

STANDARD OPERATING PROCEDURE

SUBJECT:	EFFECTIVE BIOSECURITY MEASURES AND MANAGING DISEASE OUTBREAK	Section: Animal Care - General
		SOP: AC21
APPLICABLE TO:	ALL FACILITIES	
POLICY:	TO ENSURE THE RISK OF DISEASE BEING SPREAD THROUGH THE ANIMAL POPULATION IS MINIMISED AND DISEASE OUTBREAKS EFFECTIVELY CONTROLLED	
PURPOSE:	TO DETAIL THE PROCESSES TO BE UNDERTAKEN IN RELATION TO MANAGING CONTAGIOUS ANIMAL DISEASE WITHIN THE SHELTER ENVIRONMENT	
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PREFACE

RSPCA NSW Shelters and Hospitals are in a unique position from an infectious disease management perspective due to the wide range of patients admitted in care. When animals of different ages, background, stress levels and health conditions come together, infectious diseases will occur. Shelter Medicine is herd health medicine for companion animals, however, the care of each individual animal is improved by applying rigorous attention to the health and wellbeing of the entire population of animals. This document is to be read in conjunction with SOP AC17 Cleaning of Animal Facilities.

Shelter and Adoption Outlets

Animals housed in shelters have an increased risk of acquiring or transmitting infectious diseases. We are often unaware of the vaccination status and medical history of animals that come into the shelter. Some animals are already sick, injured, stressed or have a high pathogen burden. Implementing effective infectious disease management procedures will minimise the spread of infectious diseases, protect immunologically vulnerable animals and reduce the overall infectious disease load in the shelter. As resources are often stretched, ensuring the health of the overall shelter population, allows more attention/resources for individual animals.

While adoption animals housed in Care Centres and other adoption outlets are less exposed to infection diseases, processes detailed within this document should be observed.

Hospitals

RSPCA Veterinary Hospitals receive and treat animals from the shelter, inspectorate and animals belonging to private clients. There is always the risk of animals succumbing to nosocomial infections however, this risk is mitigated by SOPs designed to limit this risk for

incoming animals. Many patients in hospital suffer some form of stress, are diseased or immuno-compromised so attention to hospital design, sanitation, animal behaviour, nutrition, husbandry and stress reduction is imperative.

Vaccination prior to (ideal) or on admission to the shelter is mandatory as vulnerability of these animals must be assumed. Private pets admitted to hospital must be vaccinated prior to routine procedures unless they are in need of emergency care or there are mitigating circumstances. Those risks must be communicated with the owner prior to admission.

In order to minimise the risk of disease outbreaks, staff must be thorough in their initial health assessment of the animal and in observing and recording any abnormalities during the animal's duration of stay. Effectively minimising and controlling disease outbreaks within a facility will reduce stress placed on staff and volunteers and potentially reduce animal euthanasia. Protocols are in place to ensure patients admitted to our facilities have the least risk of acquiring an infectious disease. Standard Operating Procedures (SOPs) detailing various procedures can be found on the Intranet.

Whilst direct contact, droplets and aerosol play roles in disease transmission, the most common method of spreading disease in shelters and hospitals is via fomites (objects and substances capable of carrying pathogens). Information on which species of animals are susceptible to the pathogen, the routes of shedding, for example urine, faeces, nasal secretions, and how personnel play a role in disease spread, must be communicated to and understood by all staff.

This document encompasses Staff Responsibilities and General Principles, as well as Specific Disease Management Strategies for Cat Flu, Calicivirus, Kennel Cough, Parvovirus, Ringworm, Giardia and Coccidia.

STAFF RESPONSIBILITIES

Chief Veterinarian

It is the responsibility of the Chief Veterinarian, with the support of the Managing and Senior Veterinarians, Nursing Manager and Shelter Manager, to ensure compliance with these procedures.

Managing and Senior Veterinarians

Managing and Senior Veterinarians shall:

- Ensure new and existing veterinary staff are familiar with this procedure.
- Ensure that this procedure is accessible to all staff, in both hard and electronic forms.
- Ensure that any changes in procedure are brought to the attention of all staff.
- Compile and report feedback from Associate Veterinarians to Chief Veterinarian.
- Provide assistance and training to staff as required
- Ensure that all staff complies with this procedure.

Associate Veterinarians

Associate Veterinarians shall:

- Keep abreast of any changes to this procedure.
- Make other hospital staff, shelter staff and volunteers aware of their responsibility to comply with this procedure.
- Provide feedback regarding this procedure via the Managing and Senior Veterinarians.
- Comply with all aspects of this procedure.

Shelter and Nursing Managers, Supervisors and Team Leaders

Shelter and Nursing Managers, Supervisors and Team Leaders shall:

- Ensure new and existing shelter staff are familiar with this procedure.
- Ensure that this procedure is accessible to all staff, in both hard and electronic forms.
- Ensure that any changes in procedure are brought to the attention of all staff.
- Provide assistance and training to staff as required.
- Ensure all staff comply with this procedure.
- Ensure that adequate stock of all equipment is available to staff at all times.

