Government of Samoa

NATIONAL INFECTION CONTROL POLICY 2011-2016

Ministry of Health

GOVERNMENT OF SAMOA

CABINET SECRETARIAT

APIA • • • SAMOA

30 Novema 2011

Mo le Faatinoina
Minisita o le Soifua Maloloina
Pule Sili Vaega o Auaunaga Faale-Soifua Maloloina
Faatonusili Aoao o le Soifua Maloloina
Ofisa Sili o Pulega Matagaluega o Tupe

Mo le silafia (ma nisi fuafuaga talafeagai)
Palemia
Minisita o Tupe
Pule ma Suetusi Sili

Faiga Faavae mo Puipuiga o Aafiaga o Siama ma Fuafuaga Alualu Mamao o Galuega Faatino 2011-2016 (National Infection Control Policy & Strategic Plan of Action)

F.K.(11)38

I lana Fonotaga FK(11)38 o le Aso Lulu 23 Novema 2011, na talanoaina ai e le Kapeneta le Pepa PK(11)1930 ma faamaonia ai Faiga Faavae mo Puipuiga o Aafiaga o Siama ma Fuafuaga Alualu Mamao o Galuega Faatino 2011-2016.

O lea Faiga Faavae o le a faafoe ai galuega a le Vaega o Soifua Maloloina o loo gafa ma togafitiga o gasegase ae le gata i lea, o i latou e ono aafia mai ni siama e feaveai e manu ma meaola.

Ua faatonuina ai le Matagaluega ina ia feutagai ma le Matagaluega o Tupe i le tulaga o le faatupeina o le faatinoina o lenei faiga faavae mai tausaga faaletupe taitasi.

O le a faatupeina mai Tala o le Tupe a le Matagaluega i tausaga taitasi le faatinoina o nei faiga faavae e amata i le tausaga faaletupe 2011/2012.

(Vaosa Epa)
PULE SILI/FAILAUTUSI O LE KAPENETA

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Introduction

'Infection control is the prevention of spread of micro-organism from patient to patient, staff member to patient, patient to staff member and staff member to staff member (WHO 2007)' It also encompass infections carried by animals to humans.

'Infection control refers to all policies, procedures and activities, which aim to prevent or minimize the risk of transmission of infectious diseases. This refers to health care acquired infections (HAI) as well as to infections of public health concern, making it a crosscutting, multidisciplinary activity (WHO 2010).'

Infection control (IC) addresses factors related to the spread of infections within the health-care setting as well as in other work environments and places outside of the healthcare system. These factors include:

- Prevention (via hand hygiene, hand washing, cleaning, disinfection, sterilization, vaccination, surveillance etc)
- Monitoring/investigation of demonstrated or suspected spread of infection within a particular health-care setting and other work settings outside of the health sector (surveillance and outbreak investigation)
- Management of outbreaks (interruption of outbreaks).

Infections in health care settings and other places are those created by exposure to harmful micro-organisms such as bacteria, fungi, parasites, viruses and unconventional agents. Employees and the public in general are vulnerable of being infected with these harmful agents/micro-organisms, by being exposed to toxins produced by the micro-organism, or by having an allergic reaction to the micro-organism or substances it produces. Micro organisms are found virtually everywhere in the natural environment including the body. Most of these micro organisms are harmless to people however certain microorganisms can cause disease. It is not always possible to identify how infection will be spread therefore precautions to prevent the spread of infection must be followed at all times.

This policy applies to all working environments within the Country and the health sector in particular (hospitals, etc.) where it is identified that there is a risk of infection and where staff deliver personal care. This policy will ensure that systems operate to identify, assess and control the risks of infection in the workplace in managing patients and work in general within the health sector and other work environments.

Aim of the Policy

'To minimize the risk of exposure to harmful agents and micro-organisms and prevent the risk of infection, particularly those who are at increased risk of being in contact with and transmitting disease (e.g. animals and farmers/employees or employees and patients in the health care setting)'

Epidemiological Background of Communicable Disease Patterns in Samoa

Over the past two decades, the health status of most Samoans has seen a significant improvement. Life expectancy is at 72.8 years for the total population, infant mortality rate is 20.4 per 1000 live births with maternal mortality rate at 21.4 per 100,000 live births. Under five mortality is 26 per 1000 live births. Overall, 25% if children age 18-29 months are fully immunized with all basic vaccinations at any time before the survey. Only 15% of children received no vaccination (Samoa Demographic and Health Survey2009). However, there remains the spectre of early death from preventable disease or diseases which, if identified and treated early could be minimized. To illustrate this, the five leading causes of morbidity are abnormal delivery, pneumonia, perineal laceration at delivery, diarrhoea and respiratory tract infection (acute bronchitis). The five leading causes of mortality are cerebro-vascular accident (stroke), septicaemia, congestive cardiac failure, pneumonia and myocardial infarction (heart attack).

While some communicable diseases have been eradicated as a result of focused immunization campaigns (poliomyelitis, tetanus and diphtheria), other communicable diseases, especially sexually transmitted infections, tuberculosis and some skin diseases remain prevalent. Typhoid, lymphatic filariasis and dengue are endemic and will require committed efforts to deliver successful intervention outcomes. These interventions include implementing comprehensive infection control policies at the national, organizational and health sector levels.

A concerted effort to prevent acquiring disease at the health care level and other public places is critical to minimizing the incidence of communicable disease in Samoa. These infections include those spread through health care workers' contact with infectious persons and secondary infections acquired in the health care setting while being treated for other conditions.

Zoonotic infections although watered down by most health issues are also recognized in this policy document. A zoonotic agent may be a bacterium, a virus, a

fungus or other communicable disease agent and is transmissible between animals and humans through the four main routes identified in section 2.2 under Key Strategic Area 2. The need for this area to be reflected in this policy is significant given the fact that "more than 60% of the newly identified infectious agents that have affected people over the past few decades have been caused by pathogens originating from animals or animal products. Of these zoonotic infections, 70% originate from wildlife"[1].

Key Strategic Areas

This policy and its implementation will be guided by the following Key Strategic Areas. It is envisaged that the successful implementation of this policy relies on genuine partnership and close collaboration amongst all relevant partners whose work will be affected by this policy. These KSA's are designed to ensure that the work of the Health Sector involved in the provision of Infection Control are cohesive and in line with relevant legislations and mandates, as well as the essential building blocks for comprehensive health policy.

