

SCHOOL OF VETERINARY SCIENCE

Biosecurity and Biosafety Procedures

Hendra Virus risk management

Refer to UQ policy: <u>https://ppl.app.uq.edu.au/content/2.40.06-hendra-virus-risk-management</u>

Gatton Campus and the School of Veterinary Science internal procedures are as follow:

Current Protocols for Hendra Virus Risk Management in

School of Veterinary Science and Gatton Campus

Horses and horse biological samples of two different Hendra virus (HeV) vaccination status may be brought onto UQ facilities:

- (a) Fully vaccinated OR
- (b) Unvaccinated

There are 7 destinations UQ-wide:

- (1) Gatton:
 - i. Office of the Director of Gatton Campus (ODGC);
 - ii. School of Veterinary Science Equine Specialist Hospital (UQVETS ESH);
 - iii. School of Veterinary Science Pathology (SVS Pathology)
 - iv. Horse biological samples used in School of Veterinary Science teaching, PC2 diagnostic services and research labs
- (2) Pinjarra Hills
 - i. For temporary agistment of teaching horses (if required);
 - ii. Equine Research Unit for research, 212 Pinjarra Road
- (3) Dayboro ambulatory first opinion veterinary clinic (UQVETS Dayboro)

Current Controls as per UQ PPL, October 2019:

GATTON:

1(i) ODGC:

- a) All horses including students' owned are all fully vaccinated as per their procedures and guidelines (contact ODGC for details).
- b) For research and teaching horses acquired elsewhere and arriving unvaccinated, equine clinician from UQVETS-ESH does the assessment and starts the vaccination process on the day of arrival and the horse is kept isolated (quarantined in a yard under shelter) for 3 weeks until the initial vaccination series is complete (contact ODGC for details).

1 (ii) For UQVETS-ESH:

- a) **Fully vaccinated horses** (as per on-line veterinary only registry) together with tiered biosecurity procedures are examined without further HeV exclusion tests.
- b) **Unvaccinated horses** All horses undergo HeV exclusion test while being held in quarantine.

1 (iii) For <u>SVS Pathology</u> services:

- a) Fully vaccinated horses that come through UQVETS-ESH (cleared through quarantine or fully vaccinated) are necropsied without further HeV exclusion test, unless the pathologist has a compelling reason to retest them such as a syndrome closely aligning with Hendra.
- b) Fully vaccinated horses that come to post-mortem directly: (i.e independently of UQVETS-ESH): are necropsied without further HeV exclusion test unless the pathologist has a compelling reason to retest them – such as a syndrome closely aligning with Hendra.
- c) Unvaccinated horses All horses undergo HeV exclusion test while being held in quarantine (cold room with procedures in place).

1 (iv) For teaching including anatomy practical and equine clinical classes,

diagnostic and research:

- a) **Fully vaccinated horses** are euthanised and used for teaching purposes without further HeV exclusion tests. If unvaccinated horses are acquired for teaching, they will be held in the stalls on Gatton Campus while vaccination strategy is undertaken.
- b) Biological samples from **fully vaccinated horses** are used in research and teaching without further HeV exclusion test.
- c) Samples from one export slaughterhouse that processes horse meat for human consumption are used.

C:\Users\vpmkyawt\Documents\2020 OH&S\2020\Biosecurity\Post-Mortem Biosafety and Biosecurity Procedures Abstract from SVS_SOP Post-Mortem_2020

Pinjarra Hills:

2 (i) Horses held temporarily for Anatomy teaching:

 Temporary agistment of anatomy teaching horses - Vaccination strategy commences soon upon procurement if to be held for longer than 10 days. Therefore when transferred to Gatton campus, they are fully vaccinated. For short-term (less than 10 days) agistment, HeV exclusion tests are carried out.

