

Safety and Good Practices Manual

**Veterinary Hospital,
University of León**



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1. Identification of the scenario

1.1. Local or Scenario (classroom, laboratory, farm, building, company, etc.)

Veterinary Clinical Hospital (HVULE) – (Small Animal Clinic and Large Animal Clinic).

1.2. Biosecurity Responsible Director-Manager of HVULE

2. Importance of Biosecurity

Biosecurity is understood as the implementation of measures that reduce the Hazard of introduction and spread of disease-causing agents. It requires the adoption of a series of attitudes and behaviours to decrease the Hazard in all activities involving domestic animals and others (World Organisation for Animal Health 2008).

For the care and maintenance of public health, considering it as a global concept (One Health), it is essential to guarantee biosecurity, as well as the prevention and control of infectious diseases, in all activities related to healthcare, teaching, and research; all these activities are carried out at the Veterinary Clinical Hospital of the University of León (HVULE).

Excellence in clinical activity and teaching is achieved not only with impeccable patient care. It is crucial to minimize the Hazard of contracting or spreading infectious diseases, paying special attention to nosocomial infections and zoonoses.

The objectives of this plan are to optimize patient care and provide a safe hospital for both staff and patients. Specifically, it aims to minimize infections associated with hospitalization, develop strategies for adequate and precise communication of an infection, play an active role in the responsible use of antibiotics, protect hospital

staff, students and clinicians from exposure to zoonotic diseases, and educate students practically in biosecurity and infection control. To achieve this, hygiene measures will be optimized including hand washing, appropriate clothing and personal protection, minimizing unnecessary contact with patients, cleaning and disinfection, and disposal of contaminated infectious material. Efforts will be made to interrupt the cycles of transmission of infectious and parasitic diseases through the use of hygiene measures, creating barriers to prevent both direct and indirect transmission. To do this adequately, the circulation of patients, students, staff, and anyone accessing the HVULE will be taken into account. Education and awareness about zoonotic and nosocomial Hazards will be promoted. Measures of health surveillance and promotion of research will also be included.

- The measures taken in this plan are based on the principles of infection prevention and control:
- Optimization of hygiene
- Interruption of cycles of transmission of diseases
- Research and control of infectious processes
- Improvement of education and awareness of nosocomial and zoonotic diseases
- The objectives of the Biosecurity Program are:
- Protect staff, students, and clients from exposure to zoonotic agents.
- Create a space that minimizes the Hazard of patients contracting nosocomial infections.
- Develop educational activities with students that include actions related to biosecurity, prevention, and control of infectious diseases and zoonoses, as well as activities related to health surveillance.
- Provide information on the prevention and control of infectious and parasitic diseases to clients and anyone accessing HVULE.

3. Notifiable Diseases (NDO)

OFFICIAL STATE BULLETIN No. 255, Wednesday, October 25, 2023, Sec. I. Page 140428-140433

An OIE (Officially Listed Disease) is a disease included in a list by the Official Veterinary Authorities, whose suspicion or presence must be immediately communicated to the Competent Veterinary Authority. The OIEs for terrestrial animals in Spain are listed in Article 5 and in Annex II of the Animal Health Regulation (EU) 2016/429, among which are included:

- Bluetongue or ovine catarrhal fever
- Foot-and-mouth disease
- Rift Valley fever
- Rinderpest
- Vesicular stomatitis
- Rabies virus infection
- Anthrax
- Bovine spongiform encephalopathy
- Contagious nodular dermatosis
- Contagious bovine pleuropneumonia
- Peste des petits ruminants
- Sheep and goat pox
- Classical swine fever
- African swine fever
- Swine vesicular disease
- Notifiable avian influenza
- Newcastle disease in poultry and captive birds
- African horse sickness
- Dourine
- Equine encephalomyelitis of the following types:
 - Eastern equine encephalomyelitis
 - Japanese encephalitis
 - Venezuelan equine encephalomyelitis
 - West Nile fever
 - Western equine encephalomyelitis
 - Equine infectious anaemia

– Glanders.

It is necessary to consider those infectious processes determined by the World Organisation for Animal Health (WOAH) that are subject to the mandatory reporting of OIEs and the regulation of their notification in accordance with Royal Decree 779/2023.

The Law 8/2003, of April 24, on Animal Health, establishes in its articles 18 and 24 that, when the existence of a notifiable disease or a disease subject to intra-community or international restrictions is confirmed, or the official extinction of a disease is declared, the MAPA will proceed to communicate such incidence to the health authorities of the European Union, as well as to third countries and international organizations with whom such an eventuality had been agreed upon, in the manner and within the deadlines established.