Shelter and Nursing staff

The Shelter and nursing staff shall:

- Keep abreast of any changes to this procedure.
- Comply with all aspects of this procedure.
- Provide assistance and training to other junior staff if required
- Seek assistance and/or training if required to comply with this procedure.
- Identify and report in a timely manner any infectious diseases to either a supervisor or veterinarian.

While volunteers play an essential role in our facilities, and as such they must be well-informed in regard to diseases and disease control strategies, it is employees who bear the responsibility associated with identifying and managing diseases within our facilities. Where volunteers assist in caring for diseased animals, such as cat flu cats, they must do so under the direct supervision of an experienced member of staff.

GENERAL PRINCIPLES

Aims of Infection Control:

1. To minimise factors that may lead to increased animal susceptibility by minimising stress and overcrowding, treating any underlying conditions, addressing pain, enriching the environment etcetera; and
2. To optimise each individual animal's ability to resist disease by means of preventative healthcare such as vaccination on arrival and parasite control; and
3. To decrease the likelihood of exposure to infectious disease pathogens by adequate facility design, including provision of isolation areas, separation by age and species, use of Personal Protective Equipment (PPE) and adherence to protocols for cleaning and disinfecting.

Personnel (incorporating staff and volunteers) and Order of Work:

1. Personnel must regularly wash their hands in order to maintain good personal hygiene and avoid spreading contagions, and utilise PPE such as gloves, gowns and booties where necessary
2. Animals should be handled in order of lowest immunity to highest immunity. Young animals do not have a fully developed immune system and geriatric animals may not have a fully functioning immune system. As such, these animals are vulnerable to infection but least likely to be infectious and should be attended to before healthy, robust adults.
3. Infectious animals should always be cared for after all healthy animals have been attended to. Ideally, a separate staff member should care for infectious or potentially infectious animals and avoid all contact with the healthy population.

Animal Management:

1. All incoming animals must be treated for internal and external parasites, and vaccinated in accordance with the relevant established procedures
2. Animals with obvious or suspect illness that may infect other animals must be housed in an isolation facility so as to minimise the risk of disease being spread to the general animal population. Ensure staff working in areas housing potentially affected animals avoid areas where healthy animals are held and avoid all contact with healthy animals
3. Movement of animals within the facility should be minimised to allow for movement tracking and to reduce possible exposure to diseases
4. Stress has a powerful impact on animal wellbeing. Stress inhibits immune function. Reducing stress is therefore an important part of infection control because a stressed animal is more susceptible to disease. Stress can cause lesions and clinical signs that are indistinguishable from true clinical disease such as vomiting, diarrhoea and skin lesions. Strategies for reducing stress include;
 - Spot cleaning of all felines and small animals. Refer to SOP AC17 Cleaning of Animal Facilities
 - Use of DAP collars and Feliway infusers, or Feliway and/or Adaptil spray
 - Appropriate handling
 - Good nutrition
 - Environmental enrichment. Refer to Environmental Enrichment Policy
 - Housing appropriate animals together
 - Use of appropriate housing for all animals
 - Providing a comfortable environment and bedding
 - Providing hiding areas for all felines and small animals
 - Reduction of noise where possible and natural light cycles
 - Use of classical music, or other music suitable for animals

Facility and Resources:

1. General cleaning of animal housing facilities and amenities must be undertaken in line with SOP AC17 Cleaning of Animal Facilities
2. Chemical foot baths are to be established at all entry points to isolation facilities and high-risk contamination areas and be routinely used by all persons entering those

areas. Biological matter such as grass and dirt contaminate the foot-bath liquid so chemical solution must be replenished on regular occasions sufficient to ensure its effective disinfection capability; the volume thereof must be sufficient to saturate the soles of those using the foot bath

3. After hosing a kennel, staff must hose any faecal matter off their gum boots before moving to the next kennel
4. To avoid cross-contamination, dedicated equipment must be allocated to each area of the facility and clearly identifiable by all personnel. For example, isolation facilities must have specified cleaning equipment that is not removed from that area. Where possible, staff should also have a dedicated work area prescribed on a daily basis; those working in high risk or isolation areas should not enter other areas if at all avoidable
5. Items that are used in relation to multiple animals, for example poop scoops, microchip scanners, cat carry cages etcetera, must be cleaned and disinfected on a regular basis sufficient to ensure they do not pose a source of infection
6. Gloves must be changed between animals
7. Newspaper must be used on scales and changed between animals
8. When closing garbage bin bags, don't express the air in a big whoosh as it spreads contaminated aerosols
9. Where possible, animals with an unknown vaccination history should only be exercised in concreted yards. The yards must be cleaned and disinfected on a regular basis sufficient to ensure they do not pose a source of infection
10. Food and water bowls
 - a. Food bowls must be washed daily in hot, soapy water and allowed to dry thoroughly in between use, except in the case of spot cleaning. An approved sanitation chemical may be applied to bowls after washing and on a routine basis however sanitation must occur when there is known or likely disease presence
 - b. Water bowls must be cleaned thoroughly on a weekly basis or at such time as the occupant vacates the kennel/cage, whichever situation occurs first. An approved sanitation chemical may be applied to bowls after washing and on a routine basis however sanitation must occur when there is known or likely disease presence
 - c. Specific instruction in relation to cleaning and sanitising of food and water bowls is provided in the Specific Disease Management Strategies section of this document

Barrier Nursing:

Barrier nursing is a technique used to care for infectious patients in isolation to prevent the spread of infection.

