



**Ambulance**Victoria

# Infection Control

Manual



## Foreword

The Infection Control Manual has been reviewed reflecting best practice in Australian Standards and State legislation.

It is available to all employees of Ambulance Victoria (AV), and is designed to facilitate the Infection Prevention & Control program.

This manual has been reviewed in conjunction with the Australian Government, National Health & Medical Research Council (NHMRC) and the Australian Guidelines for the Prevention and Control of Infection in Healthcare 2010.

The manual is a 'fluid' document that may be updated on a needs basis to ensure it remains in keeping with current trends, guidelines and legislation.

### Reviewed by:

Michelle Bibby  
Infection Prevention Australia

### Review Date:

19th October 2015

# Contents

Purpose	2	Donning & Doffing Standard Precautions	19
Scope	2	Donning Standard Precautions	19
Responsibility	2	Doffing Standard Precautions	19
Roles and Responsibilities	2	Doffing Disposable Gloves	19
AV Employees, Volunteers, Contractors and Visitors	2	Doffing Protective Eyewear	20
Infection Control Committee	2	Donning P2 Vented Respirator	20
Health, Safety & Wellbeing Department	2	Doffing P2 Vented Respirator	20
AV's Medical Service Provider	2	Donning & Doffing Transmission-based Precautions	21
Introduction	3	Donning Transmission-based Precautions	21
AV Immunisation Requirements for Preventable Diseases	4	Doffing Transmission-based Precautions	21
Immunisation Cost	4	Vehicle & Portable Equipment Cleaning	22
Table 1 – AV Vaccination requirements	5	Portable Equipment Cleaning	22
Transmission of Infection in Healthcare	7	Management of Blood and Body Fluid Spills	24
The Modes of Transmission	8	Minor Spills	24
Contact Transmission	8	Major Spills	25
Droplet Transmission	8	Blood and/or Body Fluid Exposure Injury	25
Airborne Transmission	9	Management of Contaminated and General Waste	26
Vector-borne Transmission	9	Disposal Process	26
Methods of Reducing the Spread of Infection	10	Management of Soiled or Heavily Contaminated Linen or Uniform	27
How do you complete a Dynamic Risk Assessment?	10	Disposable Items	28
Standard Precautions	10	Storage and Handling of Sterile Stock	28
Clinical Work Instructions	10	Single-use Medical Devices	28
AV Bio-Event Subplan/Incident Action Plan	10	Multi-use Ampoules/Vials	28
Figure 4: Dynamic Risk Assessment Process – Infection Control Example	11	Health of Employees	29
Transmission-based Precautions	12	Skin Infection	29
Instructions for Standard Precautions	13	Diarrhoea and/or Vomiting	29
Hand Hygiene	13	Herpes Virus Family	29
Routine Hand Hygiene	13	Employees Positive for Blood Borne Viruses	30
Hand Washing Techniques	14	Immuno-suppressed Employees	30
Hand Washing Agents	15	Management of Exposure to Infectious Diseases and Pregnancy	30
Finger Nails and Nail Lacquer	15	Chickenpox (Varicella)	30
Respiratory Hygiene/Cough Etiquette	15	Rubella (German Measles)	30
Handling and Disposal of Sharps	16	Cytomegalovirus (CMV)	30
Handling of Sharps	16	Parvovirus B19	31
Disposal of Sharps	16	Pathogens	31
Aseptic Techniques	16	Appendix	32
Standard Precaution – Personal Protective Equipment	17		
Disposable Gloves	17		
Protective Eyewear	17		
P2 Vented Respirator Mask	17		

## Purpose

The AV Infection Prevention & Control Program provides procedures for the prevention and management of infectious diseases within the AV pre-hospital environment. This manual provides the written framework for that program.

## Scope

This manual applies to all employees, volunteers, contractors and visitors of AV.

## Responsibility

This manual is issued under the authority of the General Manager, People and Culture.

## Roles and Responsibilities

### AV Employees, Volunteers, Contractors and Visitors

All AV operational and non-operational employees, including Community Emergency Response Teams (CERT), Ambulance Community Officers (ACO), Remote Area Nurses (RAN), Contractors and Visitors are responsible for ensuring their awareness of and compliance with the infection control practices contained within this manual.

### Infection Control Committee

The Infection Control Committee is the formal AV committee, through which the infection control activities of AV are facilitated. Responsibilities include policy development and review, education program development and the promotion of the maintenance of infection control standards. Refer to Infection Control Committee (ICC) Terms of Reference (TOR) procedure.

*Infection Control Committee –  
Terms of Reference*

### Health, Safety & Wellbeing Department

Management of the Infection Prevention & Control program is the responsibility of the Health Safety & Wellbeing Department.

### AV's Medical Service Provider

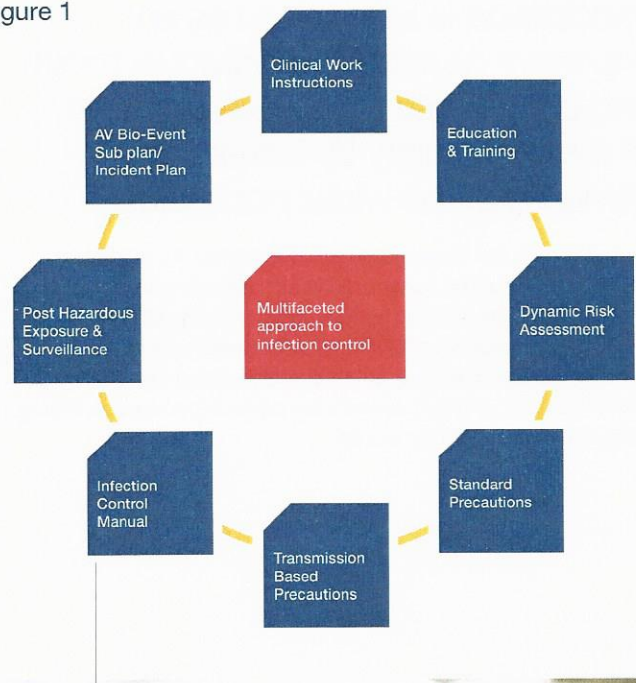
AV's Medical Service Provider is responsible for assessing, monitoring and advising individuals exposed or potentially exposed to an infectious disease.

# Introduction

Paramedics are at the front line of medical care and have a high risk of exposure to patients with known or unknown infectious agents.

Effective infection prevention and control are central to ensure pathogens are not passed from one person to another. This manual describes AV's multifaceted infectious control approach to the prevention of infectious agent transmission as seen in Figure 1.

Figure 1



# AV Immunisation Requirements for Preventable Diseases

Vaccination is recognised as an important protector of individual health and contributes to the overall health of the community by increasing the immunity of the wider population.

Table 1 details the vaccination requirements for AV employees. Employees should be vaccinated in accordance with this table, complete an immunisation status record and provide acceptable evidence of immunity to AV's Medical Service Provider. AV's Medical Service Provider maintains an AV employee health register, which contains details of employee vaccine preventable disease history, vaccination and antibody results.

## Immunisation Cost

AV will pay for costs associated with screening and/or vaccinations for all:

- ▶ existing operational employees
- ▶ all (existing and newly appointed) Community Emergency Response Teams (CERTs) and Ambulance Community Officers (ACOs)
- ▶ non-operational employees who are required to undertake observer shifts.

If the following process is followed:

- ▶ If AV's Medical Service Provider is used to conduct screening and/or vaccinations there is no out of pocket cost. Contact 1800 240 395 to arrange screening and/or vaccinations.
- ▶ If the employee attends their own GP, a completed AV Vaccination/Immunity Record form must be provided to and approved by AV's Medical Service Provider before AV will reimburse medical costs. Contact AV's Medical Service Provider on 1800 840 395, to obtain the Vaccination/Immunity Record form.

---

### Note

Non-operational employee screening/vaccination costs will be responsibility of the employee's department as applicable.

It is the responsibility of prospective operational employees (excluding ACOs and CERTs) will be required to cover the cost of any screening/vaccination required. This must be completed pre-employment.

