using a dynamic risk assessment.
- 21.2. When handling and transporting deceased patients:
- The body must not be handled unnecessarily
 - Deceased patients being transported by the Trust must be placed into a disposable plastic body bag
 - Consider the use of PPE, based on your dynamic risk assessment
 - If there is any risk of infection the receiving unit must be alerted
 - Upon completion of the incident the vehicle and equipment must be decontaminated according to procedures.

22. Communication of Infection Prevention and Control

22.1. Procedure for Emergency Operations Centre

- 22.1.1. Where applicable and appropriate in the scope of the call, staff are expected to ask the patient if they have any infectious diseases the ambulance service needs to be aware of.
- 22.1.2. This information is entered into the call log notes and, if the patient has an infection, this is communicated to the crew attending the call.

22.2. Procedure for A&E

<i>Infection Prevention and Control Procedures</i>		Page:	Page 45 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

22.2.1. The information regarding a patient's infection status may be obtained in the following ways:

- Patient provided
- Medical history provided by others such as family or household members
- Patient history provided by other health care professional
- Clinical assessment of patient
- Respiratory - productive cough
- Gastrointestinal - diarrhoea and/or vomiting
- Circulatory - Signs of sepsis / raised temperature
- Presence of a rash / cellulitis
- Clinically infected wound / indwelling device
- Recent foreign travel

22.2.2. Any information gained regarding a patient's infectious status, along with the source of this information, must be documented on the patient care record and verbally communicated to the receiving healthcare professional. It may be necessary to notify the receiving department in advance if it is anticipated that the patient may require isolation

22.3. Procedure for PTS

22.3.1. When booking patients for transport PTS control will ask if the patient has any specific infections that the crew will need to be aware when transporting the patient and if the patient has any medical conditions that may cause a significant risk of cross infection to another person or if the patient is highly susceptible to infections i.e. neutropenic patients

22.3.2. Infection control risks and status will be recorded on the work sheet to inform crews prior to transportation. Patients that pose significant infection prevention or control risks must be transported individually; this will need to be factored into the work plan for the shift.

22.3.3. When collecting a patient from transportation, if the patient communicates any symptoms of diarrhoea and/or vomiting to the PTS crew or if the handover indicates the patient has an infection, this should be discussed with the nurse in charge and PTS control, this patient will potentially be unable to travel with other patients.

22.3.4. If a patient has symptoms of diarrhoea and/or vomiting en route to the receiving destination, ideally, the crew should notify the receiving department on route so appropriate arrangements can be made. Where this is not possible, upon arriving at the destination one crew member should remain on the vehicle with the patient while the other notifies the receiving department. If neither of these options is practical then the crew must notify the receiving department upon arrival in the unit.

22.3.5. If there is any query as to whether a patient requires single transportation this should be discussed with the IPC team.

22.4. Notification of hospital departments

<i>Infection Prevention and Control Procedures</i>		Page:	Page 46 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

- 22.4.1. Communicable infectious diseases may give rise to an outbreak of infection amongst patient, visitors and healthcare staff. Outbreaks exist when there are more cases than expected in a given area or among a specific group of people, over a particular time period. Outbreaks of infectious diarrhoea and vomiting, for example, can lead to widespread closures of wards and life limiting symptoms in the most vulnerable patient. It is therefore vital that any potential communicable infection is communicated to the receiving area.
- 22.4.2. In order to ensure that this information is communicated in a timely fashion to Emergency Departments clinicians are encouraged to pre-alert hospital departments if they are transporting a patient with symptoms of diarrhoea and/or vomiting or if the infection status history indicates to the crew that isolation is necessary.

23. Care of patients with infections

- 23.1. Staff should follow standard infection prevention and control precautions at all times as patients infectious status is not always known, this will minimise the risk of cross infection.
- 23.2. In general most of the communicable infections encountered by the ambulance service do not require any special procedures or actions by staff other than adhering to the principles of standard infection prevention and control precautions.
- 23.3. Information on dealing with specific infections is available in the A to Z of disease specific precautions on insite.