2 (ii) Equine Research Unit, 212 Pinjarra Road:

- Horses which are used in short-term terminal research studies (10 days or shorter) undergo HeV exclusion test upon arrival on-site. Therefore use in research occurs only after test results are received.
- Horses are kept under cover at all times while enrolled in a research trial and are closely monitored by the veterinarian/s listed in the ethics application form.
- Horses which are used in research studies for longer than 10 days duration are <u>fully vaccinated prior to initiation of research activities.</u>

3 Dayboro ambulatory first opinion veterinary clinic (UQVETS – Dayboro):

• Regardless of the vaccination status, PRIOR to any horses arriving on-site all horses are assessed via phone contact as per tiered biosecurity triage system by a UQ veterinarian.

TITLE: SOP-PM003: Procedures involving exposure to virus and other zoonosis SCOPE: All Authorized Personnel

RESPONSIBILITY: All Authorized Personnel

PURPOSE: To Outline the Procedures for exposure to virus and other zoonosis

Zoonotic hazards

Care must be taken when handling live animals and carcasses as they may carry diseases that can affect humans and other animals e.g. Henipavirus, hydatidosis, sarcoptic mange, leptospirosis, Q fever, brucellosis, sparganosis, melioidosis, tuberculosis etc. Routinely wash hands after handling all animals and carcasses.

Henipavirus (Hendra virus) - The henipaviruses are naturally harboured by Pteropid fruit bats (flying foxes) and some microbat species. Henipavirus is characterised by a large genome, a wide host range, and their recent emergence as zoonotic pathogens capable of causing illness and death in domestic animals and humans.

Australian bat lyssavirus (ABLv) - and rabies vaccination is recommended for people who come into regular contact with bats (both flying fox's and micro-bats). Operators should avoid bites and scratches and use protective equipment when handling all bats. All wounds inflicted by bats or flying-fox's should be washed thoroughly with soap and water as soon as possible. Operators should always seek medical advice regarding post-exposure. Bats will not be accepted in the 8106 facility. A bat accidently be submitted it must be immediately disposed of by safe methods.

Treatment whenever a bite, scratch or mucous membrane exposure to saliva from any Australian bat has occurred. Where the bat is available it should be tested for the presence of ABL. UQ mandates that Biosafety approval from UQ IBC be obtained prior to handling of all species of bats, whether be for research or for clinical work.

Q fever - can be transmitted to humans during contact with infected animals, or with infected uterine or placental tissue. A variety of animals may be infected including kangaroos, wallabies, dogs, cats, cattle, sheep and goats.

Vaccination

Vaccination is highly recommended, for people who come into regular contact with potentially infected animals. Blood and skin testing of personnel is recommended to assess previous exposure, followed by vaccination for susceptible individual. For short-stay visiting scientists and students, due to the time it takes for the vaccination to become effective, the need for the vaccination will be determined case by case basis.

Refer to <u>http://ppl.app.uq.edu.au/content/2.60.08-vaccinations-and-immunisation</u> and to <u>http://ppl.app.uq.edu.au/content/2.60.13-q-fever-screening-and-immunisation</u> for Q-fever screening and vaccination.

TITLE: SOP-PM004: Procedures involving identification of RGIII or higher organisms

SCOPE: All Authorized Personnel

RESPONSIBILITY: All Authorized Personnel

PURPOSE: To Outline the Procedures for exposure to RGIII or higher organisms.

Contingency Plan - in case of identification of RGIII or higher organisms/ Security Sensitive Biological Agents (SSBA} in PC2 certified Diagnostic Lab. For detail, go to <u>Y:\SVS\SVS-OHS-</u>

Public\2019\Biosafety\EmergencyProceduresInCaseOfRGIII.docx

In the case of suspect organisms classified as class III or above: Emergency Procedures: Follow operating procedures below and immediately contact: UQ OH&S B1osafety, St Lucia on 336 51857 ext. 51857) or 334 69489 (ext.69489) during business hour and follow the advice.