Table 1 AV Vaccination Requirements

Required vaccination	All operational employees and volunteers Pre 1 Jul 2015	All operational employees (excluding ACOs/CERTS) Post 1 Jul 2015	All new ACOs/CERTS Post Feb 2016	All AV operational employees (prior to the commencement of the following**) Post Feb 2016	Paramedic students on clinical placement	Non-operational observers
<b>Measles/Mumps/Rubella</b> – Documented two doses of MMR provides lifetime protection. If not vaccinated prior to exposure, two doses given within one month will also provide lifetime protection.	Highly recommended	Compulsory	Compulsory	Highly recommended**	Compulsory	Highly recommended
<b>Varicella Zoster (Chicken Pox)</b> – Single dose provides lifetime protection. Prior infection with varicella provides 90% protection.	Highly recommended	Compulsory	Compulsory	Highly recommended**	Compulsory	Highly recommended
<b>Hepatitis B</b> – three doses, no booster required. If serology testing demonstrates therapeutic antibody levels then lifetime protection achieved.	Highly recommended	Compulsory	Compulsory*	Highly recommended**	Compulsory	Highly recommended
<b>Pertussis</b> – Single does provides lifetime protection (would recommend one booster dose if not had in the last 10 years).	Highly recommended	Compulsory	Compulsory	Highly recommended**	Compulsory	Highly recommended
<b>Influenza</b> – Annual vaccination recommended.	Highly recommended	Highly recommended	Highly recommended	Highly recommended	Highly recommended	Highly recommended

\*Note Minimum of two Hep B vaccinations is required. 3rd vaccination completed ASAP

\*\*Prior to the commencement of the Rural Sponsored Degree Program (RSDP), Graduate Diploma Emergency Health (GDEH), MICA Training, Flight Paramedic, MICA Flight Paramedic must provide immunisation status including serology testing if required to AV's Medical Service Provider.





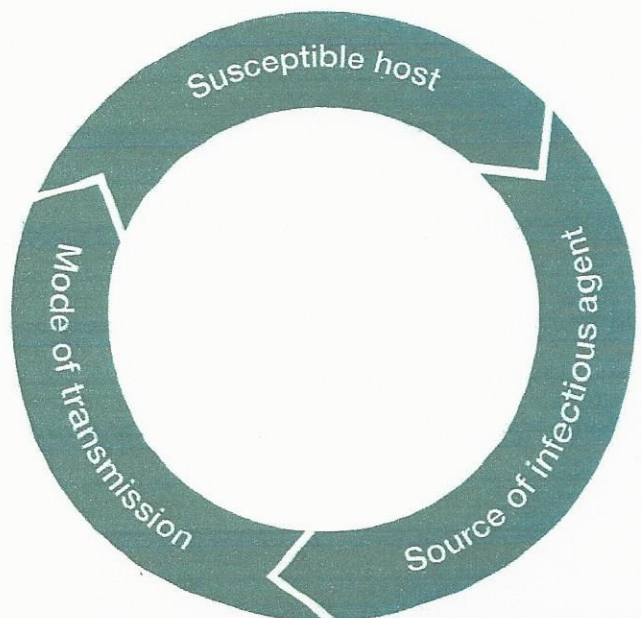
# Transmission of Infection in Healthcare

Infectious agents are biological agents that cause disease or illness to their hosts. Infection requires three main elements:

- ▶ a source of infectious agent
- ▶ a mode of transmission
- ▶ a susceptible host.

This is known as the Chain of Infection (Figure 2). Interruption of this cycle is a strategy to limit the spread of infection.

Figure 2 Chain of Infection



# The Modes of Transmission

Infectious agents can be transmitted by:

- ▶ contact
- ▶ droplet
- ▶ airborne
- ▶ vector-borne transmission
- ▶ refer to Figure 3.

## Contact Transmission

This is the most common mode of transmission and involves transmission by touch or contact with blood or body substances. Contact can be through direct or indirect contact with an infected person or contaminated objects or the environment. Examples of infectious agents/diseases that are transmitted by contact transmission include:

- ▶ Gastroenteritis
- ▶ Ebola
- ▶ Open or discharging purulent wounds (e.g. multi-resistant organisms)
- ▶ Multi-resistant organisms (MRO's) e.g. Faecal contamination from carriers of Vancomycin Resistant Enterococci (VRE) or Clostridium Difficile, Carbapenem Resistant Enterobacteriaceae (CRE).

### I. Direct Transmission

Transferal of the infectious agent from one person to another e.g. a patient's blood entering into the healthcare worker via blood splatter into eyes or through a needle stick injury.

### II. Indirect Transmission

Transferal of the infectious agent through an intermediate object or person e.g. a device or medical equipment is used to provide care for an infectious person, then not cleaned and then used on another person.

## Droplet Transmission

This transmission occurs when droplets of infectious agents are expelled into the atmosphere through breathing, coughing, sneezing or talking or through procedures such as oral suctioning or any actions generating aerosols. Transmission may also occur indirectly via contact with contaminated equipment with hands and then mucosal surfaces. Examples of infectious agents that are transmitted by droplet transmissions include:

- ▶ Influenza
- ▶ Rubella
- ▶ Pertussis
- ▶ Severe Acute Respiratory Syndrome (SARS).

## Airborne Transmission

This transmission occurs when particles containing infectious agents become airborne. Small particle infectious aerosols are created during normal breathing, talking, coughing and sneezing or when larger molecules of infectious agents evaporate in conditions such as low humidity. Clinical procedures such as airway suctioning, ventilation via bag valve masks and endotracheal intubation promote airborne transmission. Examples of infectious agents that are transmitted by airborne transmission include:

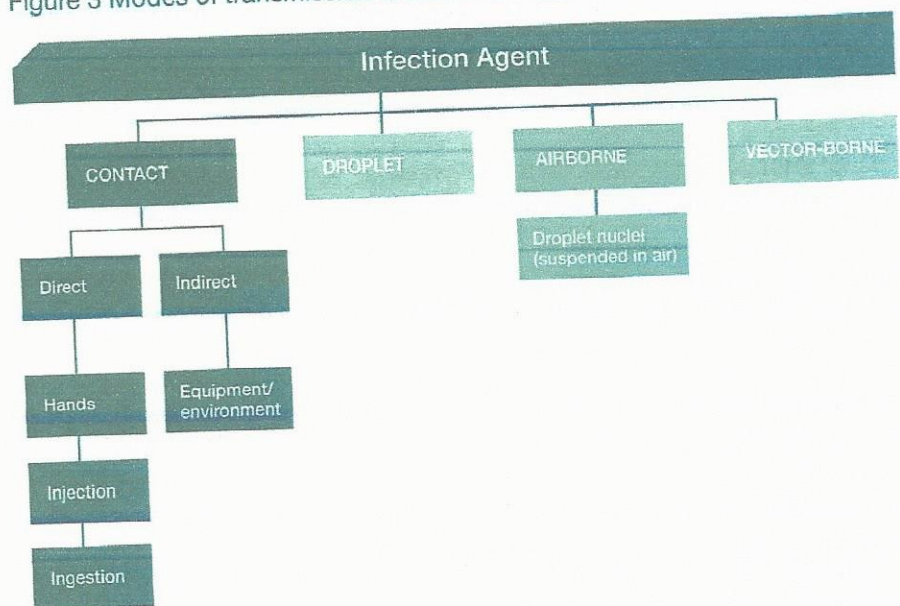
- ▶ Meningococcal Disease
- ▶ Measles
- ▶ Chicken Pox
- ▶ Tuberculosis.

## Vector-borne Transmission

A vector is a carrier of diseases. Contaminated objects (e.g. hypodermic needles) and living microorganisms fall into this category. A number of insects found in Australia, particularly mosquitoes, can transmit diseases. The best advice to avoid catching an insect borne disease is to avoid being bitten. Examples of vector-borne infections include:

- ▶ Malaria
- ▶ Dengue Fever
- ▶ Ross River Fever.

Figure 3 Modes of transmission of infectious agents



# Methods of Reducing the Spread of Infection

AV has a number of processes to reduce the spread of infection by interrupting the chain of infection cycle.

## How do you complete a Dynamic Risk Assessment?

Traditional risk assessments identify risks in the workplace in order to implement suitable controls. But when work activities involve fluid environments, where workers need to make quick mental assessments and manage risk 'on the run'. The process is called a Dynamic Risk Assessment.