23.4. Infestations

- 23.4.1. Staff may occasionally come into contact with patients who are infested with parasites which live on the skin, the three types of parasites staff may encounter are:
- Scabies
 - Lice (head, clothing and pubic)
 - Fleas
- 23.4.2. Staff are required to employ standard infection prevention and control precautions and localised cleaning when dealing with these infestations. Where potential exposure has occurred staff are advised to contact the IPC team or Occupational Health for advice.

24. Highly infectious diseases and biological warfare

24.1. Highly infectious diseases

- 24.1.1. Highly infectious diseases (Hazard group 4 biological agents) are defined by the Advisory committee for Dangerous Pathogens , Health and Safety

<i>Infection Prevention and Control Procedures</i>		Page:	Page 47 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

Executive (2005) Biological agents: Managing the risks in laboratories and healthcare premises. These include

- Rabies
- Plague
- Viral Haemorrhagic diseases
- Zoonotic infections caused by the Hendra and Nipah viruses
- Smallpox

24.1.2. These diseases are extremely rare in the UK and cases are more likely to be of a suspected nature than confirmed diagnosis. National policy dictates that in suspected cases the ambulance service will be required to convey the patient to the nearest High Security Infectious Diseases Unit (HSIDU) using appropriate standard infection prevention and control precautions for the patients presenting condition.

24.1.3. Patients with a confirmed diagnosis of a Hazard Group 4 infection will be transported by the Hazardous Area Response Team (HART) in a dedicated vehicle carrying only basic equipment. These patients will be transported with heightened infection prevention and control precautions.

24.2. Biological Warfare Agents

24.2.1. These agents include:

- Anthrax
- Plague
- Smallpox
- Some of the Viral Haemorrhagic diseases

24.2.2. None of these diseases present an immediate threat to life and there is time to seek expert medical advice from Public Health England.

24.2.3. Only staff who are trained in the use of specialised personal protective equipment and associated decontamination procedures should be within the hot or warm zones of an incident where such agents are thought to be involved. This will be the responsibility of HART and all other staff should remain a safe distance and await support from trained staff and specialist advisors. Incidents of this nature are dealt with through the implementation of the Major Incident plan appendix 2.

24.2.4. If staff are inadvertently contaminated they should isolate themselves and contact the Incident Officer who will arrange for appropriate decontamination.

25. Provision of IPC related Occupational Health (OH) advice

25.1. Pre-employment

25.1.1. Prior to commencing employment in the Trust staff will undertake a medical examination by OH where their immunisation status will be assessed. Subsequently advice and, where appropriate, vaccinations will be offered in line with individual duties. These vaccinations will be documented on the staff

<i>Infection Prevention and Control Procedures</i>		Page:	Page 48 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

members record to allow for subsequent vaccinations and booster doses to be administered.

25.1.2. An immunisation programme includes vaccination for:

- Tuberculosis
- Rubella (German Measles)
- Poliomyelitis
- Hepatitis B (HBV)
- Tetanus
- Influenza
- Hepatitis A (for specific staff groups)

25.1.3. Immunisation is not available against all infectious diseases and is not guaranteed to be 100% effective, it should never be regarded as an alternative to safe infection prevention and control working practices.

25.2. Staff sickness and reporting

25.2.1. If staff suspect they have an infectious illness they should get advice and treatment from their GP. Those who work directly with patients should follow the procedure for reporting sickness and contact occupational health for advice on when they should return to work, this is especially important if they develop any of the following diseases:

- Skin infection on exposed areas
- Infestation
- Diarrhoea and/or vomiting (staff must be symptom free for 48 hours following the last episode of diarrhoea and/or vomiting before returning to work)
- Jaundice
- Hepatitis
- Infectious diseases – chicken pox, measles, mumps, Scarlet fever, whooping cough (pertussis),

25.2.2. The Health and Safety Executive must be informed under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 1995, of any blood borne virus exposure where the source is known to be infected with hepatitis B or C or with HIV. This will be completed by the Risk and Safety team.