1. **KSA 1** – Infection Control Governance & Leadership
2. **KSA 2** – Infection Control Service Delivery
3. **KSA 3** - Infection Control Financing
4. **KSA 4**- Infection Control Information, Education & Awareness
5. **KSA 5**- Infection Control Medical Technology & Products
6. **KSA 6** – Infection Control Human Resources/Capacity Building

KSA 1: Infection Control Governance & Leadership

1.1. Legal Framework

This policy's legal framework is guided by the following approved legislations and documents. The Review of this policy and changes to be made if and when necessary is the sole responsibility of the Ministry of Health in particular the Strategic

[1] WWW.WHO.INT/FOODSAFETY

Development and Planning Division as stipulated by the MOH Act 2006, in close collaboration with all the necessary key stakeholders for this document.

All necessary actions that will be stated in this policy will also complement relevant documents and laws that are already in place which are directly linked in terms of practical translations to this policy document. This policy document also follows the same International, Regional, National, Sectoral and Ministerial Framework that is inclusive of the various agreements that binds the implementation of this document. The following legislations and plans provides the framework for this policy

1. Health Ordinance 1959
2. Ministry of Health Act 2006
3. National Health Service Act 2006
4. National Avian and Pandemic Plan 2008

1.2. Reviews

1.2.1 The Strategic Development and Planning Division (Policy Unit) of the Ministry of Health is responsible for coordinating and facilitating future reviews of this National Policy Document in accordance with the Ministry of Health Act 2006, Schedule 2, number 1.1 & 1.5, first bullet point. The timeframe for future reviews of this policy is five years from date of official cabinet approval and publication. Additionally, such reviews should also take into account applicable indicators as per Health Sector's Monitoring and Evaluation Operational Manual 2010.

1.2.2 Like all the other National Policies already reviewed and developed, any review that needs to be done will be based on the following criteria's;

1. Evidence and Information that a new and major problem arises that is not adequately addressed by the Policy urgently, and needs to be addressed
2. Any major changes or arrangements by government that warrants the need to change the policy
3. Agreement by the Sector to amend policies due to circumstances and changes that have occurred.
4. Non-feasibility in practical terms of some of the aspects of the policy that needs to be amended if and when necessary
5. Changes and amendments in current Legislations that govern work related to Infection Control Nationally, Regionally and Globally.

1.2.3 The Strategic Development and Planning Division (Policy Unit) of the Ministry of Health must ensure that any review of this policy document is widely consulted amongst all the necessary stakeholders whose work is directly and indirectly related to Infection Control by means of informal and formal consultations, emails or any other medium that is easily available to ensure the process is carried out.

1.2.4 All reviews and changes to be made are also subject to the approval of Cabinet as per existing procedures.

1.3 Monitoring & Evaluation

1.3.1 A monitoring and evaluation system should be established, including supervision activities and infection control measures. These should involve collaboration and sharing of indicators between various programs and the general health system.

1.3.2 Emphasis should be put on documenting and gathering additional evidence-based statistics regarding IC in Samoa (e.g. iatrogenic disease secondary to IC failure). Providing such data will further inform the Ministry of Health and other policy makers on appropriate activities for disease prevention and management.

1.4 Reporting of Infectious Incidents

1.4.1 The Health Ordinance 1959 mandates Clinicians to notify the Public Health Division of the Ministry of Health of any infectious incident that arises.

1.4.2 The Public Health Division of the Ministry of Health is responsible for the Control and Management of the Spread of any infectious incident, in close collaboration with the National Health Service and other relevant health sector partners.

1.4.3 In matters of disastrous situations, the plans and processes already in place must be activated and followed.

1.4.4 The Ministry of Health acknowledges the presence of existing reporting systems in various National Health sectors and other crosscutting sectors and this policy supports those existing reporting mechanisms.

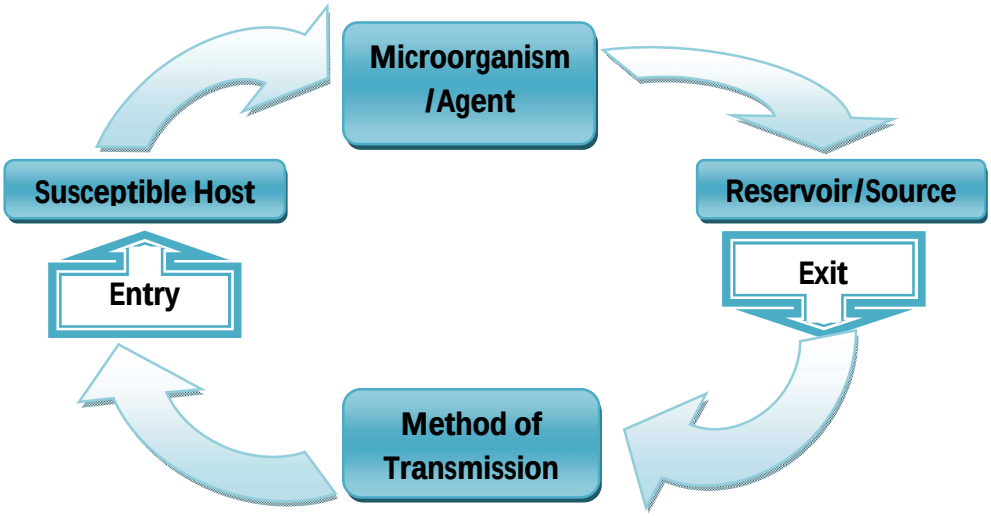
KSA 2: Infection Control Service Delivery

Identification of source, pathway, and transmission patterns of infectious disease is essential to effective management and control of these organisms, and thus the improved health and wellbeing of the population at-risk for contracting them. Furthermore, emphasis is placed on primary prevention of infection in accordance with the overall goals and vision of the Health Sector. The following strategies involve disease identification, prevention methods, and procedures to reduce the risk of disease and control transmission.

2.1 Identification of Infections

The procedures are known as Universal Precautions. By following these Universal Precautions, we as a sector can break the chain of infection and create a safe working environment for employees and those who use our services. (See Illustration 1 below; *Source: The Infection Control Manual 2005, Samoa – Ministry of Health*)

CYCLE OF INFECTION



2.2 Mode of Infection

Micro-organisms which can cause infection are generally spread by the three main routes;

(i) ***Contact Transmission***

This mode of transmission is common and more frequent and may be direct or indirect.

a. Direct Transmission – occurs when an infectious agent is transferred directly from one person to another, that is, through direct body contact.
b. Indirect Transmission - when an infectious agent is transferred to an individual from a contaminated object.