Required Samples and Diagnostic Tests

Consult the OIE (World Organisation for Animal Health, formerly OIE)

<https://www.woah.org/es/inicio/>

Animal Diseases

<https://www.woah.org/es/que-hacemos/sanidad-y-bienestar-animal/enfermedades-animales/>

Terrestrial Animal Code

<https://www.woah.org/es/que-hacemos/normas/codigos-y-manuales/acceso-en-linea-al-codigo-terrestre/>

Manual of Diagnostic Tests and Vaccines for Terrestrial Animals

<https://www.woah.org/es/que-hacemos/normas/codigos-y-manuales/acceso-en-linea-al-manual-terrestre/>

Aquatic Animal Code

<https://www.woah.org/es/que-hacemos/normas/codigos-y-manuales/acceso-en-linea-al-codigo-acuatico/>

Recommendations for Disease Control and Animal Trade

Terrestrial Animal Code

<https://www.woah.org/es/que-hacemos/normas/codigos-y-manuales/acceso-en-linea-al-codigo-terrestre/>

Aquatic Animal Code

<https://www.woah.org/es/que-hacemos/normas/codigos-y-manuales/acceso-en-linea-al-codigo-acuatico/>

Use of Animals for Teaching and Research

When using animals for such purposes, it is always necessary to comply with the basic standard for this purpose (RD 53/2013 Basic standards applicable to the protection of animals used in experimentation and other scientific purposes, including teaching) as well as having the specific authorizations regulated in such standard. Biosecurity standards must also be complied with; under no circumstances is the housing or circulation of these animals allowed in areas of the HVULE of León where they may come into contact with patients.

4. Patients with Antibiotic Multiresistant Bacteria.

Infections by multiresistant bacteria are, according to the World Health Organisation (WHO), one of the top 10 public health threats worldwide. Patients infected with bacteria resistant to major antibiotics represent a potential danger to staff, clients, and other patients and must be hospitalized in the area designated for this purpose. Biosecurity precautions must be increased to prevent the dissemination of these agents; thus, the changing of dressings on wounds infected with resistant bacteria should be performed in areas with little traffic and that are easy to clean and disinfect, subsequently carrying out proper disposal of the generated waste.

5. Disinfection and Cleanin

5.1 Use of personal protective measures

- a) Hand washing

Proper hand hygiene is the main tool for preventing the spread of microorganisms in the hospital environment. It is strictly prohibited to wear any type of jewellery on the hands during activities in the hospital. **A ROUTINE HAND WASH** of 10-15 seconds duration, using neutral pH liquid soap and rubbing both sides of the hands up to the wrist, completely rinsing with water and drying with single-use paper or an air dryer, must always be performed in the following activities:

- Before and after contact with each patient (examination, sample collection, injections, etc.).
- After any activity that may have caused contamination (direct or indirect contact with excretions, secretions or blood, cleaning of accommodations or equipment, laboratory work, etc.), even if gloves are worn.
- Between each procedure applied to the same patient, to prevent cross-contamination between different body areas.
- After handling samples for laboratory or cultures.
- After cleaning cages or areas where animals have been stabled.
- After removing gloves on any occasion.
- After using the bathroom.
- Before and after being in rest areas.
- Before eating, drinking, or smoking.
- Before leaving the workplace

Recommended technique

- Wet hands and forearms with water
- Apply 3-5 ml of soap in the palm of the hand, equivalent to 1-2 doses from a dispenser
- Rub both sides of the hands up to the wrists for 30 seconds. Thoroughly clean between the fingers and under the nails • Rinse completely with water
- Dry with single-use paper towels or an air dryer
- Use alcohol wipes or hand sanitizers when handwashing is not possible, and do so as soon as possible.

For activities requiring aseptic technique, handwashing should last 1 minute. For surgical activities, handwashing should last between 3 and 5 minutes. Hands, nails, and forearms should be thoroughly washed with an antiseptic

(chlorhexidine or povidone-iodine detergent), carefully rinsed, always keeping hands above the elbows, avoiding contact with any non-sterile objects or surfaces.

Use of hand sanitizer

- Apply a thumb-sized amount
- Spread over the opposite hand, including the spaces between fingers
- Do the same with the other hand
- Rub hands vigorously until the sanitizer dries
- Do not rinse

Nails should be short, and the minimum amount of rings worn to ensure effective cleaning procedures. This measure must be followed by all hospital staff and students.

For surgical activities, apply up to the elbow and keep moist for a minimum contact time of 3 minutes.

b) Use of gloves

Gloves are an important barrier to prevent the transmission of microorganisms. They should always be used when coming into contact with blood, organic excretions/secretions, or non-intact skin. Also, when cleaning cages or surfaces.