After -hour, contact Q-DAFF (formerly known as Biosecurity Queensland) on 13 25 23; QLD Health (3234 0111) or contact the emergency Disease Watch Hotline on 1800 675 888.

Operating Procedures:

Ensure all PPE as per PC2 guidelines are in place. These include disposable gloves and safety eyewear as per risk assessment/s relevant to the project. P2 masks should be available in the laboratory.

Inform all personnel present at the time of the organism that may have been initially identified as anything higher than RGII. Confirmation will be done through BSL immediately after.

Record details of laboratory personnel who may have been exposed. Following this, evacuate all non-essential personnel from the laboratory and restrict access.

Double contain the specimen and any associated samples and place in a class II biosafety cabinet. If samples have come from an animal, the animal, if stored in a cold room, will be labelled for easy identification, and cold room access will be restricted to Q-DAFF or other relevant personnel.

Clean and disinfect hands, clothing, and shoes.

Contact UQ Biological Safety Advisors: 336 51577 or 334-69489. Contact your supervisor and Contact SVS OH&S/Biosafety coordinator on 5460- 1966 or ext. 50966 or m.kyawtanner@uq.edu.au. Seek medical advice by contacting UQ Gatton Health Service on 5460 1396 or visit ground floor N W Briton Annexe, (Admin Annexe) (Bldg. No 8101a) if between the hours of 8.30 am to 4.15 pm Monday-Friday. If outside these hours, contact your own GP or the nearest hospital. Clean and disinfect hands, clothing, and shoes. Seek medical advice.

Useful links: <u>http://www.uq.edu.au/ohs/index.html?page=29969</u> and <u>https://ppl.app.uq.edu.au/content/2.40-biosafety</u>

TITLE: SOP-PM005: Procedures involving transport of biological material Refer to http://www.uq.edu.au/ohs/transport-of-biological-materialanimals SCOPE: All Authorized Personnel

RESPONSIBILITY: All Authorized Personnel

PURPOSE: To Outline the Procedures for transport of biological material

Material such as animal, plants, blood specimens and human or animal tissues that is not genetically modified or regarded as Quarantine material must be transported across campus appropriately. One of the purposes here could be for diagnostic analysis across the road in building 8114, VLS.

The material should be doubly contained.

- 1. The material (e.g. blood) must be in a sealed primary container (e.g. nescofilm around the top of a vacutainer) which is wiped clean of blood and other fluids.
- 2. Placed that within a sealed secondary container such as a snap lock bag or a hardesky.
- Identification document e.g. Blood & urine sample, species of the animal, both the contact details of the destination (e.g. Diagnostic Labs, Building 8114) and the origin (e.g. Small Animal/Equine Hospital, building 8156) should be available inside the outercontainer.
- 4. For transportation across campus or from another site, it is highly recommended to use UQ vehicle as using private vehicles may have insurance implications. For best advice, contact your Insurance Provider.
- 5. For transporting samples in liquid nitrogen or dry-ice, they must be packed as per IATA guideline including holes to let air out to avoid pressure being built-up inside the package. Liquid nitrogen must be in shipper. The entire container/package must be in separate compartment to the driver and the passenger of the driver.

https://ppl.app.uq.edu.au/content/2.70.20-working-safely-liquid-nitrogen-and-dry-ice

TITLE: SOP-PM009: Procedures involving PPE SCOPE: All Authorized Personnel RESPONSIBILITY: All Authorized Personnel

PURPOSE: To Outline the Proper Procedures for PPE

GUIDELINES FOR VETERINARY PERSONAL BIOSECURITY

https://ppl.app.uq.edu.au/content/2.30.05-personal-protective-equipment-and-minimumstandards-dress

Personal protective equipment (PPE) is an important routine infection control tool. PPE use is designed to reduce the risk of contamination of personal clothing, reduce exposure of skin and mucous membranes of veterinary personnel to pathogens, and reduce transmission of pathogens between patients by veterinary personnel. Adequate level of PPE must be worn in all clinical situations, including any contact with animals and their environment. These recommendations must always be tempered by professional judgment, while still bearing in mind the basic principles of infectious disease control, as every situation is unique in terms of the specific clinic, animal, personnel, procedures and suspected infectious disease.