(ii) ***Airborne Transmission***

Transmission of infectious agents spread by small particles in the respiratory size small range to patients/clients and health care workers during provision of care delivery. Diseases transmitted via the airborne droplets remain in the air for long periods of times.

(iii) ***Droplet Transmission***

This form of transmission is generated through coughing, sneezing, talking or during suctioning or bronchoscopy, when the droplets are released in the air and positions on the host via the conjunctiva, nasal mucosa or mouth.

2.3. Risk Assessment

The risks from infection at work can be dealt with in the same way as any other health and safety issue, through carrying out a risk assessment. In line with this policy and others on Hazardous Risks, a risk assessment must be carried out for all work activities where employees may come into contact with infectious micro-organisms at work and/or are at increased risk to develop disease due to individual factors. Additional precautions apply on special/specific cases for instance, isolation or SARS care. Various factors need to be considered in assessing the risk.

The key points are:

- ✓ Where the organism may be present e.g. in an animal, person or environment.
- ✓ How employees may be exposed e.g. direct skin contact and/or inhalation.
- ✓ What effects it may have e.g. infection, cause allergies.
- ✓ Exposure i.e. frequency of contact taking into account the systems of work and protective measures in place.
- ✓ Who is at risk e.g. employees, visitors, service users.
- ✓ Identify employees who may be at greater risk e.g. vulnerable staff.

The aim of the assessment is to enable decisions to be made about the actions needed to prevent or control the risk. This includes the setting up of practical control measures, providing information and training, monitoring exposure and carrying out

immunization and/or health surveillance where the assessment shows that these are required.

Vulnerable Employees/Groups

If there is a known infectious risk, managers must consider if any of the staff exposed would be at increased risk due to their own health. These groups would include:

2.3.1 Immunocompromised

This would include those being treated with radiotherapy and chemotherapy for cancer, and high doses of steroids or illness that affects immunity such as Leukaemia, HIV. These individuals are more likely to develop some infections and these may be more severe. Advice must be sought from the Public Health Division and the Medical division of the National Health Service on an individual case basis and an individual risk assessment carried out.

2.4 Immunisation

The need for staff to be immunized is determined by the risk assessment process. Immunization is a supplement to reinforce other control measures. Advice on post exposure treatments is to be sought from the National Health Services Clinical Division with support from the Ministry of Health through its Quality Assurances Divisions.

2.4.1 Compulsory Immunization

Given the increased exposure and risk of infection for staff in the health fields, one control measure that would aid to decrease infection is to require all staff to obtain compulsory immunization, especially for diseases such as (Tuberculosis, Hepatitis A & B) Immunizations for each staff member would be recorded as part of their employment and such documentation would support who is to be immunized (e.g. those staff who are at higher risk for infection, etc.) Initially, the Ministry of Health could look to international standards for guidance on this process to assess what procedures to utilize internally.

All health workers are required to get a medical check up once a year to know their health status in general.

2.5 Universal Precautions for Infection Control

Universal Precautions for Infection Control are in accordance with international standards and recommendations, as well as the Infection Control Manual developed by the Ministry of Health in 2005. These precautions include processes for hand

hygiene, preparation, and hand washing facilities; personal protective equipment (PPE); managing sharps; disposal of potentially infectious waste; managing blood and body fluids; achieving and maintaining a clean environment; and special considerations for first aiders. The Universal Precautions can be consulted in Appendix 1, as well as the Ministry of Health Infection Control Manual developed in 2005.

2.6 Standards of Care

At the administrative level, several steps should be taken to ensure the maximum safety for patients, visitors, and health care workers. This includes, but is not limited to:

- ✓ Triage: identification of infectious patients
- ✓ Quarantine infectious patients
- ✓ Control spread of pathogens: promoting appropriate disease prevention behaviors
- ✓ Minimize time spent in healthcare facilities: decrease risk for transmission

Visitors to Hospital

Compliance with all of the above standards and procedures, particularly hand hygiene, should be encouraged and promoted among visitors to the hospital to prevent disease transmission, increase their awareness of infection control, and reinforce the Standard Precautions.

2.7 Disaster and Emergency Management

Accidental exposure to body fluids can occur by:

- ✓ Injury penetrating the skin – for example, from needles, instruments, bone fragments or significant bites that break the skin.
- ✓ Exposure of broken skin – for example, abrasions, cuts or eczema.
- ✓ Exposure of mucous membranes, including the eyes and the mouth.

Note: The Ministry of Health must be contacted for information and necessary support if and when the need arises.

2.8 Disposal of Potentially Infectious Waste

There is a legal requirement for waste to be properly handled, segregated, and disposed of depending upon its type. Current and future legislations require the classification of waste on the basis of hazardous characteristics and point of

production. These requirements are reiterated in this policy document and should be strictly adhered to.

Wastes that contain substances containing viable micro-organisms or their toxins which are known or reliably believed to cause disease in man or other living organisms are hazardous wastes. Waste that poses an infection risk should be considered as hazardous infectious waste. Hazardous infectious waste includes blood and other materials that may contain blood such as dressings, swabs etc.

This section makes reference to the National Health Care Waste Policy which highlights the key areas for action to establish a Sustainable Healthcare Waste Management Systems for Samoa.

KSA 3: Infection Control Financing

3.1 This policy reinforces the need for more evidence-based statistical data to support policies and activities for Infection Control. The information provided by epidemiological evidence of disease prevalence will determine the need for evidence-based practices, and thus financial support for those activities. Resources should be readily available for any clinical coverage required urgently and consistently for evidence-based activities. With regards to a disease outbreak, the Government of Samoa is the sole funder of such activity using Reserve Funds under the Supplementary Budget.

The following are the priority areas requiring financing for an effective infection control:

3.1.1 Control Body

There is a need to establish a Control Body to manage all resources with regards to Infection Control. This department is responsible for monitoring infectious diseases, control and manage funds and leads whole operation. This Control Body ought to be the Communicable Disease Committee (CDC).

3.1.2 Information System

From past experience the Health Information System is unreliable and therefore needs to be improved and strengthened. Financial support relies on evidence-based data which is obtained from PATIS (Patient Information System) and CHNIS (Community Health Nurses Information Systems).