The following instructions should be followed when using gloves:

- Avoid contact between the skin and the outer surface of the glove
- Avoid contact with any surface commonly used by people without gloves (be careful with door handles, computer keyboards and mice, telephones, etc.)
- Also avoid contamination of personal items such as pens, phones, documents, etc.
- Gloves should be removed as soon as possible after use. Immediately remove them when:
 - Finishing a protocol on a patient
 - Working on the same patient but moving from "dirty" areas or procedures to "clean" ones

- After contact with significant volumes of blood or organic excretions/secretions.
- Once gloves are removed, immediately dispose of them in appropriate containers and wash hands.
- Once gloves are removed, immediately dispose of them in appropriate containers and wash hands.

c) Use of work clothing

The use of appropriate clothing in the hospital or center with animals suffering from infectious diseases is what prevents carrying pathogenic microorganisms home. It is very important that work clothing is not used for other activities. Necessary clothing must be available in each area at all times, for example, boots or protective footwear when working with large animals. Footwear must be closed, safe, protective, and washable. Due to the possibility of contamination in certain environments, they cannot be made of porous or absorbent materials. Their cleaning and disinfection should be easy. Each person should always have a complete clean set of work clothing available in case they need to change.

5.2 Cleaning and disinfection of materials and equipment

Both surfaces and equipment must be adequately cleaned between each use and whenever visible dirt is present. During the cleaning procedure, gloves will always be used, and the generation of dust will be avoided as much as possible. Firstly, organic dirt will be removed (soaps could be used if necessary). Then, surfaces will be disinfected using a commercial product based on peroxide compounds, aldehydes, or quaternary ammonium compounds, or their combinations (Virkon-S[®], Virocid[®], Finvirus[®], or similar). Containers with the appropriate dilution of the disinfectant will be available in all areas where activities with animals are carried out or where biological samples are handled. Once the dilution for use is prepared, the disinfectant can be used for the following 7 days.

If splashes occur with blood or any bodily excretion/secretion, absorbent paper will be used immediately for collection. This absorbent paper will be immediately disposed of in appropriate containers. Once this is completed, the usual cleaning and disinfection will be carried out.

In the case of a presumptive or confirmed diagnosis of a contagious disease caused by an agent of particular environmental resistance, bleach will be used for cleaning at a dilution of 1:30 to 1:10 in water. These solutions will be prepared immediately before use and will be used on surfaces previously prepared by cleaning of organic material.

Materials that can be sterilized will be submerged for 5-10 minutes in a tray with 1% enzymatic detergent (Helizyme[®], Darodor[®]) before cleaning to remove organic films, blood, secretions, mucus, and other organic contaminants. It is advisable to clean with slightly alkaline soaps that produce little foam and then dry. Once clean, it will be packaged; if the material is very heavy, double packaging will be used. Material with sharp points or cutting areas will be protected or covered with rubber or gauze. Subsequently, it is introduced into a plasma or heat autoclave.

6. Biological samples from patients with suspected or confirmed infectious disease

Samples obtained from high-Hazard patients must be correctly labeled with adequate identification and must be introduced into a ziplock bag. Special care must be taken when introducing the samples into the bag to avoid contaminating the outside. Patients affected by zoonotic diseases must present double packaging and appropriate labeling. If an NDO is suspected, the Competent Body must be notified, which will indicate the procedure to follow and the samples required for confirmation.

7. Action protocol

7.1. Staff, owners, and patients

Students, visitors, and staff

Access to consultations is via the internal corridor and through the main entrance of the hospital, through the properly signposted door.

Students refers to those enrolled in courses offered by the Faculty, or those from exchange programs, in any of their modalities.

Visitors are veterinarians doing internships in the hospital who are not master's, doctoral students, or exchange students. Visitors are assigned to a service and have their own insurance.

Staff refers to all personnel hired by FGULEM and all PDI or PTGAS of ULE.

Due to the Hazard of zoonoses, special attention should be paid to at-Hazard individuals to avoid or minimize their potential contact with infectious animals. Immunocompromised individuals (elderly, children, pregnant women, those with diseases or immunosuppressive treatments, etc.) should assess with a responsible party their participation in tasks related to the infectious isolation area.

Owners:

Patients in isolation may be visited by their owners after consultation with the responsible veterinarian and must be accompanied at all times. Visits should be limited to strictly necessary. All owners must follow the biosecurity measures established for the infectious isolation area and must be aware of the Hazards associated with their presence in that area of the hospital. During visits, contact with the animals should be avoided whenever possible. In any case, when accessing isolation rooms, the change from street clothes to work clothes will be carried out in the pre-rooms before entering the isolation room. Upon entering the isolation box, students and staff must enter with clean pajamas and boots for exclusive use in the isolation area, over which they will put on the required individual protective equipment. Students should never enter the box with mobile phones or other electronic devices. Hair must be tied up. Before entering the box, all types of jewelry, watches, etc., that may be subject to contamination should be removed. Upon entering, use of the footbaths present in the boxes is required before examining the animals. Staff must wear a disposable gown or coverall over the pajamas, surgical mask, cap, and gloves, and then proceed to examine the animals. Reusing disposable gowns is strictly prohibited. Visitor access will be limited to observation through the windows in boxes where possible. All visitors must be accompanied by a veterinarian or responsible student. Access for all students and staff will be recorded in a logbook present at the entrance to the isolation area.