Personal protective outerwear is used to protect veterinary personnel and to reduce the risk of pathogen transmission by clothing to patients, owners, veterinary personnel and the public.

Protective outerwear should be worm whenever there may be contact with an animal or when working in the clinical environment (including cleaning).

Personal practices to be considered by clinic personnel and students:

- Long hair should be tied back.
- Closed-toe shoes which are easily cleaned should be worn.
- Fingernails should be short to make washing and scrubbing effective.
- Special care should be taken in the case of personal risk factors such as possible immunosuppression in persons with conditions which may affect the immune system, or taking immunosuppressive drugs (cortisone, cyclosporine etc.); wounds, cuts & scratches; chronic or acute intercurrent medical conditions (e.g. colds and influenza, asthma, eczema, respiratory disease, diabetes etc.), pregnancy.
- Avoid touching the face with hands to minimise likelihood of germ transfer.
- Protective clothing such as scrubs tops, scrubs, gowns, overalls or lab coats should be worn. Protective clothing must be changed if grossly contaminated or if an animal with a known infectious disease is contacted.
- Fresh protective clothing must be worn every day. Used protective clothing should be put in a suitable bag separate from clean items until it is laundered. Students to provide their own protective clothing which should be kept separately from other clothing and equipment after wearing (e.g. in a garbage bag) and laundered in hot water after each use.
- Gloves and disposable respirators of P2 rating should be worn if in warranted in the judgment of the student or staff member, e.g. if there is likely to be contact with body fluids or transmission of a zoonotic disease by aerosol (e.g. Bordet Ella).
- Protective eye wear should be born if there is a possibility of contamination of the eyes with organic material or a pathogen (e.g. during orthopaedic or dental procedures).

C:\Users\vpmkyawt\Documents\2020 OH&S\2020\Biosecurity\Post-Mortem Biosafety and Biosecurity Procedures Abstract from SVS_SOP Post-Mortem_2020 Special protective equipment should be used if there is a higher risk, e.g. heavy gloves. Note: under any circumstances, post-mortem on bats or any species or horses which were suspected to have been infected with Hendra Virus will not be performed. Refer to UQ HeV PPL.

 No human food is to be kept in the clinical areas except for designated kitchen or dining areas. No eating or drinking in clinic areas except for designated areas.

Lab Coats

Lab coats are meant to protect clothing from contamination, but generally they are not fluid resistant, so they should not be used in situations where splashing or soaking with potentially infectious liquids is anticipated. These garments should be changed promptly whenever they become visibly soiled or contaminated with body fluids, and at the end of each day.

Lab coats worn in the labs should not be worn outside of the work environment. Lab coats worn when handling patients with potentially infectious diseases should be laundered after each use, because it is almost impossible to remove, store/hang and reuse a contaminated lab coat without contaminating hands, clothing or the environment.

Non-Sterile Gowns

Gowns provide more coverage for barrier protection than lab coats, and are typically used for handling animals with suspected or confirmed infectious diseases, that are housed in isolation. Permeable gowns can be used for general care of patients in isolation. Impermeable (i.e. waterproof) gowns should be used to provide greater protection when splashes or large quantities of body fluids are present or anticipated. Disposable gowns should not be reused, and reusable fabric gowns should be laundered after each use, because hanging/storing and reusing contaminated gowns inevitably leads to contamination of hands, clothing or the environment.

Gloves should be worn whenever gowns are worn. Gowns (and gloves) should be removed and placed in the trash or laundry bin before leaving the animal's environment, and hands should be washed immediately afterwards.