3.1.3 Improve National Health Services (NHS) Laboratory

Funding should be directed towards the development of the NHS Laboratory so as to lift its capacity regarding provision of health service. In addition, advance machinery and equipments and well-trained staff are considered necessary in better and fast service delivery.

3.1.4 Improve Surveillance

Funding is also needed to enhance surveillance. This involves a detailed examination of hospital acquired infections which consists the routine collection of data on infections among patients and staff and the analysis of the resulting information to relevant staff so that appropriate action can result.

3.1.5 Improve Human Resource

Highly trained staff is a must and hence funding should be allocated for the improvement of human resource engaged in health service provision to minimize the effects and spread of infections. In addition, the NHS Laboratory experiences staffing implications which needs to be resolved to minimize delays in obtaining results.

KSA 4: Infection Control Information Education & Awareness

4.1 Information

Information is an important aspect of this policy as it deals with what needs to be given to the various end users for different purposes. These can be information for which a decision needs to be based upon or for an end user, to make the right choice towards improved and better health.

4.1.1 Encourage research into IC to ensure data and information is current and evidenced based.

4.1.2 Ensure availability of the right information to the public and specific target groups.

4.2 Education & Awareness

Education and Awareness are an important component of this policy, as they both relate to patients, healthcare workers and animal health workers safety and ensuring control of disease transmission via proper policies and procedures at the national, organizational and individual levels.

4.2.1 Patient and Visitor Education

Ensure the appropriateness of educational messages, activities and target audience. This means ensuring that materials are also culturally appropriate and will not in any way cause any conflicts amongst the various target audience.

Once triaged, patients and visitors to the hospital should be educated on proper precautionary practices (e.g. hand hygiene, cough etiquette, etc.) to prevent further transmission of disease. These messages should be in accordance with the Standard Precautions (Appendix 1).

4.2.2 Workforce Education;

a. Information Training

Staff identified as at risk from infection and/or deliver personal care must receive information and Training on the Infection Control Policy and standard precautions on induction. This must be reviewed on a regular basis.

Every health worker within the Health Sector and other crosscutting sectors must also be made fully aware of this policy once it is approved by cabinet. Upon approval, every animal and human health worker must comply with the conditions specified in each category for prevention and control of Infection within various health and other work settings.

b. Confidentiality

Confidentiality must be maintained at all times. All Health Service Providers should actively safeguard and protect confidentiality about the medical status of all staff and service users. Deliberate breaches of confidentiality will be considered a disciplinary matter.

c. Continuous Education

This policy supports the ongoing education and training of health care providers across all sectors of the health care spectrum and other crosscutting sectors.

KSA 5: Infection Control Medical Technology & Products

Infection Control commodities are essential to this policy for clinical screening, diagnostics, and treatment of disease. Examples of Infection Control technologies include medications (e.g. antibiotics, antiviral tablets), testing/diagnostic kits and tools, and medical supplies (e.g. PPE, sterilizer, cleaning agents etc.)

5.1.1 Procurement in the public sector of all Infection Control items must be in line with existing government processes and procedures. Supply should be forecasted based on a needs and evidence based basis to avoid oversupply and wastage.

5.1.2 Management and importation of Infection Control supplies must be in line with the Food and Drugs Act 1968 and the National Medicines Policy 2008.

5.1.3 All health providers must give all the necessary and the most update information to their clients about the different types of health commodities and how it will benefit them or otherwise.

KSA 6: Infection Control Human Resources/Capacity Building

6.1.1 All different departments in the health sector and partner sectors must develop their ideal respective protocols for IC, e.g. risk assessment, documentation, activities, etc. Collaboration on IC efforts should be consulted when necessary.

6.1.2 Training & refresher programs on Infection control should be consistent collaborating all health personnel and crosscutting sectors i.e. Agriculture (zoonoses)

6.1.3 Technical Consultants and Health Professionals are involved in making protocols and guidelines for Infection Control for all to follow and especially building capacity of staff regarding IC.

6.1.4 A Committee for IC should be responsible for the development of respective protocols for different departments of the Health Sector and consultation is conducted to adopt and adjust to International Standards.

6.1.4 Health Insurance and International Standards be adopted to cover health care professionals and every crosscutting sectors and personnel.

References

1. *Communicable Disease Control Guidelines for Infection Control*, CDC USA, 2007

2. *Hospital Outbreak Management*, Ward, Joanne., Illinois Publication, 2007

3. Infection Control Manual, Ministry of Health, 2004

4. *Management of Multi-Drug Resistant Organisms in HealthCare Settings,* Siegel, Jane D. Medical Dr, Emily Rhine heart- Registered Nurse MPH, Marguerite Jackson, Ph D, Linda Chiarello,, RN., The Health Care Infection Control Practices Advisory Committee

5. *National Hand Hygiene NHS Campaign for Compliance with hand Hygiene,* 3rd Bi-Monthly Audit Report, 16th September 2009, USA Medical Journals

6. *Pacific Public Health Surveillance Network, Pacific Regional Infection Control Centre,* Secretariat Pacific Community, Noumea.

7. *Prevention Strategies For Infection Control for Professional Nurses*, Centre for Continuing Nursing Education, Saxe Health Care Continuing Communication, Burlington Virginia.

8. *Infection Control, MEDLIne Plus, Trusted Health Information for you.*

9. *World Health Organization*

Websites Consulted:

- http://www.who.int/csr/disease/swineflu (World Health Organization)

- http://www.who.int/foodsafety (World Health Organization)

Glossary of Terms

1. **Infection:** This is the process that occurs when micro-organisms gain access to a host and there is evidence of tissue invasion or damage. This evidence may be redness or swelling, temperature, pus, pain or abnormal bleeding.

2. **Human Normal Flora**: is where a micro organism lives on the skin and plays a part in protecting the skin from harm, and is generally helpful to the body's defenses. Normal flora can help protect from an invasion of harmful or foreign organism.

3. **Transient Flora:** are micro organisms that are harmful and have the ability to cause disease. Transient flora is acquired through contact with another person or surface and is transferable. A person is said to be **colonized** when they carry a micro organism on their body but do not suffer any harmful effects. **Infection** happens when the micro organisms multiply and show recognized signs and symptoms of infection such as inflammation, pain, swelling, fever, redness etc. Where infection does occur it can take the form of boils, carbuncles and wound infections. In most cases these infections remain localized to the area of broken skin. Under certain circumstances, however, the micro organism can cause more widespread infection such as septicaemia. These infections are more likely to affect people who already have a serious underlying condition which has weakened the body's defense mechanism.