8. Identification of Hazards and classification of patients and samples

8.1. Hazard

8.1.1. Physical Hazards

Animal behavior can sometimes be unpredictable. Their handling in the HVULE can cause them to respond inappropriately and cause bites. Diagnostic imaging equipment (X-rays, CT scanner, MRI) emits radiation, so their use must follow the rules and control mechanisms established by the Radiological Protection Service, which are not included in this protocol.

8.1.2. Chemical Hazards

The use of chemical or pharmacological products in the hospital is frequent. Although few can pose Hazards to users. Special mention requires anesthetics and their gases, as well as drugs used in chemotherapy. The most common disinfectants used for cleaning and disinfection of surfaces potentially contaminated with pathogenic microorganisms can produce diverse symptoms that may include throat and lung irritation, asthma or asthma-like symptoms, difficulty breathing, nasal irritation, sneezing, nosebleeds, burning eyes, conjunctivitis, rash—contact or allergic dermatitis (chemical sensitivity dermatitis), hand discoloration (depigmentation), hives, headaches, and nausea.

8.1.3. Biological Hazards

In the HVULE, patients of various origins are treated. These animals may be affected by infectious diseases and/or should be prevented from contaminating other patients. Additionally, there is a Hazard of zoonosis, so measures should be taken to minimize it.

8.2. Classification of patients/samples based on biological Hazard

Class 1 Patients (green): Patients with infectious diseases that do not pose a real Hazard of transmission and are not a Hazard to human health (normal hospitalization). They are the majority of the patients attended at HVULE, therefore, the biosecurity rules for these patients are the general rules followed at HVULE for patients. This includes patients without fever, respiratory problems, no history of fever or respiratory problems during the last two weeks, trauma, wounds,

ophthalmological patients, non-contagious neonates, and other similar animal conditions.

Class 2 Patients (green): Patients with infectious diseases with low Hazard of transmission, with limited geographical importance, without interspecies transmission, and whose economic or veterinary health importance is limited:

- FeLV (Feline Leukemia Virus)
- FIV (Feline Immunodeficiency Virus)
- FIP (Feline Infectious Peritonitis)
- Animals with leukopenia
- Leishmaniasis, ehrlichiosis...
- Chronic Coryza
- Aspergillosis
- Sepsis
- Severe immunosuppression

Generally, effective prophylaxis or treatment is available. The biosecurity rules for these patients are the general rules for normal patients hospitalized at HVULE.

Class 3 Patients (yellow): Patients suspected or diagnosed with infectious diseases that may infect other patients, or suspected of suffering from zoonotic diseases (transmissible to humans, including the veterinarian):

- Leptospirosis
- Infections with multiresistant bacteria.

The biosecurity procedures are focused on minimizing the Hazards of transmission, so it is very important to implement them as soon as possible upon suspicion and not only when the diagnosis is confirmed. When working with these pathogens, work will be carried out in the isolation areas for infectious small animals at HVULE.

Class 4 Patients (red): Patients suspected or diagnosed with highly contagious infectious diseases to other patients, or suspected of suffering zoonotic diseases (transmissible to humans, including the veterinarian) or notifiable diseases:

- Parvovirus
- Acute Coryza
- Panleukopenia
- Distemper

8.3. Reception of Suspected Cases

To prevent contagion to other animals, patients should not remain in the waiting room in the following cases:

- Animals presenting:

Dogs/cats: acute and profuse vomiting or diarrhea

Cats: significant sneezing and/or nasal discharge.

- Suspected of, or referred for:

Distemper	Parvovirus	Panleukopenia
Coryza	Leptospirosis	Acute azotemia/uremia/anuria

Acute renal failure.

In these cases, it is necessary to:

- Request that they wait with the animal in their car or transport.
- Accommodate the animal with its owners in a suitable consultation room for this purpose.
- Immediately notify the responsible veterinarian.
- Avoid any contact with the animal without taking appropriate precautions.

9. Procedures with Class 1 and 2 Animals

Animals belonging to these classes are the majority of patients that present in the consultation routinely. The rules to consider with these animals will be those that govern the general standards of clinics. The correct implementation of these rules will minimize the Hazard of the emergence of multiresistant germs in consultations, operating rooms, and hospitalization wards. Furthermore, following them minimizes the Hazard of veterinarians or assistants transmitting pathogens between animals.