Barrier nursing techniques:

- Only one staff member should be assigned to care for infectious animals each day
- Ensure all healthy animals are attended to prior to caring for infectious animals. Do not return to healthy animals once the infectious animals are attended to
- Gather all equipment required (this equipment should remain with the infectious animal), ensure there is an ample supply of necessary PPE

- Ensure you have the correct disinfectant prepared to the appropriate ratio
- Ensure all unnecessary items are removed. This allows for easier cleaning and less areas for the infectious particles to be present
- Wash hands before and after handling the infectious animal
- PPE including gloves, gown and rubber boots or booties should be worn when attending to potentially infectious or infectious animals. These PPE items are to be carefully removed and disposed of when leaving the area
- When removing contaminated items such as bedding, place the items carefully into the garbage bin/bag to minimise the spread of the infectious particles
- When an infectious animal is discharged from the cage, the area must be degreased and disinfected; this includes walls, doors and door handles. Ensure all equipment is thoroughly disinfected or disposed of appropriately
- Utilise foot baths or booties, keeping in mind -
 - Foot baths require regular changing especially if excess faeces/debris
 - Booties or disposal shoe covers are a better choice than foot baths. Alternately provide boots available to wear only in isolation areas. These are to be removed on leaving isolation.

SPECIFIC DISEASE MANAGEMENT STRATEGIES

In the case of a disease being present in the shelter environment, the following processes must also be undertaken.

Appropriate Disinfectants for use on suspected and confirmed Infectious Diseases

Disinfectant	Ratio
CSA Clawrite 12.5%	1:100
CSA Clawrite 6%	1:50
Household bleach 3%	1:25
CSA Tri-San (canine housing only)	1:80
F10	1:125 (or 1:114 in auto dispenser)

Once diluted, disinfectant should be used within 24 hours.

CAT FLU

Managing cat flu in a shelter environment involves:

- Ensuring all staff and volunteers are able to recognise the signs of cat flu
- Having a clear procedure at each site for personnel to follow if a cat or kitten shows signs of flu
- Isolating cat flu cats and those suspected of cat flu from the general population
- Implementing strategies to reduce stress on cats and kittens
- Spot cleaning wherever possible
- Hand washing between handling different cats
- Adhering to cleaning and disinfecting procedures
- Wearing appropriate PPE

Often cats under observation for cat flu are housed in the same area as cat flu cats. It is essential that measures are taken to protect the cats under observation

- House cats under observation in cages above actively sneezing cats to prevent them getting sneezed on
- Attend to cats under observation before the cat flu cats
- Wash or sanitise hands, or change gloves, between each cat
- Wear gloves when feeding or spot cleaning
- Wear gloves and gown if degreasing or disinfecting pen of handling the cats

Cleaning a cat flu cage

- Wear gloves and gown
- Refer to SOP AC17 Cleaning of Animal Facilities - Feline Accommodation
- Allow contact time of Viracide for at least one minute, or as long as possible without letting it dry
- Ensure that all dried nasal discharge is removed from walls, floor and door
- Remove PPE. Wash hands thoroughly
- Cage can be used immediately

Personal Protective Equipment

PPE	Comments
Gloves	Gloves if spot cleaning
Gown	Gloves and Gown for full clean

Bedding, Bowls, Litter trays and Toys

Item	Comments
Bedding	Can be washed and reused
Food and water bowls	Degrease, rinse, disinfect and rinse after contact time
Litter trays	Degrease, rinse, disinfect
Toys	Degrease, rinse, disinfect and rinse after contact time
Scratching posts	Disinfect daily for three days and allow to dry outside in sun

CALICIVIRUS

As Calicivirus is highly infectious, it is important that cats with signs of Calicivirus are dealt with in a quick and appropriate manner by -

- Ensuring all staff can recognise signs of Calicivirus
- Having a clear procedure at each site for staff to follow if a cat shows signs of Calicivirus. These procedures may differ at each site due to the design of the facility etc.
- Isolating Calicivirus cats and those suspected of Calicivirus from the general population
- Hand washing between handling different cats
- Wearing appropriate PPE

Cleaning a Calicivirus cage

- Implement full barrier nursing techniques

- Wear gloves and gown
- Refer to SOP AC17 Cleaning of Animal Facilities - Feline Accommodation
- Allow contact time of Viracide for at least one minute, or as long as possible without letting it dry
- Ensure all unnecessary items are removed
- Dispose of any soft toys, bedding or scratching posts. When removing contaminated items such as bedding, place the items carefully into the garbage bin to minimise the spread of the infectious particles
- Remove PPE. Wash hands thoroughly
- Cage should be disinfected daily for three days prior to use