4. **Bacteria:** are identified by their shape. Bacteria which cause infection in humans survive most effectively at body temperature. They require water and other nutrients in order to grow. However bacteria can be killed quite readily by heat, drying, some antiseptics and disinfectants and by radiation. Infections caused by bacteria include: MRSA, Tuberculosis (TB)

5. **Spores:** some bacteria can produce spores which can survive for long periods of time and can cause infection at a later date when suitable conditions arise. Spores are not killed by disinfectants. Examples of spore forming bacteria include the bacilli which cause anthrax and Clostridium difficile.

6. **Viruses:** are identified by their shape. Viruses need living cells in order to grow and multiply. Viruses affect cells by causing either:
   a) The death of the cell
   b) The cell to change such as become cancerous

c) A latent infection whereby it may become an active infection later
Viruses are very small and can only be seen with an electron microscope. Infections caused by viruses include: HIV, Hepatitis B, measles, mumps, cold/influenza, viral gastro-enteritis and rabies.

7. **Fungi:** Fungal infections are classified as either superficial or deep. Fungi are divided into 3 types:

- Yeast/yeast-like (such as candida)
- Filamentous (such as aspergillus)
- Dimorphic (such as blastomyces)
- Infections include athlete's foot and ringworm.

8. **Parasites:** Parasitic infections include malaria, worms, lice and scabies. The process of infection can be represented as a chain – breaking a link in the chain will control the risk of infection. The introduction to this policy details the chain of infection and how micro organisms are spread.

9. **Body Fluids:** These include blood and other body fluids e.g. urine, faeces, saliva, sputum, vomit, breast milk, semen and vaginal secretions and sources of blood/body fluids such as human bodies, animal carcasses and raw meat.

10. **Zoonoses:** Diseases and infections that are naturally transmitted between vertebrate animals and humans

11. **Blood-Borne Transmissible Diseases (BBTDs):** These are viruses that some people carry in their blood that may cause diseases in certain people and few or no symptoms in others. The virus can spread to another person whether the carrier of the virus is ill or not. These viruses can be found in other body fluids other than blood.

12. **Reportable Diseases:** These are diseases and/or infections that are reportable to the Public Health Division of the Ministry of Health by all health providers.

List of Appendices

Appendix 1: Universal Precautions for Infection Control

1.1 Hand Hygiene

Hand washing is widely acknowledged to be one of the most important ways of controlling the spread of infection. Staff may think that they know how to wash their hands but evidence suggests that many people do not use the correct technique. This means that areas of the hands can be missed. The diagram in Appendix 2 demonstrates the hand hygiene procedure that should be followed when washing with soap (liquid soap is recommended) and water or using alcohol hand gel or rub.

Hands should be cleaned:

- ✓ Before and after personal contact with service users
- ✓ Following cleaning activities
- ✓ Before handling food
- ✓ Before eating, drinking or smoking
- ✓ Before taking medication
- ✓ Before inserting contact lenses
- ✓ After contact with body fluids
- ✓ After removing gloves
- ✓ Whenever hands are visibly dirty after any activity or contact that contaminates the hands including using the toilet, coughing, sneezing, handling waste etc. even if gloves have been worn. Alcohol/antibacterial hand gels and rubs are a practical alternative to soap and water where staffs do not have immediate access to suitable washing facilities. However, hands that are visibly dirty or potentially grossly contaminated should wherever possible be washed with soap and water and dried thoroughly.

Hand washing procedures should be developed amongst staff via training and hand washing promotion campaigns (e.g. Wash In, Wash Out). See Appendix 2 for an illustration of an effective hand washing procedure. Monitoring protocols should be developed that promote reinforcement, resulting in a penalty or disciplinary action if out of compliance.

1.2 Hand Preparation

Preparation of the hands increases the effectiveness of cleaning. Staff identified as at risk from infection and/or deliver personal care should:

- ✓ Keep nails short, clean and polish free
- ✓ Avoid wearing jewellery, such as wristwatches, bracelets and especially rings with ridges or stones
- ✓ Avoid artificial nails
- ✓ Cover all cuts and abrasions with a waterproof dressing.

1.3 Hand Washing Facilities

In premises, adequate hand washing facilities must be available and easily accessible. Designated hand washing facilities must be provided in treatment rooms, laundries and kitchens. Designated hand washing facilities must have basins provided with liquid soap dispensers, paper towels and foot-operated waste bins. Where hand washing facilities are not readily available for example when working at outside locations staff should have access to alternatives i.e. alcohol/antibacterial hand gels and rubs.

Hand Drying

Improper drying can contaminate hands that have been washed. Wet surfaces transfer organisms more effectively than dry ones and inadequately dried hands are prone to skin damage. Disposable paper hand towels are the best method.

Promotion of Patients & Visitors Hand Hygiene

All patients must be provided with the means to ensure that hand hygiene taking into account all the aspects stated above are provided with. Visitors also must be encouraged to wash hands before and after visiting the hospitals or wards. In doing do, wash basins must be in place to be able to do and also soap.

1.4 Personal Protective Equipment (PPE)

Personal protective equipment is used to protect both staff and service users from the risk of cross-infection. It may also be required for contact with animals, hazardous chemicals and some pharmaceuticals. PPE includes items such as gloves,

aprons, masks, goggles or visors. In certain situations it may also include hats and footwear.

Skin Preparation

Skin should be properly prepared prior to invasive procedures that would place staff and patients at a higher risk for infection (e.g. surgical procedures). Skin should be thoroughly cleansed and sanitized, as well as performing precautionary measures as close to time of incision as possible (e.g. shaving surgical site area, etc.)

Disposable Gloves

Gloves should be worn whenever there might be contact with body fluids, mucous membranes, non-intact skin or chemicals. They are not a substitute for hand washing. Disposable gloves are for single use only and they must be removed and discarded appropriately as soon as the task is completed. Hands must always be washed following their removal. The disposable gloves provided must be either powder free vinyl or nitrile. Latex gloves must not be issued to staff due to the risk of sensitivity and allergic reaction associated with latex. The correct procedure for the safe removal of re-usable and single use gloves is shown in Appendix 7.

Disposable Plastics Aprons

These should be worn whenever there is a risk of contaminating clothing with body fluids and when a service user has a known infection. Staff should dispose of them appropriately once the task is completed.