9.1. Procedures before the procedure

Clothing and Equipment



**HOSPITAL CLÍNICO VETERINARIO:
ÁREA DE PEQUEÑOS ANIMALES
(Veterinary Teaching Hospital: Small Animals)**

OBLIGACIONES/PROHIBICIONES ESTUDIANTES,
PERSONAL VETERINARIO Y PTGAS
(Obligations/Forbiddances for students, staff
and auxiliary personal)



Obligatorio uso pijama quirúrgico
Use surgery clothes



Obligatorio uso calzado sanitario
Use sanitary shoes



Obligatorio uso tarjeta identificativa
Use identification card



Obligatorio uso fonendoscopio
Use stethoscope



Obligatorio tapar heridas
Covered wounds



Obligatorio llevar pelo recogido
Large hair tied back



Prohibido llevar joyas/complementos
Forbidden to carry jewels or complements

a) For the animals

- In consultations, no specific procedure is required for the animals. However, the use of gloves is mandatory if wounds are to be handled or dressings changed. If during the consultation it is suspected that the animal may belong to classes 3 or 4, the following measures should be adopted:
- Go to the specific material area for the box containing materials for class 3 animals.
- Place a sign on the consultation room door so that it is subsequently cleaned and disinfected properly.

b) For Equipment/Facilities

Each consultation room should have cleaning and disinfection products for equipment, as well as soap and hand sanitizer. If any product is missing, it should be replenished immediately. Before placing the animal on the table, it is important to check that it is clean and disinfected.

9.2. Operational steps during the procedure

Behavior

**HOSPITAL CLÍNICO VETERINARIO:
ÁREA DE PEQUEÑOS ANIMALES**
(Veterinary Teaching Hospital: Small Animals)



INFORMACIÓN GENERAL
PROPIETARIOS Y ESTUDIANTES
(General information for
owners and students)



Se ruega silencio
Silence please



Prohibido mascotas sueltas
No pets without leash



Uso restringido móviles/ prohibido realizar fotos
Restricted use mobile/No photographs



Prohibido sentarse en el suelo y/o las mesas
Forbidden to sit on the floor or tables



Prohibido comer/beber
Forbidden to eat or drink

9.3. Steps to Take Post-Procedure

- Procedimientos de salida

a) Exit of cadavers

All cadavers must be identified by the case responsible to avoid errors. Additionally, it should be specified whether the cadaver (properly isolated in a watertight bag) is to be sent for necropsy, collective/individual incineration, or will be returned to the owners.

b) Cleaning and equipment

Proceed to clean and disinfect the material used in consultation, as well as tables and floors. Sterilization of the material will be carried out using an autoclave in the facilities designated for this purpose and under the supervision of the corresponding auxiliary staff.

c) Personnel Exit

It is strictly prohibited to leave the Hospital facilities in the regulation uniform. This clothing must be kept in optimal hygienic conditions. Hand washing should be carried out as previously described.

10. Procedures with Class 3 Animals

10.1. Preparatory Steps Before the Procedure

Clothing and equipment



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de león

HOSPITAL CLÍNICO VETERINARIO: Clase 3
(Veterinary Teaching Hospital: level 3)

OBLIGACIONES/PROHIBICIONES ESTUDIANTES,
PERSONAL VETERINARIO Y PTGAS
(Obligations/Forbiddances for students, staff
and auxiliary personal)

			
Obligatorio uso pijama quirúrgico Use surgery clothes	Obligatorio uso calzado sanitario Use sanitary shoes	Obligatorio uso tarjeta identificativa Use identification card	Obligatorio uso bata desechable Use disposable apron
			
Obligatorio tapar heridas Covered wounds	Obligatorio llevar pelo recogido Large hair tied back	Prohibido llevar joyas/complementos Forbidden to carry jewels or complements	Obligatorio uso guantes desechables Use disposable gloves

Under no circumstances should personal equipment be used for handling these animals.

Preparation for Procedures

- a) For people
 - The use of disposable gowns and gloves is mandatory.
- b) For animals
 - Place disposable cloths on the examination table.
 - Animals must always remain on the table.
 - If the animal is to be hospitalized, it must be properly identified and placed in the designated areas.
- c) For Equipment/Facilities
 - Use the material prepared for Class 3 patients.