A Dynamic Risk Assessment entails continuous monitoring of the surrounding circumstances and conditions to manage risks. Dynamic Risk Assessments should be clearly communicated, especially when working in a team to ensure all paramedics and others are aware of the potential or identified hazards and the agreed/most appropriate actions to reduce the risk of injury. Refer Figure 4 and the Appendix for scenario based examples.

A Dynamic Risk Assessment is conducted to determine the appropriate PPE to be worn, prior to entering scene/treating patient to reduce the risk of exposure to blood or body fluids.

## Standard Precautions

Standard precautions are work practices required for the basic level of infection control. It is essential that standard precautions are applied at all times in the assessment, treatment and transport of all patients and cleaning of equipment and/or vehicles. The blood, body fluids, secretions and excretions, mucus membranes and non-intact skin will be treated as potentially infectious.

Standard precautions are:

- ▶ good hygiene practices; particularly hand washing
- ▶ respiratory hygiene and cough etiquette
- ▶ safe handling and disposal of sharps and other contaminated or clinical (infectious) waste
- ▶ use of aseptic techniques
- ▶ carrying the following personal protective equipment (PPE) on person at all times by the paramedic.
  - ▶ disposable gloves
  - ▶ eye protection
  - ▶ one vented P2 mask for the paramedic and one non vented mask for the patient.

## Clinical Work Instructions

Clinical work instructions are used to document processes to be followed for clinical procedures. Where there is a risk of exposure to blood and/or body fluids, clinical work instructions will document infection control measures which must be implemented e.g. PPE to be worn when conducting a procedure to reduce the potential exposure to blood and/or body fluids.

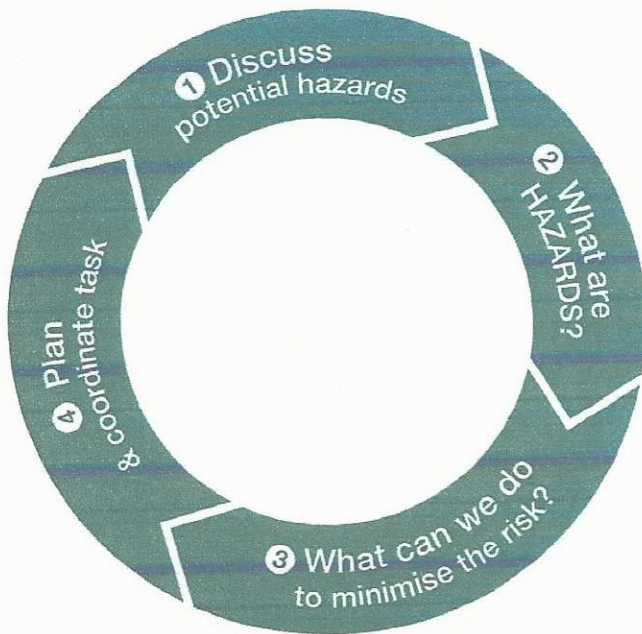
## AV Bio-Event Subplan/ Incident Action Plan

Bio-Event Subplans and Action Plan are used, to establish effective procedures to plan and mitigate potentially serious consequences for any biological hazard that may be identified as having the potential to cause either an epidemic or a pandemic. Examples of which are:

- ▶ infectious disease
- ▶ bio-terrorism
- ▶ water supply contamination
- ▶ Influenza.

In the event of a pandemic, the Emergency Management Unit will liaise directly with the AV Infection Control Committee to ensure that there is a consistent approach to managing AV's response to the pandemic. If required, the Emergency Management Unit may develop an Incident Action Plan for a biological hazard, this plan supersedes the Infection Control Manual and documents the required infection control processes to be implemented.

Figure 4 Dynamic Risk Assessment Process – Infection Control Example



1. Receive job – Discuss potential hazards

- ▶ Predict/anticipate the PPE required to prevent exposure to infectious agent
- ▶ Contact communication centre for specific information

2. What are the hazards?

- ▶ Type of exposure anticipated splash/spray versus touch, exposure to blood or body fluids
- ▶ What is the mode of transmission; contact, droplet, airborne transmission

3. How can we minimise the risk?

- ▶ Hand hygiene
- ▶ Gloves
- ▶ Eye protection
- ▶ Paramedic to wear Vented P2 mask
- ▶ Non vented mask on patient
- ▶ Goggles/face shield

4. Plan and coordinate task

- ▶ Continually conduct Dynamic Risk Assessment

## Transmission-based Precautions

Transmission-based precautions are additional work practices for specific situations where standard precautions are not sufficient. These precautions are tailored to the specific routes for transmission (contact, droplet or airborne transmission) of an infection and are to be implemented in addition to standard precautions for patients known or suspected to be infected or colonised with infectious agents that are epidemiologically important or easily spread, and may not be contained with standard precautions alone, for example Multi-Resistant Organisms (MRO's). Table 2 provides information on the standard and transmission based precautions.

A Dynamic Risk Assessment should be completed to identify all potential hazards and to determine the additional transmission-based precautions to prevent exposure to infectious agents. Transmission-based precautions may include one or any combination of the following:

- ▶ Continued implementation of standard precautions and wearing the appropriate PPE carried on person (i.e. gloves, eye protection, vented P2 mask) to prevent exposure to infectious agents specific to mode of transmission i.e. contact, droplet, airborne or vector-borne.
- ▶ Patient to wear non-vented mask when there is a risk of droplet transmission.
- ▶ Showering post-exposure.
- ▶ Donning and doffing supervision by partner.
- ▶ Avoid being exposed to insect borne disease e.g. vector-based transmission by wearing long sleeves, apply insect repellent.
- ▶ When contact of clothing/ exposed skin with blood/body fluids, secretions, or excretions is anticipated.
- ▶ When there is a potential for contact with any of a variety of liquids e.g. vomit, diarrhoea.
- ▶ During enhanced cleaning and disinfection of equipment/vehicles.

### Use enhanced eye protection – goggles or face shield

Enhanced eye protection such as goggles or face shield over glasses must be worn when there is a risk of exposure to a known pathogen which can be transmitted by direct contact transmission and/or blood born transmission. e.g. SARS, Meningococcal, Measles, Ebola, Anthrax etc. and/or conducting invasive procedures.

- ▶ Transporting separately from other patients if required.
- ▶ Enhanced cleaning and disinfection of equipment/vehicles e.g. vehicle out of service for professional clean.

### Appropriate use of the following additional PPE:

#### Protective overalls (Tyvek)/gown

Use Tyvek overalls and overshoes when caring for a patient where there is a risk of exposure to a known pathogen which can be transmitted by direct contact, droplet transmission and/or blood borne transmission e.g. VRE, Gastroenteritis, SARS, Meningococcal, Measles, Ebola and Anthrax. For example:

Table 2 Standard/Transmission-based Precautions

	Standard Precautions Carried on person and worn as per Dynamic Risk Assessment			Transmission based Precautions Worn as per Dynamic Risk Assessment	
	Disposable gloves	Eye protection	One P2 vented masks and one non-vented mask	Goggles/ face shield	Gown or Tyvek overalls/ over boots
▶ all patient care	✓	✓	✓		
▶ standard vehicle cleaning	✓	✓	✓		
▶ management of blood & body fluid spills, infectious waste.	✓	✓	✓		
▶ airborne transmission suspected or diagnosed and/or	✓	✓	✓	✓	✓
▶ contact transmission suspected or diagnosed and/or	✓	✓	✓	✓	✓
▶ droplet transmission suspected or diagnosed and/or	✓	✓	✓	✓	✓
<b>Note donning &amp; doffing supervision by partner</b>	✓	✓	✓	✓	✓
<b>Shower post exposure to vomit, diarrhoea/large quantities of blood</b>					

# Instructions for Standard Precautions

The following section provides instructions on the following standard precautions:

- ▶ good hygiene practices; particularly hand washing
- ▶ respiratory hygiene and cough etiquette
- ▶ safe handling and disposal of sharps and other contaminated infectious or clinical waste
- ▶ use of aseptic techniques
- ▶ carrying the following personal protective equipment (PPE) on person at all times by the paramedic and worn as per Dynamic Risk Assessment
  - ▶ disposable gloves
  - ▶ eye protection
  - ▶ one vented P2 mask for the paramedic and one non vented mask for the patient.