Personal Protective Equipment

PPE	Comments
Gloves Gown	Full barrier nursing techniques should be implemented

Bedding, Bowls, Litter trays and Toys

Item	Comments
Bedding	Dispose of in the garbage
Food and water bowls	Degrease, rinse, disinfect and rinse after contact time
Litter trays	Degrease, rinse, disinfect
Toys	Dispose of in garbage
Scratching posts	Dispose of in garbage

FELINE IMMUNODEFICIENCY VIRUS (FIV)

FIV is not very readily spread as the main route of transmission is through bites. FIV is spread by direct contact with a FIV positive cat and it is possible for humans to spread FIV through thoughtless husbandry. FIV is easily killed with routine disinfectants.

Managing FIV in a shelter environment:

- House an FIV positive cat in a separate cage from other cats
- Do not allow direct contact with FIV negative cats
- Wear disposable gloves when handling water bowls, food bowls and litter trays
- Wash hands after handling an FIV positive cat and/or after handling bedding, litter, bowls which have been in contact with a FIV cat
- Bowls, medication, pill poppers and litter trays of FIV positive cats should be kept permanently separate from non-infected items
- Do not share items that can be contaminated with body fluids (blood and saliva) such as pill poppers, multi dose medication containers, toys, eye drops and food
- Do not house an FIV positive cat in an isolation ward unless they also have ringworm, panleucopaenia or cat flu. As these virus cause a suppressed immune system, housing these cats in Isolation increases their chances of being infected with other diseases

Cleaning a FIV positive cat cage:

- Clean FIV positive cat cages last

- Wear disposable gloves when spot cleaning cages, handling water bowls, food bowls and litter trays, and wash hands afterwards
- Wash hands after handling a FIV positive cat and cleaning a cage
- Wash and disinfect bowls, pill poppers, litter trays and scratching posts separately from non-contaminated items. Keep these items permanently separate from non-infected items
- In the hospital, thoroughly clean and sterilise medical equipment that can be contaminated with body fluids between patients, e.g. dental and surgical instruments, ET tubes, breathing circuits. Do not use for more than one patient

Personal Protective Equipment

PPE	Comments
Gloves	Gloves for spot and full clean

Bedding, Bowls, Litter trays and Toys

Item	Comments
Bedding	Can be washed and reused for FIV positive cats ONLY
Food and water bowls	Degrease, rinse, disinfect and rinse. Keep separate from non-infected items. Can be reused for FIV positive cats ONLY
Litter trays	Degrease, rinse, disinfect. Keep separate from non-infected items. Can be reused for FIV positive cats ONLY
Toys	Degrease, rinse, disinfect and rinse. Keep separate from non-infected items. Can be reused for FIV positive cats ONLY
Scratching posts	Disinfect and allow to dry outside in sun. Keep separate from non-infected items. Can be reused for FIV positive cats ONLY

FELINE LEUKEMIA VIRUS (FeLV)

At times shelters are required to house FeLV positive cats due to custody or impounding circumstances. This infectious disease is classified as a non-rehomable condition and as such these cats should not be housed in adoption areas. Cats can pass FeLV between themselves through long-term exposure to infected milk, saliva (mutual-grooming, sharing food and water bowls) and bite wounds. FeLV is spread by direct contact with a FeLV positive cat and it is possible for humans to spread FeLV through thoughtless husbandry. FeLV is easily killed with routine disinfectants.

Managing FeLV in a shelter environment:

- House a FeLV positive cat in a separate cage from other cats
- Do not allow direct contact with other cats
- Wear disposable gloves when handling water bowls, food bowls and litter trays
- Wash hands after handling a FeLV positive cat and/or after handling bedding, litter, bowls which have been in contact with a FeLV cat

- Bowls, medication, pill poppers and litter trays of FeLV positive cats should be kept permanently separate from non-infected items
- Do not share items that can be contaminated with body fluids (blood and saliva) such, pill poppers, multi dose medication containers, toys, eye drops and food
- Do not house a FeLV positive cat in an isolation ward unless they also have ringworm, panleucopaenia or cat flu. As these virus cause a suppressed immune system, housing these cats in Isolation increases their chances of being infected with other diseases

Cleaning a FeLV positive cat cage:

- Clean FeLV positive cat cages last
- Wear disposable gloves when cleaning cages, handling water bowls, food bowls and litter trays. Wash hands afterwards.
- Wash hands after handling a FeLV positive cat and cleaning a cage
- Wash and disinfect bowls, pill poppers, litter trays and scratching posts separately from non-contaminated items. Keep these items permanently separate from non-infected items
- In the hospital, thoroughly clean and sterilise medical equipment that can be contaminated with body fluids between patients. E.g. dental and surgical instruments, ET tubes, breathing circuits. Do not use for more than one patient