Personnel should learn to remove gowns properly, in such a way as to avoid contaminating themselves and the environment. All gowns should be used only once, then discarded or laundered.

Gloves

Gloves reduce the risk of pathogen transmission by providing barrier protection; they should be worn when contact with blood, body fluids, secretions, excretions and mucous membranes.

Gloves should also be worn when cleaning cages and environmental surfaces, as well as when doing laundry if gross contamination of items is present. Avoid contact between skin and the outer glove surface.

Gloved hands should not be used to touch surfaces that will be touched by people with nongloved hands. Care should be taken to avoid contamination of personal item such as telephones, pens and pagers. Hands should be washed or an alcohol-based hand sanitizer should be used immediately after glove removal.

It is a common misconception that using disposable gloves negates the need for hand hygiene. Gloves do not provide complete protection against hand contamination therefore, hand hygiene immediately after removing gloves is essential. Disposable gloves should not be washed and reused.

Gloves are NOT a substitute for proper hand hygiene.

Change gloves and perform hand hygiene when:

- Moving from contaminated areas to clean areas on the same animal
- Moving from dirty to clean procedures on the same animal
- After contact with large amounts of blood and/or body fluids
- Between individual animals

Latex gloves are commonly used, but if latex allergies are a concern, acceptable alternatives include nitrile or vinyl gloves. Latex gloves will decompose and lose come in a variety of materials. The choice of glove material depends on their integrity when exposed to many chemicals. If exposure to chemicals such as disinfectants is expected (e.g. when cleaning and disinfecting cages), disposable nitrile gloves or heavier, reusable rubber gloves (e.g. common dishwashing gloves) can be used.

Reusable gloves must also be disinfected at the end of each task.

Face protection

Face protection prevents exposure of the mucous membranes of the eyes, nose and mouth to infectious materials.

Respiratory Protection

Respiratory protection is designed to protect the respiratory tract from zoonotic infectious diseases transmitted through the air. The need for this type of protection is limited in veterinary medicine because there are few relevant airborne or aerosol zoonotic pathogens in companion animals, in most regions. The disposable P2 mask of N95 rating respirator is a mask that is inexpensive, readily available, and easy to use and provides adequate respiratory protection in most situations.

Footwear

Safety toe boots/gumboots must be worn at all times to reduce the risk of injury from dropped equipment (e.g. scalpels, needles) and to protect the feet from contact with potentially infectious substances (e.g. discharges and other body fluids).

TITLE: SOP-PM018: Procedures for receiving cadavers into Post mortem SCOPE: All Authorized Personnel

RESPONSIBILITY: All Authorized Personnel

PURPOSE: To Outline the Proper Procedures for receiving cadavers

All Cadavers/Submissions must have a necropsy request form also RISQ form if required, from referring vet or clinics including internal clinics such as Equine Specialist Hospital, small animal hospital, UQ Vets & PAS, Clinical Studies Centre, & QASP.

A copy of the request must be supplied to the Post mortem Technician for admin records.

When cadaver is received and stored in post mortem, a toe tag must be completed and attached to animal or bag with matching information to the paperwork provided. Toe tags are attached via zip ties.

University of Queensland Gatton Campus Post mortem Department

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TITLE: SOP-PM019: Procedures involving the transport, handling & storage of animal cadavers. SCOPE: All Authorized Personnel RESPONSIBILITY: All Authorized Personnel

PURPOSE: To Outline the Proper Procedures for the transport, handling & storage of animal cadavers.

The University of Queensland provides assurance that all transportation, handling & storage is in accordance with all applicable laws, policies and guidelines.

Standard procedures for the transportation of cadavers or specimens must ensure optimum bio- security arrangements are in place.

Transportation cadavers can only be done by the Post-Mortem technician or a designated University employee who has completed the Induction for Staff.

All specimens must be fully labelled for transport – including a description of the specimen and identifier that must be able to be linked to the cadaver number.