Masks, Visors and Eye protection

These should be worn when a work activity is likely to cause body fluids or substances to splash into the eyes, face or mouth. Masks may also be necessary if infection is spread through the airborne route – for example, multidrug resistant tuberculosis or severe acute respiratory syndrome (SARS). The recommended and most effective mask for preventing airborne transmission is the N95 mask. Staff should ensure that this equipment fits correctly, is handled as little as possible, and changed between service users or tasks. Masks should be disposed of appropriately immediately after use.

1.5 Managing Sharps

A sharp is defined as any item that is capable of penetrating the skin and may be contaminated with blood or other body fluids. Sharps include needles, glass, metal and knives. The main hazards of a sharps injury are Hepatitis B, Hepatitis C and HIV. Accidents can occur at any stage and to reduce the risk of injury and exposure to

blood-borne transmissible diseases, it is vital that sharps are used safely and disposed of carefully.

To avoid injury staff should ensure that:

- ✓ Sharps are not passed directly from hand to hand.
- ✓ Handling is kept to a minimum.
- ✓ Needles are not broken or bent before use or disposal.
- ✓ Syringes or needles are not dismantled by hand before disposal.
- ✓ Needles are never re-sheathed.
- ✓ They plan for the safe handling and disposal of sharps before they are used.
- ✓ Service users who self medicate must be encouraged to dispose of sharps themselves directly into a sharps container at the point of use.
- ✓ Sharps containers are not filled by more than two thirds and are stored in an area away from the public.
- ✓ Where needles are regularly used consideration should be given to the use of retractable needles.
- ✓ Sharps containers must be kept in a secure place away from unauthorized people.

Staffs that are identified at risk from injury by discarded needles should be provided with puncture resistant gloves and suitable equipment for safe handling and disposal. Premises or locations that identify a risk from discarded sharps such as syringes must have suitable equipment available/accessible to remove the sharps. Both private and public entities that directly uses syringes must comply in ensuring that safety equipments are available on site to do so.

(*For information on what to do in the event of a needle stick injury, see Section3 - Managing Accidents.)*

1.6 Disposal of Potentially Infectious Waste

There is a legal requirement for waste to be properly handled, segregated, and disposed of depending upon its type. Current and future legislations requires the classification of waste on the basis of hazardous characteristics and point of production.

Wastes that contain substances containing viable micro-organisms or their toxins which are known or reliably believed to cause disease in man or other living organisms are hazardous

wastes. Waste that poses an infection risk should be considered as hazardous infectious waste. Hazardous infectious waste includes blood and other materials that may contain blood such as dressings, swabs etc.

Soiled waste such as sanitary products and plasters (from minor first aid treatment) are not considered to be infectious unless specific advice is given to the contrary by a healthcare practitioner. Offensive waste describes wastes which are non-infectious but may cause offence to those coming into contact with it. Offensive waste includes wastes previously described as human hygiene waste and sanpro waste.

Offensive waste includes:

- ✓ Faeces
- ✓ Nasal secretions
- ✓ Sputum
- ✓ Tears
- ✓ Urine
- ✓ Vomit
- ✓ Puss
- ✓ Necrotic tissue

Offensive waste may be considered infectious if it contains visible blood or there has been a clinical assessment that an infection exists from the waste e.g. TB in the sputum.

All staff required to handle waste must be instructed to

- ✓ Understand the waste streams (classification).
- ✓ Seal bags effectively and ensure bags are labelled appropriately.
- ✓ Handle filled bags by the neck only.
- ✓ Know the procedure in the event of spillage.

Segregation

1 All wastes produced must be placed in appropriately coloured bags.
2 Each bag must be filled to no more than 2/3rds capacity.
3 Each bag must be securely fastened with adhesive tape or plastic security grips to prevent risks of spillage of contents.

The procedures to be followed for the management of waste are detailed below:

(i) In the Hospitals or a clinical setting or otherwise

Type of Waste	Storage	Method of Disposal
Sharps	Sharps Colour coded Bins	Health Care Waste Collection System or use approved contractor if outsourced
Hazardous/Offensive Waste	Double Blacked bag	Include with normal household waste
Infectious waste where service user has a communicable disease	Suitable sealable container or yellow bags (Like the ones that were used during the H1N1 at the ports)	Health Care waste Collection System, NHS
Pharmaceutical waste		Health Care Waste Collection System NHS and private contractors for private companies
Offensive Waste	Yellow bagged	
Animal By-Products	Sealed Container and Frozen	
Microbiological waste	Suitable protective container	

1.7 Managing Blood and Body Fluids

Protective clothing must always be worn when dealing with body fluid spillages. Such spillages should be dealt with immediately and precautions taken to prevent a reoccurrence.

(i) Spillages

These should be dealt with quickly, taking into account the type of spillage.

Spillage	Cleanser
All body fluids **except blood** i.e. vomit, urine, faeces	Disinfecting detergent
Blood	Sanitizer/Protect diluted following manufacturer's instructions
Body fluid in low risk areas i.e. Establishments or offices where there is a low risk of a spillage of body fluid	Body Spills Pack Minimize traffic around the spill area.

(ii) Collecting, handling and labeling samples of body fluid

Staff handling samples should:

- ✓ Be instructed how to handle samples safely
- ✓ Have the necessary personal protective equipment available i.e. disposable gloves, aprons
- ✓ Collect samples in an appropriate rigid, leak proof, (sterile where appropriate) and properly sealed container
- ✓ Take care not to contaminate the outside of the container and any associated documentation
- ✓ Follow good personal hygiene principles
- ✓ Samples are to be clearly labeled and identified

1.8 Achieving and Maintaining a Clean Environment

An unclean environment is one of the factors that may contribute towards infection. High standards of cleanliness, good cleaning routines and techniques will help reduce the risk of cross-infection. Good design in buildings, fixtures and fittings is also important. Cleaning removes contaminates, including dust and soil, large numbers of micro-organisms and the organic matter that shields them, for example, faeces, blood and other bodily fluids. In addition to this, colour-coding cleaning equipment will help to prevent and control the risk of cross-contamination, keeping red items (gloves, mops, buckets and cloths) for sanitary areas and other colors for elsewhere.

Cleaning

This is an essential part of a program for the control of infection. Cleaning uses water and detergent to remove visible contamination but does not necessarily destroy micro-organisms, although it should reduce their numbers. Cleaning is also essential prior to disinfection as this is then much more likely to be effective.