10.2. Actions during the procedure

Behavior

a) People

Follow the same guidelines mentioned in Class 1 and 2. Before touching the animal, put on a disposable gown and gloves. Use exclusively the material intended for Class 3 animals. Under no circumstances should personal material be used. All material used for each animal must correspond to the class of the animal. After contact with a Class 3 animal, change the disposable gown, wash and properly disinfect the used material, and place it back in its corresponding location. Wash and disinfect hands properly.

b) Animals

It is not allowed to bring an animal into a consultation room that has not been cleaned and disinfected beforehand, including tables and utensils. When an animal urinates, vomits, or defecates, the cleaning service must be called immediately to clean and disinfect the area in question. Students in charge of a particular clinical case are responsible for ensuring that the movements of that animal to other facilities (X-rays, CT, etc.) are carried out correctly following the biosecurity algorithms described in each area.

- **Actions After the Procedure** Procedimientos de salida

a) Exit of cadavers

All cadavers must be identified by the case responsible to avoid errors. Additionally, it should be specified whether the cadaver (properly isolated in a watertight bag) is to be sent for necropsy, collective or individual incineration, or returned to the owners.

b) Exit of Equipment

Proceed to clean and disinfect the material used in consultation, as well as tables and floors. Sterilization of the material will be carried out using an autoclave in the facilities designated for this purpose and under the supervision of the corresponding auxiliary staff. The examination room will be marked as Class 3 until it is cleaned and disinfected.

c) Salida de personal

Follow the directions mentioned in Class 1 and 2. Remove the disposable gown when leaving the examination or hospitalization room. Dispose of disposable gloves in the designated containers. Wash and disinfect hands thoroughly.

11. Procedures with Class 4 Animals

All biosecurity rules are aimed at reducing the Hazard of transmission to other animals or humans. It is essential to implement these rules as soon as a Class 4 animal is suspected and not only from the moment the diagnosis is confirmed.

11.1. **Actions Before the Procedure**

- Access

Class 4 animals **MUST NOT** enter the Hospital's waiting room. At the entrance of the Hospital, owners must be instructed to consult at the reception the procedure to be carried out with their animal. These animals should be transported to the Infectious Diseases consultation room in carriers or stretchers designated for this purpose, without the presence of the owner. Owners may only access the reception area of these facilities.

- Clothing and equipment



Preparation for procedures

a) For people

- Follow directions for Class 1 and 2.
- Before entering the isolation area, ensure that no personal equipment is introduced.
- Once inside:
 - Mandatory use of shoe covers.
 - Close the first door of the corridor.
 - Put on gloves, cap, gown, and mask.
 - Open the second door with the elbow.

b) For animals

If an animal is suspected of being Class 4, it must go directly to the isolation area, avoiding all contact with other animals, owners, hospital staff, and equipment.

c) For equipment/facilities

All equipment must be exclusively in the Infectious Diseases room. The use of material and/or equipment from other hospital areas for these animals is strictly prohibited.

11.2. Actions during the procedure

- Behavior

Follow the same guidelines mentioned in Class 1 and 2. Students **MUST NOT** examine Class 4 animals without the consent of the responsible veterinarian.

- Movement

Animals can only be transported on isolated stretchers or in clearly identified carriers. They must be unequivocally identified with the terminology Class 4. All materials used for each animal must be the corresponding and designated for infectious animals.

11.3. Actions after the procedure

Exit of cadavers

a) Salida de cadáveres

All cadavers must be identified by the case responsible to avoid errors. Additionally, it should be specified whether the cadaver (properly isolated in a watertight bag) is to be sent for necropsy, collective or individual incineration, or returned to the owners.

b) Exit of equipment

Proceed to clean and disinfect the material used in consultation, as well as tables and floors. The sterilization of the material will be carried out using an autoclave in the facilities designated for this purpose and under the supervision of the corresponding auxiliary staff. The examination room will be marked as Class 4 until it is cleaned and disinfected.

c) Personnel exit

In the isolation room

- Rigorously follow all instructions.
- Properly handle waste.
- Remove the gown and gloves after cleaning and disinfecting them.

- Perform a new cleaning and disinfection of the hands following the standard washing and disinfection procedure. Always use paper to close the soap and disinfectant containers.
- Open the door with the elbow

Outside the isolation room

- Close the door.
- Remove equipment in the following order: cap, mask, and shoe covers.
- All equipment must be disposed of properly.
- Proceed with a new cleaning and disinfection of the hands.

12. Movement within the Hospital

12.1. Staff Movement

The hospital uses a color code to indicate restrictions to different areas (see maps on the following page).

- Yellow lines: Authorized access respecting the rules of attire and behavior detailed in previous sections. There may be temporary yellow lines indicating the presence of Class 3 or 4 animals on stretchers and/or carriers.
- Red lines: Access allowed only to authorized personnel.