The appropriate documentation of all animals and specimens must be recorded before the animal is disposed or sent to private cremation.

Students handling cadaveric specimens should observe appropriate personal hygiene measures such as hand washing and use of PPE when necessary; students and staff should receive an induction program (incorporating infection prevention); a higher level of infection prevention and control should be in place for handling of non-embalmed specimens.

All cadavers and specimens should be stored in a secure environment and used for teaching and/or anatomical examinations in a secured setting with restricted staff / student access. All personnel with access rights to such settings within UQ must complete an induction program and be aware of all conditions of access to the setting and requirements for personal conduct & safety within the Post-Mortem examination areas.

Any public open-day sessions to UQ, or public displays should be fully supervised by authorised UQ staff of the University.

When necessary, prohibition of all unauthorised photography, videos and use of mobile phones by students within the post-mortem settings where examinations involving cadavers are performed, to ensure there is no improper use of cadavers, body parts or anatomical examinations or images thereof, and so that client confidentiality is maintained.

TITLE: SOP-PM020: Procedures involving disposal of cadavers

SCOPE: All Authorized Personnel

RESPONSIBILITY: All Authorized Personnel

PURPOSE: To Outline the Proper Procedures for the disposal of cadavers

- 1. The animal waste bin is for the disposal of cadavers and tissues only. The bin is potentially hazardous and new users or people not conversant with the system should seek advice from the post mortem room technician or Duty Pathologist. Personnel or students must not, under any circumstances, stand on top of the bins or enter bins for retrieval of tissues/organs. Minimise dripping of blood onto the floor of the post mortem room and work spaces by bringing the bins close to necropsy tables and gently placing cadavers and organs inside.
- 2. There are certain occasions where a deceased animal cannot be cut-up unto pieces at the risk of aerosol exposure. Under such circumstances, whole animal must be disposed of via deep-burial through UQ waste collection. Animals previously treated with cytotoxic drugs will be double-bagged prior to collection by private cremation companies, or single bagged prior to disposal in an animal waste bin to minimise blood and tissue contamination.
- 3. Students, guests and untrained staff are not allowed to operate the hoist mechanism to move large cadavers.
- 4. All cadavers must be clearly labelled for disposal, private cremation or postmortem examination by the submitting clinician. Labelling cadavers "not for postmortem examination" would also be helpful.
- 5. Needles and sharps must be removed from cadavers prior to submission.
- 6. The following must NOT be placed in the green animal waste bin:
 - Plastic bags or containers, clinical waste, catheters, indwelling needles and drains, metal (horseshoes, etc.), fabric, paper or other non-animal tissue. The exception being animals treated with cytotoxic drugs being bagged prior to disposal.
 - Transgenic animals.
 - Any radioactive waste.

If in doubt about any procedures connected with cadaver/organ disposal, please ask.

TITLE: SOP-PM031: Procedures involving Cleaning and Disinfection SCOPE: All Authorized Personnel

RESPONSIBILITY: All Authorized Personnel

PURPOSE: To Outline the Procedures for cleaning and disinfection

GUIDELINES FOR VETERINARY PERSONAL BIOSECURITY

Cleaning and disinfection are two separate tasks. Cleaning involves the removal of visible organic matter with soap or detergent, whereas disinfection involves the application of a chemical or other procedure in order to kill the remaining microbes that cannot be adequately removed by cleaning. Cleaning is essential because the survival time of many infectious agents outside the host is prolonged by the presence of organic matter, and organic matter also decreases the effectiveness of disinfectants. Depending on the level of disinfection used, disinfection kills or prevents the growth of many or most pathogens.

Equipment should be cleaned and disinfected according to its intended use, the manufacturer's recommendations, and practice policy. Equipment must be cleaned before sterilization or disinfection. Surfaces where animals are housed, examined, or treated should be made of non- porous, sealed, easy-to-clean materials to facilitate cleaning and disinfection and minimize infection transmission.