Disinfection

This uses chemical agents e.g. the use of hypochlorite or heat to reduce the number of organisms to a level where they are unlikely to be a danger to health, although it may not necessarily inactivate all viruses and bacteria spores.

The routine use of disinfectants for general cleaning is unnecessary. Thorough regular use of detergent and hot water is sufficient for routine purposes. Titan Sanitizer/Protect is to be used for items which are contaminated with blood. The use of hypochlorite's (bleach) is restricted and must only be used after consultation with the Environmental Health Team (see Appendix () for MOH Organizational Structure).

An Approval to use hypochlorite's (bleach) is only normally given to disinfect following an outbreak of communicable disease such as gastro-enteritis.

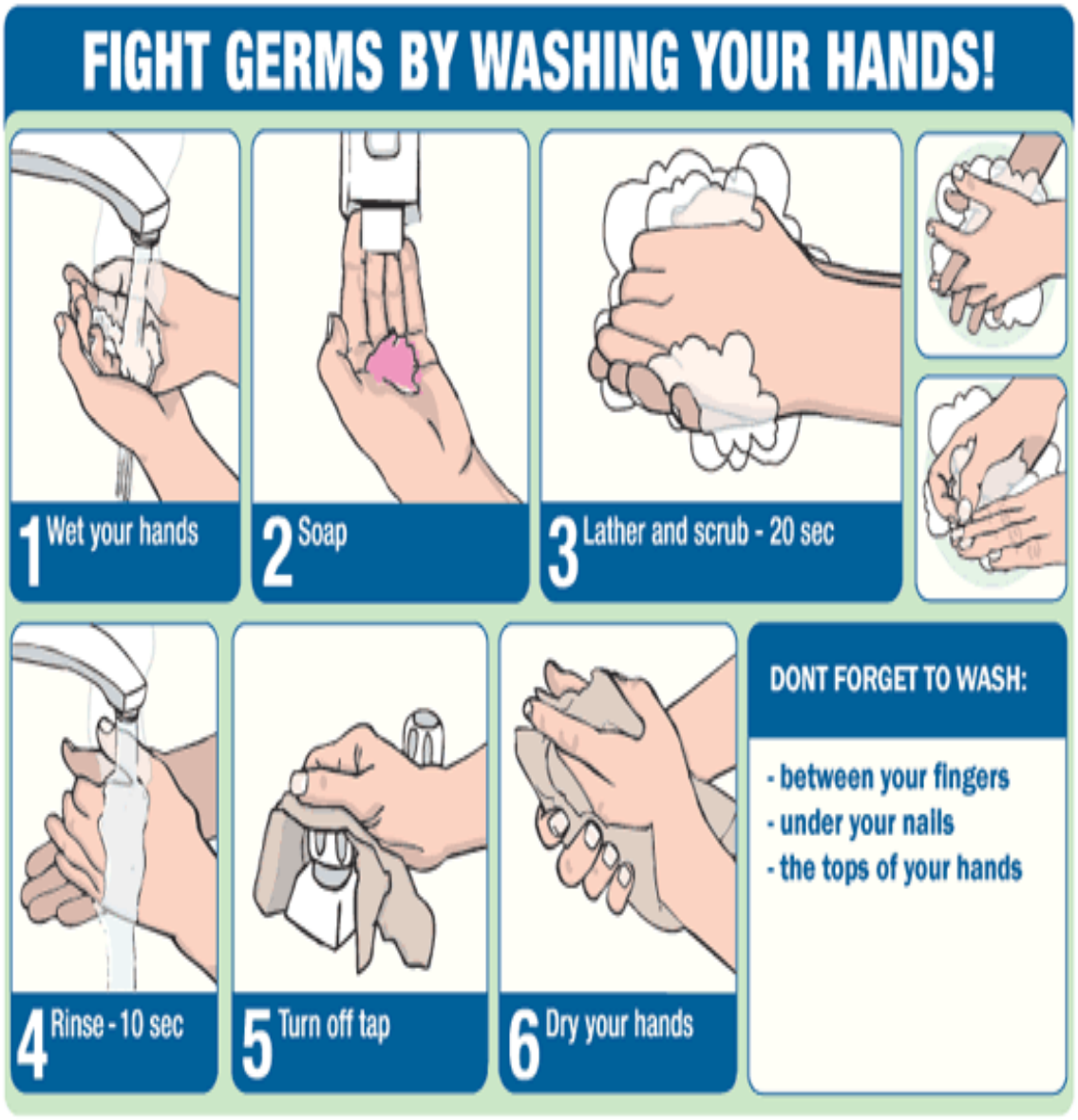
All disinfectants are potentially hazardous and must be used with caution; for example hypochlorite (bleach) is an irritant, corrodes metals and bleaches fabrics. An assessment of the product should be made prior to use and staff provided with information, instruction and training.

1.9 Special Considerations for First Aiders

The risk of being infected whilst carrying out first aid duties is considerable. The following precautions can be taken to reduce the risk of infection:

- ✓ Cover any cuts or grazes on your skin with a waterproof dressing.
- ✓ Always wear PPE (e.g. disposable gloves, eye/facial protection) when dealing with blood or any other body fluid.
- ✓ Use suitable eye protection and a disposable plastic apron where splashing is possible.
- ✓ Use devices such as a resuscitate when giving mouth-to-mouth resuscitation, but only if you have been trained to use them.
- ✓ Wash hands after the procedure.
- ✓ Body Spills Kits should be made available where Sanitizer/Protect is not readily available.