## Hand Hygiene

The term hand hygiene includes hand washing with running water with either plain or antimicrobial liquid soap, the use of water-free skin cleansers and sanitiser hand rubs (SHR).

### Routine Hand Hygiene

- ▶ Routine hand hygiene is the process of removing dirt, organic material and transient flora from the hands using soap, water and friction for 10–15 seconds. See Figure 5.
- ▶ An alternative to water is alcohol based hand rub or hand sanitisers. These are not as effective if organic matter and dirt are present, therefore if hands are visibly soiled or contaminated with blood or body substances then soap and water should be used first, followed by an alcohol based hand rub or hand sanitiser.

---

#### Note

Gloves are not a substitute for hand hygiene.

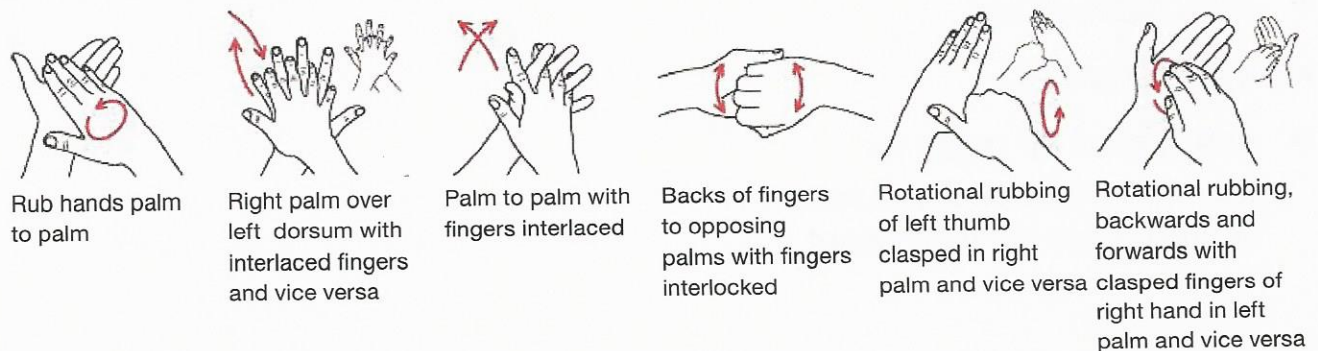
Ensure strict hand hygiene following any contact with body substances or physical contact with patients as follows:

- ▶ when starting and finishing work
- ▶ prior to and following contact with patients
- ▶ following contact with blood, body fluids, secretions and excretions
- ▶ following contact with mucous membranes, non-intact skin and skin rashes
- ▶ emptying drainage bags/ suction containers
- ▶ fitting or touching a mask or other PPE
- ▶ following removal of PPE e.g. removing gloves, protective glasses and masks
- ▶ prior to food preparation or eating
- ▶ before using computer, keyboard
- ▶ whenever hands feel dirty or visibly soiled
- ▶ if skin is contaminated with blood/body fluids
- ▶ after contact with other contaminants e.g. chemicals.

Table 3 Hand Washing Techniques

Type	Technique (how)	Duration	Drying	When (example)
<b>Routine</b>	Wet hands. Apply liquid hand cleanser. Lather vigorously ensuring all aspects of the hands and fingers are cleaned. Rinse well under running water. Do not turn taps off with clean hands. If hands free taps are not available, use paper towels to turn them off.	10–15 seconds	Pat dry using a single use paper towel	Before or after handling or preparing food, eating, drinking, smoking, using the toilet, significant patient contact, using gloves, after coming into contact with items contaminated with blood or body substances.
<b>Before or After Patient Contact</b>	An approved sanitiser based rub or sanitiser solution must be thoroughly rubbed into all aspects of the hands and fingers.	As long as it takes the product to dry, approx. 10 seconds	Allow product to dry in ambient air. Do not rub off with any form of towel.	In circumstances where access to hand washing facilities is restricted or absent, or when time critical incidents preclude thorough hand washing.
<b>Aseptic</b>	Wash hands with anti-microbial hand cleansing agents where available. If not available use sanitiser wipes followed by hand sanitiser.	10–15 seconds	Pat dry using a single use paper towel or allow product to dry in ambient air	When hands are soiled with blood or body fluids.

Figure 5 Recommended Hand Wash Procedure





## Hand Washing Agents

### Soap

Plain soap, used in conjunction with water and friction, is effective in removing most microorganisms and is suitable for routine hand washing when hands are visibly dirty or contaminated with proteinaceous material, blood or other body substances. Liquid hand soap and water should be used for routine hand washing between patients.

### Antimicrobial Soaps

Antimicrobial soaps remove microorganisms in the same manner as plain soap, but also inactivate micro-organisms that remain following hand washing. These soaps are recommended prior to clinical and surgical procedures where it is important to reduce bacterial counts to as low as possible. In an ambulance environment these soaps are recommended to be used after exposure to blood or body fluids and are available at hospitals.

## Sanitiser-based Hand Rubs

Suitable sanitiser hand rubs that are used for routine hand hygiene or procedural hand hygiene. Sanitiser hand rub is not a good cleaning agent and should only be used if hands are not visibly soiled. If the hands are visibly soiled and hand washing amenities are not readily available physically clean the hands with disposable moist towelettes before applying sanitiser hand rub.

Hand sanitising rubs should be used as an infield hand cleaning agent between contact with different patients or different procedures on the same patient.

### Finger Nails and Nail Lacquer

Subungual areas of the hand harbour high concentrations of bacteria, therefore nails are to be kept short and clean. Nails should not extend beyond the tips of fingers. Artificial nails must not be worn. Finger nail polish/varnish must not be worn.

### Jewellery

All jewellery must be removed from hands and wrists prior to hand washing.

## Respiratory Hygiene/ Cough Etiquette

Always observe precautions, against droplet transmission in addition to standard precautions, when examining and caring for patients with signs and symptoms of a respiratory infection (if suspicious for an infectious agent spread by airborne route, refer to airborne precautions)

All people with signs or symptoms of a respiratory infection, regardless of presumed cause should be instructed to:

- ▶ cover the mouth and nose with a tissue when coughing or sneezing
- ▶ dispose of the used tissue in the nearest waste receptacle
- ▶ perform hand hygiene after contact with respiratory secretions and contaminated objects/materials
- ▶ patients with respiratory symptoms to don a non-vented mask.

## Handling and Disposal of Sharps

Sharps represent a major risk for incidents involving potential exposure to blood borne diseases. Sharps (includes needles – all types, syringes, razors and broken glass ampoules). Sharps must be handled with care at all times.

### Handling of Sharps

Standard precautions such as good hygiene practices, particularly hand washing and the safe handling and disposal of sharps and other contaminated or clinical (infectious) waste should be applied when handling and disposing of sharps.

- ▶ Sharps must not be passed between employees or other persons.
- ▶ Where possible, alternatives to the use of sharps should be considered, including the use of blunt needles for drawing up sterile solutions from ampoules.
- ▶ To prevent injury, needles should not be recapped, bent or disconnected from syringes but disposed intact into sharps containers provided.
- ▶ Ensure sharps containers are as close to the point of care as possible to encourage immediate sharps disposal.

### Disposal of Sharps

- ▶ All persons generating a sharp shall be responsible for its safe disposal immediately following its use.
- ▶ Dispose of sharps into an AV approved sharps container. In the case of needles, do not recap or disconnect from syringe.
- ▶ Disposable sharps containers must not be overfilled. These must be sealed at no more than  $\frac{3}{4}$  full or designated fill line.
- ▶ Portable sealed  $\frac{3}{4}$  full sharps containers are to be disposed of into the branch yellow infectious waste bin.
- ▶ No sharps, attached syringes or attached contaminated products are to be left behind at a scene unless they can be discarded as above.
- ▶ No fluid must be put into sharps bin.

## Aseptic Techniques

Aseptic technique protects patients during invasive clinical procedures by employing infection control measures that minimise, as far as practicably possible, the presence of pathogenic microorganisms.

An aseptic technique is a method employed to help prevent contamination of wounds and other susceptible sites by organisms that could cause infection, by ensuring that only uncontaminated equipment (components) and fluids come into contact with sterile/susceptible body sites during certain clinical procedures.