Personal Protective Equipment

PPE	Comments
Gloves	Gloves for spot and full clean

Bedding, Bowls, Litter trays and Toys

Item	Comments
Bedding	Dispose of in the garbage
Food and water bowls	Degrease, rinse, disinfect and rinse. Keep separate from non-infected items. Can be reused for FeLV positive cats ONLY, otherwise dispose of in the garbage.
Litter trays	Degrease, rinse, disinfect. Keep separate from non-infected items. Can be reused for FeLV positive cats ONLY, otherwise dispose of in the garbage.
Toys	Degrease, rinse, disinfect and rinse. Keep separate from non-infected items. Can be reused for FeLV positive cats ONLY, otherwise dispose of in the garbage.
Scratching posts	Disinfect and allow to dry outside in sun. Keep separate from non-infected items. Can be reused for FeLV positive cats ONLY, otherwise dispose of in the garbage.

KENNEL COUGH

Managing Kennel Cough in a shelter environment involves:

- Ensuring all staff can recognise signs of Kennel Cough
- Having a clear procedure at each site for staff to follow if a dog shows signs of Kennel Cough

- Isolating Kennel Cough dogs from the general population. This will vary at different sites, some sites will have designated cages for Kennel Cough dogs, other will quarantine the dog in its cage and not allow it to exercise with other dogs
- Hand washing between handling different dogs
- Adhering to cleaning and disinfecting procedures
- Wearing appropriate PPE

Cleaning a kennel cough cage:

- Wear gloves and gown
- Refer to SOP AC17 Cleaning of Animal Facilities - Canine Accommodation
- Allow contact time of Tri-San for at least one minute, or as long as possible without letting it dry
- Disinfect cleaning equipment (pooper scoop etc)
- Remove PPE. Wash hands thoroughly
- Cage can be used immediately

Personal Protective Equipment

PPE	Comments
Gloves	Gloves if spot cleaning
Gown	Gloves and Gown for full clean

Bedding, Bowls and Toys

Item	Comments
Bedding	Can be washed and reused
Food and water bowls	Degrease, rinse, disinfect and rinse after contact time
Toys	Degrease, rinse, disinfect and rinse after contact time

PARVOVIRUS

Effective management of parvovirus contact animals is essential in protecting the general population of animals. Dogs that have been vaccinated at least 10-14 days prior (last vaccine over 10 weeks) are less likely to be at risk. These animals should be bathed only and processed normally.

When an adult dog is diagnosed with canine parvovirus, in general, the risk is confined to that dog. When a puppy is diagnosed with canine parvovirus, in general, only littermates are considered at high risk

When a dog or pup is suspected of Parvovirus the actions of the staff are imperative to contain the virus to that one cage.

- Ensure all staff can recognise signs of Parvovirus
- If a dog is suspected of Parvovirus the staff member must advise a Team Leader/Supervisor/Manager immediately
- Stop all movements of animals, staff and public into and from the area to contain the virus. **DO NOT MOVE THE DOG/PUP FROM ITS CAGE**
- Chemical foot baths are to be established at all entry points to the contaminated area

- Wear PPE - gloves, gown and booties. Remove booties each time you step outside of the cage
- If a ELISA Parvo test is required, do so within the cage to prevent having to move the dog unnecessarily
- If the Parvo test result is positive, the Manager or treating vet will decide the appropriate course of action
 - A positive ELISA canine parvovirus test in a clinical animal is considered canine parvovirus +
 - A negative ELISA canine parvovirus test in conjunction with normal complete blood count is considered canine parvovirus - ve, though may indicate an animal which has been recently exposed to parvovirus
 - A negative ELISA canine parvovirus test in conjunction with clinical signs may be considered canine parvovirus however other disease states may present in a similar fashion. It is ultimately the attending veterinarian's professional judgement on whether the animal be deemed parvo positive or negative.
- On occasions that an infected dog must be moved, place its back end into a thick plastic bag to reduce the chance of Parvovirus particles being spread. Carry the dog to the appropriate area
- When removing soiled PPE, do so carefully and dispose of appropriately. Wash hands. If clothing is contaminated advise the Team Leader/Supervisor/Manager
- Consider animals which have potentially been exposed to Parvovirus. Check the vaccination status of surrounding dogs. Determine which animals will require quarantine time
- Attend to Parvovirus contact animals (see Managing Parvovirus Contact Animals)
- Return to Parvo cage to clean and disinfect

Cleaning a Parvovirus cage:

- Implement full barrier nursing techniques
- Organise equipment required; PPE, garbage bags, newspaper, appropriate disinfectant
- Wear PPE - gloves, gown and booties
- Remove any soiled bedding and place carefully in the garbage bag
- If the water/food bowls are plastic dispose of them in the garbage bag
- Wipe up as much faeces with newspaper and dispose of carefully in garbage bag
- Apply the appropriate disinfectant at the correct ratio for Infectious Diseases and allow at least 10 minutes contact time, or as long as possible without allowing it to dry
- Hose cage gently to ensure parvovirus particles are not sprayed around the environment
- Scrub the cage with degreaser. Ensure the door and latches are attended to
- Rinse cage thoroughly with water
- Apply appropriate disinfectant at correct ratio for Infectious Diseases and allow to air dry
- Degrease pathway and apply appropriate disinfectant at correct ratio for Infectious Diseases