Personnel whose duties include cleaning and disinfection of equipment and different hospital areas should be trained regarding how to safely handle and use the products available in the clinic. In Australia, Material Safety Data Sheets (MSDS) must be readily accessible for all the applicable chemical products.

Post- Mortem Cleaning

Cleaning entails the removal of all forms of organic matter (e.g. soiled, urine, blood, food, etc.) from a surface. Ensure all areas are well ventilated during cleaning. Cleaning must always be done before a disinfectant is used. After cleaning, allow all surfaces to dry completely.

Avoid generating airborne dust that may contain pathogens by:

- Using a vacuum cleaner equipped with a HEPA filter. The filter helps to prevent aerosolization of pathogens such as ringworm. For this reason, vacuums without HEPA filters should not be used for cleaning in patient-contact areas.
- Lightly spraying surfaces with water prior to mopping or sweeping using an electrostatic wipe, using a wet mop.

Exposure to aerosols generated by brushes during cleaning can be minimized by taking certain precautions, such as wearing a face mask and containing spatter, if the brush or surface is damp. A surgical nose-and-mouth mask will provide some protection against droplet spatter, but not against finer particles and dry dust that can become suspended in the air. Removing C:\Users\vpmkyawt\Documents\2020 OH&S\2020\Biosecurity\Post-Mortem Biosafety and Biosecurity Procedures

Abstract from SVS_SOP Post-Mortem_2020 Myat Kyaw-Tanner and Jo Meers 19th August 2020 sticky, wet or dried-on organic material from surfaces:

This kind of debris should be removed using a detergent or soap and a brush or cloth, as necessary. During cleaning, it is the mechanical action and surfactant properties of the soap that are important, not necessarily its antimicrobial activity.

Avoid the use of pressure washers, particularly those that produce more than 120 psi of pressure.

This amount of pressure may cause aerosolization of pathogens, and pressure washing may even damage surfaces, thus making them harder to disinfect properly. A home garden hose sprayer usually produces less than 120 psi of pressure, and would therefore be relatively safe to use in a small animal kennel area.

Disinfection

Disinfection is more effective if preceded by thorough mechanical cleaning. Ensure the area is well ventilated before using disinfectants. Gloves should be worn when handling disinfectants, but latex gloves will decompose and lose their integrity when exposed to many chemicals. For small jobs, disposable nitrile gloves should be used instead. For large jobs, heavier rubber gloves (e.g. common dishwashing gloves) can be used, but reusable gloves of this type must also be disinfected at the end of each task.

Always refer to the product label with respect to dilution rates and required contact time.

Footbaths

Footbaths are used to decrease (but do not eliminate) microbiological contamination of footwear. Footbaths are shallow containers containing a disinfectant solution. Foot-mats are spongy commercial mats covered with a durable, easy-to-clean material that can be saturated with disinfectant. Foot-mats can increase compliance because they are easier to use, but they are more expensive and more difficult to maintain than footbaths.

Data regarding the need for and efficacy of footbaths and foot-mats are very limited, and there is essentially no information relating to small animal clinics specifically. It has been shown that footbaths can reduce bacterial contamination of footwear in large animal clinic settings. Although other sources of contamination have been shown to be more significant in infection transmission, footwear and floor surfaces cannot be overlooked in an infection control program in a small animal clinic, because patients so often have extensive direct contact with the floor.

Possible problems with footbaths or foot-mats use must also be considered. Footbath or foot mat use is almost invariably accompanied by spillage of disinfectant solution; this can create a slipping hazard on smooth floor surfaces, which are typically present in small animal clinics. Certain disinfectants can also damage floor surfaces with prolonged contact.