AV's Pre-hospital Aseptic Techniques:

1. if patient's condition permits, remove existing gloves, use hand sanitiser
2. select equipment required for procedure
3. use hand sanitiser and don fresh gloves
4. thoroughly clean the site to cover approximately a 5cm x 5cm area with an alcohol chlorhexidine swab for 10 seconds using side-to-side or up and down motion with light friction; repeat for 10 seconds with a second swab. Allow the antiseptic to air dry completely prior to performing the procedure; do not wipe or blot. Do not touch or re-palpate site
5. if patient's condition permits, remove existing gloves, use hand sanitiser
6. don fresh gloves.

## Standard Precaution – Personal Protective Equipment

A Dynamic Risk Assessment must be continually conducted to determine the appropriate PPE to be worn, prior to entering the scene and treating patient, to reduce the risk of exposure to blood and bodily fluids.

### Disposable Gloves

Disposable gloves MUST be worn as a single use item for:

- ▶ each invasive procedure
- ▶ contact with sterile sites and non-intact skin or mucous membranes
- ▶ any activity that has been assessed as carrying a risk of exposure to blood, body substances, secretions and excretions
- ▶ when cleaning contaminated equipment/vehicle.

Disposable Gloves should be changed/discarded when:

- ▶ changing tasks and procedures on the same patient to avoid cross contamination
- ▶ they become torn or punctured
- ▶ before answering telephone or radio, recording patient notes or driving.

DO NOT write notes on your gloves and keep them.

Hand hygiene must be performed each time a pair of gloves is removed, prior to the next pair of gloves being applied.

### Protective Eyewear

Protective eyewear MUST be worn during procedures that could potentially generate splashes or sprays of blood, body substances, secretions or excretions into the face and eyes.

This includes during:

- ▶ endotracheal intubation
- ▶ placing LMA
- ▶ any patient contact where there is a risk of spraying or splashing blood or body fluids
- ▶ insertion of intravenous lines or drainage tubes, emptying drainage bags/catheters
- ▶ caring for any patient with a cough
- ▶ treating an agitated or drug/alcohol effected patient who may spit sputum/blood
- ▶ any airway examination, insertion of any airway device or airway suctioning
- ▶ emptying drainage bags/ suction containers
- ▶ impending birth and delivery
- ▶ invasive procedures
- ▶ cleaning of equipment.

Reusable protective eyewear must be cleaned in accordance with the manufacturer's instruction following use and then stored clean and dry.

#### Note

General prescription glasses do not afford complete protection and therefore protective eyewear must be worn in addition to prescription glasses or prescription safety eyewear must be worn.

### P2 Vented Respirator Mask

The P2 vented respirator mask must be worn by the paramedic during procedures where there are splashes or sprays of blood, body substances, secretions or excretions into the face. This includes during:

- ▶ caring for patients with suspected or known airborne spread disease
- ▶ administering medications via nebuliser
- ▶ invasive procedures
- ▶ insertion of any airway device/suctioning
- ▶ treating an agitated or drug/alcohol effected patient who may spit sputum/blood
- ▶ caring for patients with a cough or undiagnosed fever. Droplets may be transmitted during human expiratory activities such as talking, laughing, coughing and sneezing (patient to wear non-vented mask).



# Donning & Doffing Standard Precautions

Standard precautions should be donned in the following order. A Dynamic Risk Assessment should be conducted to identify potential hazards and what PPE is required to be worn to prevent exposure to blood and bodily fluids.

## Note

You may not be required to wear all of the standard precaution PPE when treating a patient, however the sequence for donning PPE remains the same.

## Donning Standard Precautions

1. Perform hand hygiene.
2. Put on P2 vented respirator mask (refer to Donning procedure described in previous section).
3. Put on eye protection (refer to Donning procedure described in previous section).
4. Fit disposable gloves

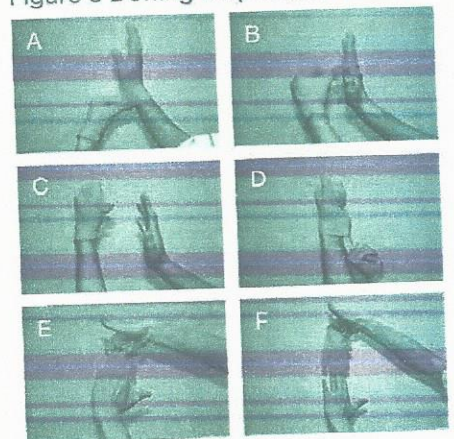
## Doffing Standard Precautions

1. Remove disposable gloves
2. Perform hand hygiene with hand sanitiser.
3. Remove safety glasses by grasping the strap at the back/or handles.
4. Remove P2 vented mask (use mask retaining straps)
5. Perform hand hygiene with hand sanitiser.

## Doffing Disposable Gloves (see Figure 6)

- A Pinch first glove at wrist.
- B Peel first glove away from hand, turning glove inside-out.
- C Hold first glove in opposite gloved hand.
- D Slide ungloved finger under the wrist of the remaining glove.
- E Peel off from inside, creating a bag for both gloves.
- F Remove and discard.
- G Perform hand hygiene with hand sanitiser.

Figure 6 Doffing Disposable Gloves



## Doffing Protective Eyewear

Perform these steps slowly and carefully and DO NOT touch the front/contaminated part of the protective eyewear.

1. Gloves removed.
2. Perform hand hygiene with hand sanitisers.
3. For glasses – grasp the handle and pull away from your face. For goggles/face shield grasp the strap and pull over head.
4. Sanitise eye protection with available sanitiser wipes.
5. Perform hand hygiene with hand sanitisers.

## Donning P2 Vented Respirator

1. Perform hand hygiene with hand sanitisers.
2. Lift the bottom elastic over your head first.
3. Then lift off the top elastic.
4. Conduct Test to ensure Mask is positioned correctly:
  - A Negative Pressure – inhale sharply; the mask should collapse on the face. If air can pass around the edges of the device the mask will not collapse, indicating that the seal is inadequate and the mask needs to be repositioned.
  - B Positive Pressure (for mask with no exhalation valve) – wearer exhales sharply; no air should escape from the edges of the mask. If air can pass around the edges of the device then the seal is inadequate and the mask needs to be repositioned.

Protective respirator masks must:

- ▶ not be touched by hand while being worn
- ▶ cover mouth and nose while worn
- ▶ be removed/replaced as soon as practicable after they become moist or visibly soiled
- ▶ be removed by touching the strings and loops only
- ▶ not be worn loosely around the neck, but be removed and discarded.

## Doffing P2 Vented Respirator

1. Remove gloves and dispose.
2. Lift the bottom elastic over your head first.
3. Then lift off the top elastic.
4. Discard mask in the biohazard bag.
5. Perform hand hygiene with hand sanitisers.

# Donning & Doffing Transmission-based Precautions

## Donning Transmission-based Precautions

Application and removal should be performed in a sequence which eliminates or reduces the possibility of skin or clothing contamination. A Dynamic Risk Assessment should be conducted to identify all potential hazards and to determine the additional transmission-based precautions to prevent exposure to infectious agents.

### Note

You may not be required to wear all of the transmission-based PPE precautions when treating a patient, however the sequence for donning PPE remains the same.

The following procedure should be followed when applying PPE:

1. Remove personal items (jewellery, watch, mobile phone).
2. Visually inspect PPE before donning.
3. Perform hand hygiene with hand sanitisers.
4. Put on over-boots (cover shoes).
5. Put on Tyvek overalls/gown.
6. Put on P2 Vented Respirator (refer to donning procedure described in previous section).
7. Put on goggles or face shield (refer to donning procedure described in previous section).
8. Put on Tyvek hood.
9. Don gloves.

## Doffing Transmission-based Precautions

Application and removal should be performed in a sequence which eliminates or reduces the possibility of skin or clothing contamination. When doffing transmission-based PPE precautions after caring for a patient where there is a known pathogen which can be transmitted by direct contact or droplet transmission, your partner should observe/supervise you removing your PPE.

### Note

Not all patients may require the use of full PPE, however the sequence for doffing PPE remains the same.

The following procedure should be followed when doffing transmission-based precautions. Care should be taken to minimise risk of contamination.