- Disinfect any equipment used
- Remove PPE and place in garbage bag
- Tie up garbage bag, allowing the air to release very slowly - don't whoosh it out as it will aerosolize the virus particle, and dispose of in industrial bin
- Wash hands thoroughly
- Consider a change of clothes
- Parvovirus cage must be disinfected daily for three days before it can be used again

Avoid contact with other non-vaccinated dogs and cats for the rest of the day until you have showered and washed your uniform in a very hot wash or soaked the clothes in an appropriate disinfectant prior to the wash. Ensure shoes are also thoroughly disinfected.

Personal Protective Equipment

PPE	Comments
Gloves Gown Booties	Full barrier nursing techniques should be implemented

Bedding, Bowls and Toys

Item	Comments
Bedding	Dispose of in the garbage
Food and water bowls	Dispose of plastic food/water bowls in the garbage. Degrease, rinse, disinfect and rinse after contact time any stainless steel bowls
Toys	Dispose of in the garbage

Managing Parvovirus Contact Animals

Effective management of parvovirus contact animals during their quarantine time is essential in protecting the general population.

- All dogs housed in the same section/row of a confirmed case of Parvovirus should be observed for signs of parvovirus for three to 10 days. Limit the amount of exercise these dogs have to prevent the potential spread of Parvovirus. Do not exercise in grass paddocks.
- Determine the vaccination status of any dogs that were housed in the same cage or had contact with the infectious dog. See table below for quarantine requirements

Vaccination status	Quarantine period
Puppy vaccinated less than 14 days prior OR that has not had final vaccination	Isolate in kennel for 14 days. Bath with Malaseb or other disinfectant/medicated shampoo at commencement and conclusion of quarantine period
Puppy vaccinated more than 14 days prior OR that has had final vaccination	Bath with Malaseb or other disinfectant/medicated shampoo to remove potential Parvovirus particles on coat. No quarantine necessary
Adult vaccinated less than 14 days prior	Isolate in kennel for 14 days. Bath with Malaseb or other disinfectant/medicated shampoo at commencement and conclusion of quarantine period

Adult vaccinated more than 14 days prior	Bath with Malaseb or other disinfectant/medicated shampoo to remove potential Parvovirus particles on coat. No quarantine necessary
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Quarantining Parvovirus Contact Animals

- Ensure the quarantine pen is clean and disinfected prior to placing the dog in it
- Bath the dog before and after quarantine time to remove any parvovirus particles on the coat
- Vaccinate the dog if not already completed, remember the dog may not develop parvovirus
- Implement full barrier nursing techniques
- Ensure animals paperwork clearly indicates when the quarantine period begins and ends
- Observe the dog closely every day and alert the veterinarian if suspect signs develop

FELINE PARVOVIRUS AND PANLEUKOPEANIA

Effective management of Feline parvovirus and panleukopaenia contact animals is essential in protecting the general population of animals. Cats and kittens that have been vaccinated at least 10-14 days prior (last vaccine over 10 weeks) are less likely to be at risk. These animals should be bathed only and processed normally.

When an adult cat or kitten is diagnosed with feline parvovirus or panleukopenia, due to the virulence of the strain and the naivety of the population, all cats and kittens that have been transported, handled or housed near the positive cat during the 14 day incubation period (in same air space or in contact with the same equipment or potentially contaminated staff member (if not barrier nursed) are to be considered high risk exposed and managed according to their vaccination status as described below. It is important to trace all movements of the parvo positive cat/kitten within the 14 day incubation period to ensure effective containment and confirm the source of infection.

Any cat or kitten that tests positive that has not been vaccinated within the past three (3) days with a live F3 vaccine (slight risk of false positive parvo test), should be humanely euthanased due to the high mortality rate and virulence of the virus. If a positive parvo test result occurs and the cat or kitten has been vaccinated within the three (3) day window and is asymptomatic, a leucogram or complete blood count should be performed to determine if there is an active infection.

When a cat or kitten is suspected of Feline Parvovirus or panleukopeania the actions of the staff are imperative to contain the virus to that one cage or area/room.