26. Transportation and consumption of food on vehicles

26.1. Food transportation

26.1.1. Food must only be transported in the designated areas.

26.1.2. In order to prevent the contamination of food, food containers should be fit for purpose, lidded, washable, liquid and leak proof and must be labelled and dated.

26.1.3. Cool bags can be utilised to increase the amount of time food can remain out of the fridge before cooking or consumption. Ice blocks need to be used in

<i>Infection Prevention and Control Procedures</i>		Page:	Page 49 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

conjunction with the cool bag and these should have been in the freezer for at least 24 hours prior to use and must be the correct size for the bag and the amount of food to be kept chilled. Cool bags must be fit for purpose, sealable, washable, leak proof and undamaged.

26.2. Food Consumption

26.2.1. Food and drink must not be consumed whilst driving.

26.2.2. Staff must not consume food or drink in the treatment/clinical area of the vehicle or whilst undertaking clinical care. Staff can consume snack food and drink in the cab area of the vehicle to provide sustenance and maintain hydration during calls. Meal breaks must not be taken in the vehicle. Any rubbish must be disposed of appropriately.

26.2.3. Hand hygiene must be undertaken prior to and after consuming food or drink. Where possible this should be undertaken with soap and water. When there is no access to soap and water the hand wipes should be used to decontaminate hands. Gloves should never be used as a substitute for appropriate hand hygiene.

27. Consultation

27.1. This procedure has been presented for comments and approval at the Infection Prevention and Control Group.

27.2. Further consultation has taken place with the Locality Quality Managers, occupational Health, Hazardous Area Response Team, Emergency Planning and Preparedness. Staff side have been included in the consultation process as have organisational learning and all relevant stakeholders

28. References

- Department of Health (2013) Choice Framework for Local Policy and Procedure 01-04 – Decontamination of linen for health and social care: Management and Provision. Crown Copyright London.
- Department of Health (2015) Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance. Crown Copyright, London

29. Monitoring Compliance and Effectiveness of the Procedure

29.1. Monitoring of the compliance with and effectiveness of this procedure will be undertaken as part of the quarterly divisional audits and the IPC specialist audits. These results will be analysed and reported to the Infection Prevention and Control Group meetings for assurance.

<i>Infection Prevention and Control Procedures</i>		Page:	Page 50 of 48
Document ID:	<i>NS/07.04</i>	Version:	<i>7</i>
Date of Approval:	<i>14 September 2015</i>	Status:	<i>Final</i>
Approved by:	<i>Infection Prevention and Control Group</i>	Next Review Date:	<i>September 2017</i>

Plan for Dissemination of Procedural Document

Title of document:	Infection Prevention and Control Procedures		
Version Number:	7	Dissemination lead: Print name, title and contact details	Kirsty Morgan, Head of IPC Kirsty.morgan@emas.nhs.uk
Previous document already being used?	Yes / No (Please delete as appropriate)		
Who does the document need to be disseminated to?	All staff		
Proposed methods of dissemination: Including who will disseminate and when Some examples of methods of disseminating information on procedural documents include: <i>Information cascade by managers</i> <i>Communication via Management/ Departmental/Team meetings</i> <i>Notice board administration</i> <i>Articles in bulletins</i> <i>Briefing roadshows</i> <i>Posting on the Intranet</i>	Information cascade by managers Update of QE noticeboard template to highlight updated procedures to staff Bulletin article in “In Focus” Posting on the intranet Email to the VAS/PAS providers for information.		

Note: Following approval of procedural documents it is imperative that all employees or other stakeholders who will be affected by the document are proactively informed and made aware of any changes in practice that will result.