1. Your partner should observe/supervise you removing your PPE.
2. Inspect PPE for visible damage before starting to remove e.g. contamination from cuts or tears.
3. Carefully fold back hood from head.
4. Unzip suit.
5. Remove each arm from suit whilst turning suit arms inside out.
6. Push suit down to ankles whilst turning suit inside out.
7. Remove suit and over-boots from legs.
8. Step out of suit.

9. Remove disposable gloves.
10. Perform hand hygiene with hand sanitisers.
11. Remove safety goggles by grasping the strap at the back/or handles.
12. Remove P2 vented mask (use mask retaining straps).
13. Wash and disinfect hands and face with appropriate hand sanitiser.
14. Change into clean uniform if required after exposure to high-risk patient, (refer to section Management of Soiled or Heavily Contaminated Linen or Uniform).
15. Don NEW gloves.
16. Don NEW P2 vented mask.
17. Don NEW safety glasses.
18. Carefully gather used PPE.
19. Place in yellow biohazard bag.
20. Remove gloves, P2 vented mask and glasses, place in biohazard bag.
21. Dispose of biohazard bag.
22. Wash and disinfect hands with available hand sanitiser.
23. Showers are recommended after exposure to large quantities of blood, body fluids, or excreta. Showers are also suggested for anyone who spends extended periods with the patient.

# Vehicle & Portable Equipment Cleaning

Standard precautions must be applied; particularly hand washing. A Dynamic Risk Assessment must be conducted:

- ▶ identify the potential hazards i.e. potential exposure to blood/body fluids, mode of transmission and appropriate controls to prevent exposure to infectious pathogens when cleaning
- ▶ what cleaning equipment do you need e.g. sanitiser, wipes, mops etc.
- ▶ the appropriate decontamination of patient care equipment to reduce the risk of transmission i.e. sanitise vehicle and equipment using approved sanitiser or does the vehicle need to be taken out of service and fully decontaminated.

## Portable Equipment Cleaning

Portable equipment items that are contaminated with blood/body fluid such as soft bags/straps/harnesses are to be 'bagged & tagged', placed in a yellow biohazard bag and the equipment fault book completed including information regarding the contaminants nature. The equipment should then be placed outside the appropriate equipment locker as directed by the Duty Manager and replacement items collected from the equipment locker.

Any non-disposable critical items must be processed and sterilised by a hospital based sterile processing facility.

---

### Note

Items that have a potential for contamination during routine use should be cleaned and/or disinfected between each patient. Some examples of this type of equipment are stretchers, monitor, ECG leads, stethoscopes, sphygmomanometer and pulse oximeter probes.



Table 4 Portable Equipment Cleaning

Portable equipment	Activities	Cleaning agent	Quality
Stretcher/wheelchair	Remove from vehicle.  Spray all surfaces and wipe dry using AV supplied cleaning rags.  Stretcher/wheelchair to be wiped/disinfected between patient usages.	Available sanitiser	All surfaces are visibly clean
Monitor, ECG leads, stethoscopes, sphygmomanometer and pulse oximeter probes etc.	Equipment should be wiped/disinfected between patient usages.	Available sanitiser	All surfaces are visibly clean
VACIS Tablet	<ul style="list-style-type: none"> <li>▶ Wiped/disinfected between cases.</li> <li>▶ Ensure all ports are firmly closed – all rubber caps are pushed home tightly over their respective port or opening such that no cleaning solution or water can enter.</li> <li>▶ Lightly spray and wipe the selected cleaning solution over the unit, ensuring a light mist spray is used.</li> <li>▶ Dry the unit immediately after washing.</li> <li>▶ Do not use a direct spray jet.</li> <li>▶ If the ports or rubber coverings require cleaning – it is recommended that they are wiped with a damp cloth.</li> <li>▶ Do not immerse the VACIS Tablet in water.</li> </ul>	Available sanitiser	All surfaces are visibly clean

Table 5 Vehicle Cleaning

As a general guide, cleaning of interiors of patient carrying vehicles should be based on working from vehicle front (including driver/passenger area) to back and top to bottom.

It is of particular importance that the following items are wiped/disinfected between cases: portable radio, steering wheel, MDT (metro only), radio handset and door handles inside and out.

Vehicle	Activities	Cleaning agent	Quality
Lockers/storage compartments	Remove any equipment.  Spray all surfaces and wipe dry using AV supplied cleaning rags.	Available sanitiser	All surfaces are visibly clean
Interior surfaces	Spray all surfaces and wipe dry using AV supplied cleaning rags.  Interior surfaces which have come into contact with patients are to be wiped down/disinfected between patient usages.	Available sanitiser	All surfaces are visibly clean
Floors (including driver/passenger area)	Mop (Yellow).	Available sanitiser	All surfaces are visibly clean

# Management of Blood and Body Fluid Spills

Standard precautions must be applied; particularly hand washing. A Dynamic Risk Assessment to identify the potential infection risks prior to cleaning blood and body substance spills must be conducted to determine the standard/transmission-based precautions to be worn when cleaning surfaces and facilities.

Blood and body substance spills must be managed according to the following principles:

- ▶ a well-equipped and maintained spills kit must be accessible at all times
- ▶ spills should be cleaned prior to the area being disinfected (adding disinfectant/detergent to the spill increases the size and should be avoided)
- ▶ aerosolisation of spill material should be avoided (avoid adding water to a spill that may cause splashing)
- ▶ cover large spill with absorbing granules and scoop up debris
- ▶ treat debris as clinical waste
- ▶ clean spill site with warm water and detergent.

## Minor Spills

- ▶ wipe up the spill
- ▶ wash down with warm, soapy water (where available and practical)
- ▶ spray or pour available sanitiser over minor blood or body fluid spill and use a clean rag found in Spills Kit
- ▶ wipe up spill, the respray and allow evaporation.

## Major Spills

Use only AV Major Spills Kit

- ▶ use plastic/ cardboard disposable scoop tray to pick up solidified waste and place in and seal in a yellow biohazard waste bag
- ▶ wash area with warm, soapy water (where available and practical)
- ▶ spray over affected area with available sanitiser spray, wipe dry with disposable towel provided in the Major Spills Kit and allow evaporating
- ▶ dispose of yellow biohazard waste bag into large yellow waste bin.

## Blood and/or Body Fluid Exposure Injury

The type of exposure to blood or body fluid incidents include:

- ▶ needle pricks or cuts with instruments contaminated with blood or body secretions
- ▶ contamination of fresh cuts or abrasions with patient's blood or body fluids
- ▶ contamination of the eyes or other mucous surfaces with patient's blood or body fluids
- ▶ bites from patient.

All instances of blood or body fluid exposure injuries must be treated and reported as soon as possible and as follows:

- ▶ administer first aid
  - ▶ wash the affected surface well with soap and water or if in field hand sanitiser
  - ▶ if eye or mucous surfaces contamination, rinse well with water or normal saline
- ▶ notify the Duty Manager (DM) or Department Manager as soon as possible
- ▶ the DM will contact AV's Medical Service Provider who will contact the employee and recommend further treatment as required.

*For further information Post Hazardous Exposure Health Surveillance Procedure*

# Management of Contaminated and General Waste

Standard precautions must be applied; particularly hand washing. A Dynamic Risk Assessment to identify the potential infection risks prior to handling infectious waste must be conducted to determine the standard/transmission-based precautions to be applied.

## Disposal Process

All contaminated waste must be disposed/discarded via either a sealed yellow biohazard waste bag or the yellow infectious waste bin.

All clinical and related wastes contaminated by blood and/or body fluids are to be managed and disposed of as follows:

- ▶ blood and body fluids may be disposed of via the sewerage system and should be double flushed
- ▶ waste bags should not be filled over  $\frac{2}{3}$  full
- ▶ other clinical waste, i.e. any waste capable of potentially causing cross infection must be:
  - ▶ disposed into yellow biohazard waste bags and sealed
  - ▶ disposed of in yellow waste bin
  - ▶ yellow waste bins storing clinical and related infectious wastes must remain closed when not in use.

# Management of Soiled or Heavily Contaminated Linen or Uniform

Clean linen must be used for each patient. Care should be taken to ensure that there are no sharps or other objects inadvertently discarded in linen bags.

Standard precautions must be applied; particularly hand washing before handling linen.