Appendix 2: Effective Hand Hygiene

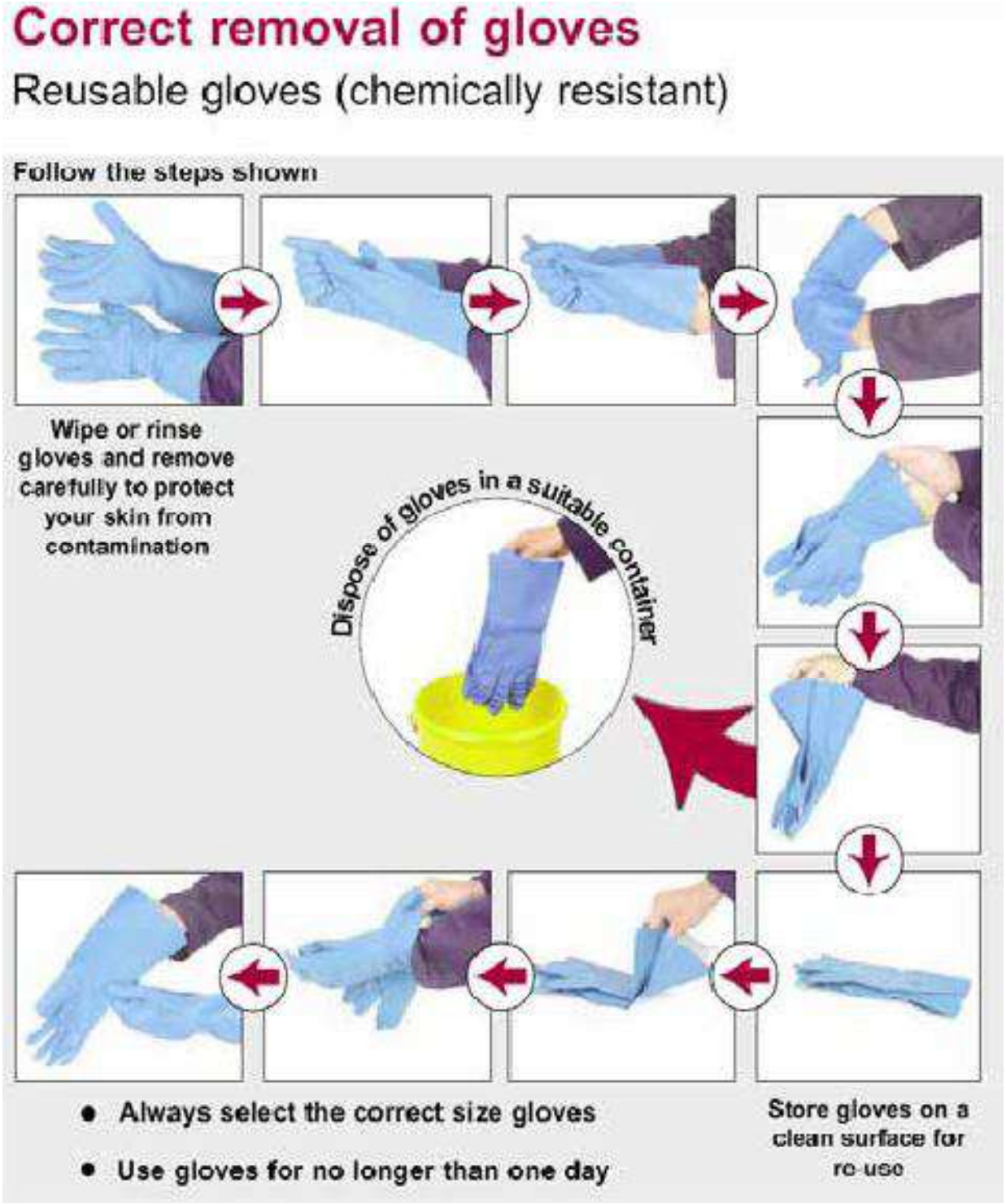


Appendix 3: Recommended Cleaning Procedure

Baths	Staff to clean after each service user, using detergent only. ***Infected service user & service users with open wounds:*** Chemical disinfection with Sanitizer or equivalent.
Bed frames and wheels	Wash with hot water and detergent and dry ***after infected service user:*** Use Sanitizer or equivalent
Bedpans, Commodes, Urine Bottles	If available use bed pan washers. Empty contents down sluice or toilet. Wash in hot water and detergent, and scrub with Sanitizer, then rinse. Wash carriers for disposable bedpans after use, in hot soapy water. ***Service users with diarrhea thought to be infectious:*** Use individual pan for infected service user. Seek advice from Health Promotion and Preventive Division.
Bowls (washing)	Each service user should have their own washing bowl. Clean with detergent after each use. Rinse and dry. Store separately and inverted, to reduce contamination.
Catheter/Stoma bags	Single use – Empty contents down sluice or toilet and dispose of bag as hazardous/offensive waste.
Crockery & Cutlery	Machine wash whenever possible or hand wash with detergent and hot water. Hot rinse and air dry.
Laundry	Washing machines complying with requirements will provide satisfactory disinfection of clothing and bed linen, including blood and soiling from non-infected service users. Items of bedding/clothing defined as infected linen should be sealed in clear plastic bags inside stitched alginate bags and enclosed in the bag provided for the purpose.
Lifting equipments, that is, hoists used for moving service users	After use, wash with hot water and detergent.
Masks, Nebulizers	Use for one person only. Disposable – discard following a course of treatment. In between therapy – wash in hot water and detergent. Do not soak.
Mattresses, Pillows	Wipe plastic cover with hot water and detergent. After infected service user use hypochlorite solution. Do not disinfect unnecessarily as this damages the mattress cover. If the foam inner of the mattress becomes contaminated, the mattress

	should be condemned and disposed of as clinical waste. Mattresses of specialized design (such as air flow mattresses) should be cleaned in accordance with manufacturer's instructions.
Plastic aprons	Single use only. Dispose of a hazardous waste
Personal Protective Equipment	Disposable PPE – Must be single use only and disposed of appropriately after use. Other – PPE contaminated with body fluids (human or animal) must not be laundered using the services provided by the Hospitals or Contractors.
Toilet/Commode seats	Wash with detergent and dry. Diarrhoea thought to be infected or gross contamination: After use by infected service user or if grossly contaminated, clean both sides with Sanitizer. Rinse and dry.
Toys	Most toys can be either laundered or washed with detergent and water. If heavily contaminated, they should be disposed of. Toys should be routinely wiped over with Sanitizer.
Trolleys (food)	Clean with hot water and detergent daily.
Vehicles used by the Animal/Health Team	Vehicles cleaned through car wash with power wash/hot jet wash facilities at regular intervals or when the vehicle becomes heavily soiled. Approved disinfectant at approved dilution rates to be used in addition to car wash where appropriate.
Vomit bowl/receivers	Empty down sluice or toilet, wash, rinse and wash with Sanitizer/Protect, or use disposables.
Walls and ceilings	When visibly soiled, use hot water and detergent. Splashes of blood, urine or known contaminated material should be cleaned promptly with Sanitizer solution and then rinse.

Appendix 4: Removal of Gloves



Appendix 4 Cont.

Correct removal of gloves

Single use gloves (splash resistant)