- Ensure all staff can recognise signs of Feline Parvovirus and Feline Panleukopenia
- If a cat is suspected of Feline Parvovirus and Feline Panleukopenia the staff member must advise a Team Leader/Supervisor/Manager/Senior or Managing Veterinarian immediately
- If possible, triage any cats or kittens entering the shelter or clinic and assess their health status/risk profile in isolation to other shelter/clinic animals

- Ask if there were any sick or dead cats or kittens seen in the area where the cat/kitten was found. Triage accordingly
- Ideally adult cats and naive kittens should not be housed in the same area.
- Consider the disease profile of each animal and house the higher risk animals in the bottom cages or in a separate area to reduce the splash risk onto healthy animals if an animal develops signs of the disease in care
- Record, track and identify any hot-zone areas where positive animals have previously come from. This will add in triaging on entry
- Stop all movements of animals, staff and public into and from the area to contain the virus. **DO NOT MOVE THE CAT/KITTEN FROM ITS CAGE**
- Chemical foot baths are to be established at all entry points to the contaminated area
- Wear PPE - gloves, gown and booties. Remove booties each time you step outside of the cage/room/area
- If an ELISA Parvo test is required, do so within the cage or carry box to prevent having to move the cat/kitten unnecessarily.
- Ideally, if identified as a potential risk of infection prior to entering the shelter/clinic, the parvo test should be performed while the cat/kitten is contained in the vehicle it arrives in.
- If the Parvo test result is positive, the Manager or treating vet will decide the appropriate course of action
 - A positive ELISA canine/feline parvovirus test in a clinical animal is considered feline parvovirus +
 - A negative ELISA canine/feline parvovirus test in conjunction with normal complete blood count is considered feline parvovirus - ve unless the cat or kitten has come from a known hot-zone or infected property, though a negative ELISA test may indicate an animal which has been recently exposed to parvovirus.
 - A negative ELISA canine/feline parvovirus test in conjunction with clinical signs may be considered Feline Parvovirus/Panleukopenia however other disease states may present in a similar fashion. It is ultimately the attending veterinarian's professional judgement on whether the animal be deemed parvo positive or negative.
- On occasions that an infected cat or kitten must be moved, place it into a carry box and place the carry box into a plastic lidded tub to reduce the chance of virus particles being spread. Carry the cat or kitten to the appropriate area
- When removing soiled PPE, do so carefully and dispose of appropriately. Wash hands. If clothing is contaminated advise the Team Leader/Supervisor/Manager
- Consider animals which have potentially been exposed to Parvovirus. Check the vaccination status of surrounding cats and kittens. Determine which animals will require quarantine time
- Attend to Parvovirus/panleukopenia contact animals (see Managing Parvovirus Contact Animals)
- Return to Parvo/Panleukopenia contaminated cage to clean and disinfect

Cleaning a Parvovirus/Panleukopenia contaminated cage:

- Implement full barrier nursing techniques
- Organise equipment required; PPE, garbage bags, newspaper, appropriate disinfectant
- Wear PPE - gloves, gown and booties
- Remove any soiled bedding and place carefully in the garbage bag
- If the water/food bowls are plastic dispose of them in the garbage bag
- Wipe up as much faeces with newspaper and dispose of carefully in garbage bag
- Apply the appropriate disinfectant at the correct ratio for Infectious Diseases and allow at least 10 minutes contact time, or as long as possible without allowing it to dry
- Hose or wipe out the cage gently to ensure parvovirus particles are not sprayed around the environment
- Scrub the cage with degreaser. Ensure the door and latches are attended to
- Rinse cage thoroughly with water
- Apply appropriate disinfectant at correct ratio for Infectious Diseases and allow to air dry
- Degrease pathway or floor and apply appropriate disinfectant at correct ratio for Infectious Diseases
- Disinfect any equipment used
- Dispose of any consumables in the room or area
- Remove PPE and place in garbage bag
- Tie up garbage bag, allowing the air to release very slowly - don't whoosh it out as it will aerosolize the virus particle, and dispose of in industrial bin
- Wash hands thoroughly
- Consider a change of clothes
- Parvovirus/Panleukopenia contaminated cage must be disinfected daily for three days before it can be used again
- Fogging the whole area with F10 SC for 3 days is also recommended

Avoid contact with other non-vaccinated dogs and cats for the rest of the day until you have showered and washed your uniform in a very hot wash or soaked the clothes in an appropriate disinfectant prior to the wash. Ensure shoes are also thoroughly disinfected.

Personal Protective Equipment

PPE	Comments
Gloves Gown Booties	Full barrier nursing techniques should be implemented

Bedding, Bowls and Toys

Item	Comments
Bedding	Dispose of in the garbage

Food and water bowls	Dispose of plastic food/water bowls in the garbage. Degrease, rinse, disinfect and rinse after contact time any stainless-steel bowls
Toys	Dispose of in the garbage

Managing Parvovirus Contact Animals

Effective management of Parvovirus and Panleukopenia contact animals during their quarantine time is essential in protecting the general population.