A Dynamic Risk Assessment to identify the potential infection risks prior to handling soiled or heavily contaminate linen or uniform should be conducted to determine the standard/transmission-based precautions to be worn.

All AV linen or uniform which has been heavily contaminated items with blood and/or body fluids is to be managed as follows:

- ▶ always conduct good hygiene practices; particularly hand washing
- ▶ conduct a Dynamic Risk Assessment to determine standard/transmission PPE precautions to be worn
- ▶ place soiled/contaminated linen or uniform items into a yellow biohazard bag and seal
  - ▶ if linen, place sealed biohazard bag into the soiled linen bag
  - ▶ if uniform, place sealed biohazard bag into the soiled dry cleaning bag. (Each yellow biohazard bag must be clearly labelled with employee's service number and surname)
- ▶ the contracted laundry service/ dry cleaning service will process the garments separately from other items in accordance with AS 4146-2000
- ▶ uniforms will be returned to the branch by the dry cleaning service following processing.

# Disposable Items

## Storage and Handling of Sterile Stock

The integrity of sterile items must be maintained until the items are selected for use. All sterile items must be stored and handled in a manner that maintains the integrity of the item and prevents contamination.

## Single-use Medical Devices

Medical equipment/consumables, including syringes, needles and drug ampoules/vials labelled by the manufacturers as single use, are to be used once only then discarded.

## Multi-use Ampoules/Vials

Ampoules/vials are a source of cross-infection to patients, ampoules/vials are to be used for one patient only, and then discarded.

# Health of Employees

To prevent or reduce the risk of cross infection and thereby ensure and maintain the health and wellbeing of all employees, the following guidelines must be adhered to.

## Skin Infection

Employees with skin infections should seek medical advice regarding their fitness for duty and contact with patients.

## Diarrhoea and/or Vomiting

Employees with diarrhoea and/or vomiting are requested to absent themselves from work for 48 hours after their last episode of diarrhoea and vomiting and be without signs and symptoms prior to returning to work. Following Salmonella gastroenteritis employees may continue to harbour pathogens but be symptom free. Furthermore Norwalk virus, a community acquired pathogen which presents with rapid onset of diarrhoea and vomiting is readily transmitted from employee to patients and vice versa in healthcare settings. Routine hand washing (as recommended in the application of standard precautions) may not be sufficient as environmental contamination and aerosolisation have been implicated in disease transmission.

## Herpes Virus Family

The Herpes Virus Family possesses the ability to remain latent in the nerve tissue (VZV) or lymphoid tissue (CMV and EBV) of the host and to reactivate at a later stage. The most important human pathogens are:

- ▶ Herpes simplex virus type 1 & 2 (HSV 1 & 2)
- ▶ Cytomegalovirus (CMV).

Other viral pathogens include:

- ▶ Varicella-Zoster virus (VZV)
- ▶ Epstein-Barr virus (EBV).

Preventative measures include:

- ▶ avoid contaminating the skin of eczematous patients with infectious material
- ▶ wear gloves when in direct contact with potentially infectious lesions or fluid
- ▶ standard precautions must be applied when assessing/treating
- ▶ employees who have either uncovered or active lesions or herpes simplex should not work with newborn infants, burns patients, or immune compromised hosts until all lesions are dried and crusted.

---

### Note

Paramedics with active HSV infection should take extreme care to ensure that there is no possibility that patients could have contact with his or her lesion fluid. The risk posed to patients by paramedics with uncovered orofacial lesions is believed to be low, but it has not yet been quantified. However, the risk can be reduced by covering the lesion to prevent hand contact, careful hand washing before all patient contact, not kissing or nuzzling newborn infants or children with dermatitis, and restricting paramedics with active lesions from providing care to high risk patients.

## Employees Positive for Blood Borne Viruses

If an employee is found to be positive for HIV, Hepatitis C or Hepatitis B confidentiality must be maintained. Fitness for duty policy will determine ongoing employee management.

## Immuno-suppressed Employees

Substantial depression of immune function predisposes a person to infection. Paramedics who are or may be immuno-suppressed to this extent would normally be unable to work. Employees who are immune-suppressed must have their fitness to perform operational duties assessed by an AV medical practitioner.

Examples of conditions include:

- ▶ Neutropenia which is often associated with cancer chemotherapy
- ▶ Disseminated malignancy
- ▶ Medications that produce immunodeficiency.

## Management of Exposure to Infectious Diseases and Pregnancy

Those contemplating pregnancy or who are pregnant or who may have a pregnant contact (eg wife/partner) should ensure that:

- ▶ Their treating medical practitioner is aware of their work environment and activities that they undertake on a daily basis. They should seek advice on diseases relevant to pregnancy, their immunity status for these diseases, as well as standard precautions for infection control
- ▶ Apply standard precautions and continually conduct dynamic risk assessments to avoid exposure to infectious circumstances that may present a risk to themselves or the pregnancy

- ▶ Apply specific transmission based precautions in accordance with dynamic risk assessments to avoid exposure to infectious circumstances that may present a risk to themselves or the pregnancy.

The following information is provided as a guide, however it is strongly recommended that medical advice is sought with regard to diseases relevant to pregnancy in the work environment.

## Chickenpox (Varicella)

Chickenpox (Varicella) can, on rare occasions, cause very serious damage to an unborn baby if acquired during pregnancy. Also, maternal chickenpox infection around the time of childbirth can cause a serious chickenpox infection in the newborn.

Most adults have immunity to chickenpox from previous infection but 5–10% of adults have never had chickenpox. If a person is unsure about whether she has previously had chickenpox, she can request a blood test from her medical practitioner to determine immunity.

Non immune employees should consider their immunisation status with respect to Chicken Pox. It is recommended that pregnant employees, students or those contemplating pregnancy seek medical advice about their individual risk of exposure to infectious diseases during pregnancy.

## Rubella (German Measles)

Rubella (German measles) is transmitted by respiratory secretions and can produce serious birth defects in children born to women infected during pregnancy.

The following points apply to rubella:

- ▶ non-immune female employees and students of child-bearing age are at significant risk of infection with rubella

- ▶ female employees and students of child-bearing age should be advised and encouraged to be vaccinated against rubella
- ▶ persons born during or since 1966 may have received only one dose of the measles-mumps-rubella (MMR) vaccine and require a second dose of vaccine as it wanes over time.

## Cytomegalovirus (CMV)

Cytomegalovirus (CMV) can have serious implications for the health of the unborn child, especially if a mother becomes infected for the first time while pregnant. For specific information about the cause, symptoms, prevention and treatment of CMV seek medical advice about their individual risk of exposure to infectious diseases during pregnancy.

CMV is transmitted by contact with urine and saliva. It often presents as a 'silent' disease with no signs of illness. Employees who have contact with urine and saliva such as pre-school personnel and teachers of students with special needs may be at increased risk.

To date, there is no vaccine for CMV. Regular hand washing and minimising contact with urine and saliva (e.g. by wearing disposable gloves) are the most important ways to prevent infection.

Blood tests can indicate whether an individual has previously been infected with CMV. Reactivation of previous infection and re-infection can occur during pregnancy; however the risk to the unborn baby is usually lower.



## Parvovirus B19

Parvovirus B19 (also known as slapped cheek syndrome, fifth disease and erythema infectiosum) is a common illness of primary school-aged children, which is transmitted by contact with respiratory secretions. It is recommended that those who are pregnant or contemplating pregnancy determine their immunity to Parvovirus. This can occur via a simple blood test. For those who are not immune, infection during pregnancy has been associated with an increased risk of miscarriage and stillbirth.

A person is most infectious before the onset of symptoms (i.e. rash). Infected persons are therefore unlikely to transmit the disease once the rash develops and therefore do not usually require exclusion.

As Parvovirus is not vaccine-preventable, standard precautions must be in place for the prevention of infection. Standard precautions include regular hand washing and avoiding contact with respiratory secretions.

If there is an outbreak of Parvovirus B19 at a school, pregnant employees should be requested to seek medical advice about whether they should have contact with children during the outbreak based on their immunity status.

# Pathogens

The following links to the Blue Book can be accessed for information for specific pathogens. The Blue Book: Guidelines for the control of infectious diseases has been published by the Communicable Disease Prevention and Control Unit Victorian Department of Health, to assist public health practitioners in the prevention and control of infectious diseases.