Footbaths or foot-mats should be considered when personnel will be walking on a surface that could potentially be more contaminated than the general floor environment, and where

spread of this contamination might pose a risk to patients or personnel. The most likely area where footbaths or foot-mats could be useful would be at the exit of an animal housing area (e.g. dog run) that contains a potentially infectious case, and where clinic personnel will be walking in and out of the potentially contaminated area.

The need for routine use of footbaths or foot-mats in isolation areas where animals are confined in cages is questionable. If footbaths or foot-mats are used, selection of an appropriate disinfectant is important. The disinfectant should be effective against the specific pathogen(s) of concern, stable in solution, and effective with a relatively short contact time.

Oxidizing agents such as accelerated/stabilized hydrogen peroxide and peroxygen disinfectants are ideal. The solution should be changed daily or sooner if gross contamination of the bath/mat occurs. Maintaining proper concentrations of active disinfectants in footbaths and foot-mats is essential for proper performance.

TITLE: SOP-PM032: Procedures involving waste management

Refer to Y:\SVS\SVS-OHS-Public\2019\Biosecurity\Procedures involving waste

<u>management.pdf</u> for laboratory and animal waste disposal; **SCOPE:** All Authorized Personnel

RESPONSIBILITY: All Authorized Personnel

PURPOSE: To Outline the Protocol for handling and disposal of medical waste and sharps

Waste Management

Veterinary medical waste is a potential source of both zoonotic and non-zoonotic infectious pathogens. Therefore, it is important to handle all such waste appropriately. Biomedical waste typically includes sharps, tissues (anatomic waste), highly contaminated (e.g. blood-soaked) materials, and dead animals.

Used sharps are considered biomedical waste and should be disposed of in approved, puncture- resistant sharps disposal containers to remove, store and dispose of used sharps such as needles, blades, razors and other items capable of causing punctures. Non-anatomical waste saturated or dripping with blood (e.g. blood-soaked lap sponges and gauze) are also best disposed of as biomedical waste. If there is likely to be splashes or sprays during this disposal process, appropriate personal protective equipment should be worn.

All other waste, such as general office waste and non-sharp medical equipment, may be disposed of in the regular waste stream, and requires no special treatment other that containment during disposal and removal. Waste should be contained in a leak-proof container or bag that can be discarded with the waste (e.g. a plastic garbage bag).

Urine and faeces are not considered biomedical waste, nor is disposable equipment that has come in contact with an infectious animal (e.g. examination gloves, gowns, bandage materials that are not saturated with blood). Nonetheless, some of these materials may pose a risk to clinic personnel, patients and waste disposal personnel in terms of their potential to transmit infectious pathogens.

Therefore, additional precautions should be taken to minimize contamination of the clinic environment and the risks to people and animals from potentially infectious waste. These may include double-bagging of materials from isolation areas, and keeping waste cans covered to prevent access by curious animals and to prevent spillage if a waste can is knocked over. If contamination of the inside of a waste can occurs (e.g. due to a tear in a garbage bag), the container should be thoroughly disinfected after emptying.

Precautions should be taken to minimize contamination of the clinic environment and the risks to people and animals from potentially infectious waste.

Requirements for storage of medical waste:

- Treat any waste mixed with medical waste, as medical waste.
- The disposal of sharps should not incorporate cutting, bending or any other manipulation that could generate aerosols or splatter of contaminated fluids.

Place sharps into a suitable container that:

- Is puncture-resistant, leak-proof, shatter proof and able to withstand heavy handling.
- Displays the universal biohazard label
- Has an opening which is accessible, safe to use, and designed so that it is obvious when the container is full.
- Is sealable when full or ready for disposal.
- Can be handled without danger of the contents spilling or falling out.
- All needle stick injuries must be recorded.

Place all medical waste other than sharps in clearly labelled heavy duty plastic bags. Bags intended for domestic use are unsuitable for this waste. Tie the bags so as to prevent leakage or expulsion of solid or liquid wastes during storage, handling or transport and ensure they will not be subject to compaction by any compacting device.