- All cats housed in the same section/row/room of a confirmed case of Parvovirus or Panleukopenia case should be observed for signs of parvovirus for 10-14 days (incubation period) and prevent any animal movement to or from the containment area. Additional cases may develop within the quarantine period which may require the quarantine period to restart again.
- Determine the vaccination status of any cats that were housed in the same cage, area, room, had contact with the same equipment or staff, shared the same air space or had contact with the infectious cat or kitten. See table below for quarantine requirements

Vaccination status	Quarantine period
kitten vaccinated less than 14 days prior OR that has not had final vaccination	Isolate in for 14 days. Bath with Malaseb or other disinfectant/medicated shampoo at commencement and conclusion of quarantine period
Kitten vaccinated more than 14 days prior OR that has had final vaccination	Bath with Malaseb or other disinfectant/medicated shampoo to remove potential viral particles on coat. No quarantine necessary
Adult vaccinated less than 14 days prior	Isolate in cage/room/run/area for 14 days. Bath with Malaseb or other disinfectant/medicated shampoo at commencement and conclusion of quarantine period
Adult vaccinated more than 14 days prior	Bath with Malaseb or other disinfectant/medicated shampoo to remove potential viral particles on coat. No quarantine necessary

Quarantining Parvovirus Contact Animals

- Ensure the quarantine enclosure is clean and disinfected prior to placing the cat or kitten in it
- Bath the cat or kitten before and after quarantine time to remove any viral particles on the coat
- Vaccinate the cat or kitten if not already completed, remember the cat or kitten may not develop Parvovirus or Panleukopenia
- Implement full barrier nursing techniques
- Ensure animals paperwork clearly indicates when the quarantine period begins and ends

Observe the cat/kitten closely every day and alert the veterinarian if suspect signs develop such as increase or decrease in core body temperature, diarrhea, inappetence, vomiting or lethargy.

RINGWORM

Ideally animals under treatment for ringworm should be placed in foster care with an appropriately skilled and resourced carer, housed in specific isolation cages, or housed at a veterinary clinic. Procedures on how to manage Ringworm animals will differ at each site depending on the resources (space, foster carers, appropriate housing) available.

Ringworm spores are often found in dust and fluff, as such keeping areas clean and dust free is very important when dealing with ringworm.

Cleaning a Ringworm cage:

- Wear PPE - gloves and gown
- Implement full barrier nursing techniques
- Carefully gather up bedding and dispose of in garbage bin
- Take out all items, litter tray, bowls, toys, scratching posts
- Dispose of any soft toys, bedding or scratching posts. When removing contaminated items such as bedding, place the items carefully into the garbage bin to minimize the spread of the infectious particles
- Litter trays and bowls are to be washed in appropriate disinfectant at correct ratio for Infectious Diseases
- If there is newspaper lining the cage, carefully fold inwards then lift and place in the garbage bag
- Use dampened paper towel to wipe up debris and dispose of immediately, to reduce spread/aerosolisation of contaminants
- Spray cage with appropriate disinfectant and correct ratio for Infectious Diseases and allow up to 10 minutes contact time, or as long as possible without allowing it to dry
- Disinfect all equipment
- Remove PPE. Wash hands thoroughly
- Cage should be disinfected daily for three days prior to use

Personal Protective Equipment

PPE	Comments
Gloves Gown Hair cap Booties	Gloves, Gown, Hair cap and Booties OR full protection overalls with hair cap included

Bedding, Bowls, Litter trays and Toys

Item	Comments
Bedding	Dispose of in the garbage
Food and water bowls	Degrease, rinse, disinfect and rinse after contact time
Litter trays	Degrease, rinse, disinfect
Toys	Dispose of in the garbage
Scratching posts	Dispose of in the garbage

GIARDIA AND COCCIDIA

Animals that have tested positive for Giardia or Coccidia will likely require three doses of Baycox over three consecutive days. Giardia and Coccidia animals will likely have diarrhea. These animals will require a bath at the beginning of treatment and also at the end of their treatment to remove infectious particles from their coat.

Cleaning Giardia and Coccidia cages:

- Wear PPE - gloves and gown
- Carefully gather up bedding and dispose of in garbage bin
- Take out all items, litter tray, bowls, toys, scratching posts
- Dispose of any soft toys, bedding or scratching posts. When removing contaminated items such as bedding, place the items carefully into the garbage bin to minimise the spread of the infectious particles
- Litter trays and bowls are to be washed in appropriate disinfectant at correct ratio for Infectious Diseases
- If there is newspaper lining the cage, carefully fold inwards then lift and place in the garbage bag
- Allow maximum contact time of disinfectant for at least one minute
- Disinfect all equipment
- Dry cage if using immediately
- Remove PPE. Wash hands thoroughly

Personal Protective Equipment

PPE	Comments
Gloves Gown	Gloves if spot cleaning Gloves and Gown for full clean or if animal must be handled/removed or if entering a dog's cage while occupied

Bedding, Bowls, Litter trays and Toys

Item	Comments
Food and water bowls	Degrease, rinse, disinfect and rinse after contact time
Litter trays	Degrease, rinse, disinfect
Toys	Dispose of in the garbage
Scratching posts	Dispose of in the garbage

SAFETY REQUIREMENTS

Prior to handling any diseased animal and/or cleaning the infected environment, staff must don protective clothing sufficient to reduce the risk of infection being spread either to themselves, or to other animals housed at the shelter. Refer to the detailed advice in this document for specific Personal Protective Equipment advice.