---

### Note

In relation to cleaning techniques AV cleaning processes in the Infection Control Manual must be followed.

*The Blue Book: Guidelines for the control of infectious diseases*

# Appendix

## Dynamic Risk Assessment Scenarios

Does the activity involve?	What is the potential source of infectious agent?	How is it transmitted?	What can I do to minimise the risk?
<p><b>Scenario 1</b> – Direct physical contact with patient infected with multi resistant organism – VRE</p> <p>You are dispatched to nursing home to an 85 year old female patient requiring transport for an X-ray for #right wrist. On arrival you find the patient sitting in bed with her right wrist supported in a sling. Nursing staff advise you the patient had slipped over in the bathroom the previous night with nil LOC or head strike. Today the nursing staff found an obvious deformity to the patient’s right wrist. The patient was administered paracetamol for her 2/10 pain approximately 2 hours ago and appears comfortable.</p>	<p>Contaminated:</p> <ul style="list-style-type: none"> <li>▶ paramedic hands</li> <li>▶ medical devices</li> <li>▶ surroundings</li> <li>▶ body fluids (pitting oedema).</li> </ul>	<p>Direct and indirect contact transmission</p>	<ol style="list-style-type: none"> <li>1. Apply standard precautions</li> <li>2. Upon arrival prior to meeting the patient ask the nurse for a hand over/patient history e.g. if patient has any communicable diseases (Tuberculosis, VRE, MRSA) so appropriate transmission based precautions</li> <li>3. Complete a Dynamic Risk Assessment to identify hazards and appropriate controls to prevent exposure to infectious pathogens</li> <li>4. Apply appropriate controls: <ul style="list-style-type: none"> <li>▶ on arrival wear gloves</li> <li>▶ on arrival wear tyvek overalls/gown</li> <li>▶ on arrival wear eye protection.</li> </ul> </li> </ol>
<p><b>Scenario 2</b> – Direct physical contact with broken skin/wounds</p> <p>You are dispatched to a 6 year old male who has fallen off his bike and severely grazed his left leg. On arrival you find the patient sitting on the dirt bicycle track with a cut to his lower left leg. There is obvious grazing to the patients shin. The patient is complaining of 5/10 pain. There are no other obvious injuries and patient was wearing a helmet.</p>	<p>Contaminated:</p> <ul style="list-style-type: none"> <li>▶ paramedic hands</li> <li>▶ medical devices</li> <li>▶ blood or body substances.</li> </ul>	<p>Direct contact transmission with patient’s blood</p>	<ol style="list-style-type: none"> <li>1. Apply standard precautions</li> <li>2. Complete a Dynamic Risk Assessment to identify hazards i.e. mode of transmission and appropriate controls to prevent exposure to infectious pathogens.</li> <li>3. Apply appropriate controls: <ul style="list-style-type: none"> <li>▶ wear gloves when treating</li> <li>▶ aseptic techniques to try to clean wound before applying sterile dressing to reduce infection risks to the patient.</li> </ul> </li> </ol>
<p><b>Scenario 3</b> – Procedures relating to the respiratory system i.e. suctioning, nebuliser, mucous membrane</p> <p>You are dispatched to a 70 year old male patient complaining of shortness of breath in a hostel. On arrival you find the patient lying supine in bed complaining of a productive cough, sweating, rigours, and malaise. This has been ongoing for about 3 days with nil improvements. The patient was started on antibiotics yesterday for a chest infection.</p>	<p>Contaminated:</p> <ul style="list-style-type: none"> <li>▶ paramedic hands</li> <li>▶ medical devices</li> <li>▶ mucosal secretions, including droplets from coughs and sneezes</li> <li>▶ aerosols created by the procedures.</li> </ul>	<ul style="list-style-type: none"> <li>▶ airborne (TB, measles)</li> <li>▶ droplet (influenza)</li> <li>▶ indirect contact via contamination of equipment by droplets.</li> </ul>	<ol style="list-style-type: none"> <li>1. Apply standard precautions</li> <li>2. Complete a Dynamic Risk Assessment to identify hazards i.e. mode of transmission and appropriate controls to prevent exposure to infectious pathogens</li> <li>3. Apply appropriate controls: <ul style="list-style-type: none"> <li>▶ on arrival wear gloves</li> <li>▶ on arrival paramedic to wear P2 Vented Mask</li> <li>▶ on arrival wear protective eyewear</li> <li>▶ if patient coughing and does not require oxygen mask consider fitting non vented mask to patient.</li> </ul> </li> </ol>

Does the activity involve?	What is the potential source of infectious agent?	How is it transmitted?	What can I do to minimise the risk?
<p><b>Scenario 4 – Treating a patient with a cough and temperature</b></p> <p>You are dispatched to a 4 year old child who is short of breath with a temperature of 39, sister recently had confirmed case of influenza type A. On entering the house you hear a distressed child who has a productive cough. His mother takes you into the bedroom.</p>	<p>Contaminated:</p> <ul style="list-style-type: none"> <li>▶ mucosal secretions, including droplets from coughs and sneezes</li> <li>▶ medical devices.</li> </ul>	<ul style="list-style-type: none"> <li>▶ droplet (influenza)</li> <li>▶ indirect contact via contamination of equipment by droplets.</li> </ul>	<ol style="list-style-type: none"> <li>1. Apply standard precautions</li> <li>2. Complete a Dynamic Risk Assessment to identify hazards i.e. mode of transmission and appropriate controls to prevent exposure to infectious pathogens</li> <li>3. Apply appropriate controls: <ul style="list-style-type: none"> <li>▶ wear gloves when treating patient</li> <li>▶ wear P2 Vented Mask on arrival</li> <li>▶ wear protective eyewear on arrival</li> <li>▶ if possible use of non-vented mask on patient.</li> </ul> </li> </ol>
<p><b>Scenario 5 – Direct physical contact with large amounts of body fluids</b></p> <p>You are dispatched to a 35 year old female patient in labour (delivery imminent). The caller has stated that the contractions are approximately 2 minutes apart. As you enter the house an anxious husband meets you at the door and takes you through to the patient. She tells you she has an urge to push and her contractions started only 2 hours ago.</p>	<p>Contaminated:</p> <ul style="list-style-type: none"> <li>▶ blood or body fluids and faecal matter</li> </ul>	<p>Contact and transmission via direct contact with body fluids</p>	<ol style="list-style-type: none"> <li>1. Apply standard precautions</li> <li>2. Complete a Dynamic Risk Assessment to identify hazards i.e. mode of transmission and appropriate controls to prevent exposure to infectious pathogens</li> <li>3. Apply appropriate controls: <ul style="list-style-type: none"> <li>▶ wear gloves on arrival</li> <li>▶ wear P2 Vented Mask on arrival</li> <li>▶ wear protective eyewear on arrival</li> <li>▶ wear gown/tyvek overalls on arrival.</li> </ul> </li> </ol>
<p><b>Scenario 6 – You are dispatched to a 41 year old male with a psychiatric history who has been detained at the local police station post threatening to self-harm. The patient is under the influence of alcohol, antidepressants and extremely agitated and has been spitting at police.</b></p>	<p>Contaminated:</p> <ul style="list-style-type: none"> <li>▶ body fluid, droplets from sputum</li> </ul>	<ul style="list-style-type: none"> <li>▶ droplet</li> <li>▶ contact transmission via direct contact with body fluids.</li> </ul>	<ol style="list-style-type: none"> <li>1. Apply standard precautions</li> <li>2. Complete a Dynamic Risk Assessment to identify hazards i.e. mode of transmission and appropriate controls to prevent exposure to infectious pathogens</li> <li>3. Apply appropriate controls: <ul style="list-style-type: none"> <li>▶ wear gloves on arrival</li> <li>▶ wear P2 Vented Mask on arrival</li> <li>▶ wear protective eyewear on arrival</li> <li>▶ if possible apply an O2 mask or a non-vented mask to the patient.</li> </ul> </li> </ol>

**In an emergency call Triple Zero (000)**

Ambulance Membership  
1800 64 84 84

Ambulance Victoria  
PO Box 2000  
Doncaster VIC 3108  
P 03 9840 3500

©Ambulance Victoria  
December 2015

[ambulance.vic.gov.au](http://ambulance.vic.gov.au)