12.2. Animal movement

It is not allowed to bring an animal into a consultation room that has not been cleaned and disinfected beforehand, including tables and utensils. When an animal urinates, vomits, or defecates, it must be reported to the Hospital Reception so that they can immediately communicate with the cleaning service to clean and disinfect the area in question. Students in charge of a particular clinical case are responsible for ensuring that the movements of that animal to other facilities (X-rays, CT, etc.) are carried out correctly following the biosecurity algorithms described in each area under the supervision of the responsible veterinarian.

12.3. Equipment movement

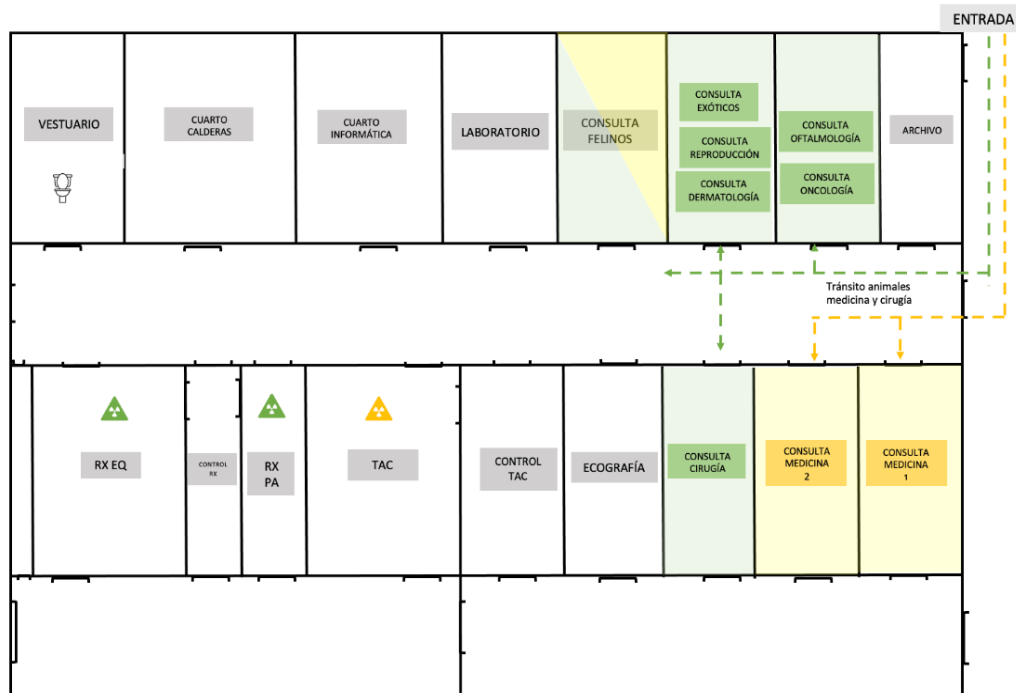
Each consultation room must be equipped with the minimum necessary and appropriate equipment and utensils to carry out the work. If something is missing, it must be replenished immediately.

In case of an accident.

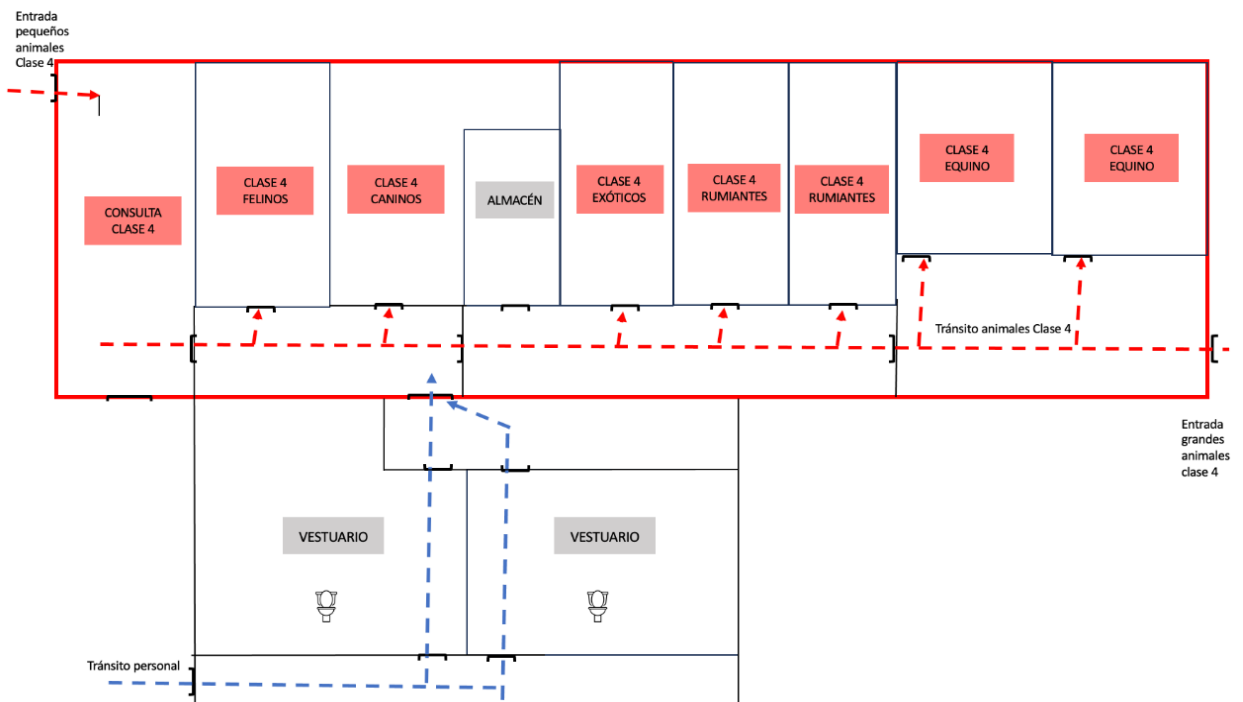
Depending on the situation:

- a) In minor cases, seek help from other team members.
- b) In serious situations, contact 112 directly.

PLAN OF CIRCULATION IN THE SMALL ANIMAL CONSULTATION AREA (GREEN AND YELLOW)



PLANO CON LA CIRCULACIÓN EN LA ZONA DE HOSPITALIZACIÓN CLASE 4 (ROJA) DE PEQUEÑOS Y GRANDES ANIMALES



13. Waste management

The Veterinary Faculty has a contract with a waste collection and management service. There are rigid yellow containers for sharp instruments and vaccine waste, and larger black containers for infectious waste, anatomical remains, blood, etc. There will also be containers for the disposal of cytostatics and medicinal waste (detailed in the following figure). There will be at least one container of each of these two types in every area where procedures with animals or biological samples are carried out.

In each room, there will be specific containers for the immediate disposal of these materials. Needles should always be disposed of without recapping. If necessary to perform this operation, use tweezers, forceps, or some other similar equipment, or use the shovel technique on a surface, which avoids the Hazard of injury. Whenever possible, the needle should be separated from the syringe using the system in the containers. The needle should never be manually separated from the syringe



CLASIFICACIÓN DE LOS RESIDUOS



14. LARGE ANIMALS

14.1. Preliminary considerations

As a general rule, a horse should be isolated to prevent possible contagion when it presents two of the following symptoms:

- Fever
- Neurological symptoms (sudden onset ataxia, urinary incontinence, hind limb paresis)
- Diarrhea
- Leukopenia
- Suspicion of upper respiratory tract viral disease (nasal discharge, cough, fever)
- Suspicion of mumps (nasal discharge, fever, submandibular or retropharyngeal lymphadenopathy, dysphagia, cough)
- Abortions, mares that have aborted in farms with a history of abortions.

Special precautions are required in the management of patients known or suspected to be infected with microbial agents causing contagious disease. Among the situations in which special biosecurity measures must be adopted due to the possibility of transmission of nosocomial disease are patients with acute gastrointestinal disorders (for example, diarrhea), acute respiratory infections, acute neurological diseases, abortions, or infections with bacteria resistant to different antimicrobial drugs.

Hospitalization in the isolation area will be mandatory for animals that meet at least two of the following criteria: presence of diarrhea, leukopenia, ataxia, nasal discharge and/or fever.

Patients at high Hazard of infectious diseases will be isolated from other animals and discharged as soon as possible.

Initial physical examinations on external patients will be carried out in the examination rooms designated for this purpose, or in the patient's own transport trailer, to assess the Hazard of contagious disease.

Staff should consider implementing isolation precautions when handling these sick patients until the Hazard of transmission of contagious diseases is assessed.

The suspected or confirmed disease must be reported to the Occupational Health and Safety Service as soon as possible so that they can assist in communication and evaluation of the measures to be adopted, as well as analyze whether these measures are the most appropriate for the hospitalization of the animal.

An animal hospitalized for other clinical reasons that develops signs compatible with an infectious-contagious disease during hospitalization will be transferred to isolation as soon as possible, and the stable, material, and surfaces in contact with that horse will be disinfected.

In the suspicion of a notifiable disease, it must be reported to the relevant official body. The reference veterinarian and the owner of the source farm must be notified so that they can take the appropriate measures to prevent the spread of the disease.

Patients should be hospitalized in the corresponding area according to the suspected disease. If the animal is hospitalized for a previous problem (e.g., colic or orthopedic surgery) and begins to show signs of an infectious-contagious disease (diarrhea, nasal discharge, etc.), it should be transferred to the isolation area as soon as possible and maintain increased surveillance of the other hospitalized animals that have had close contact with the previous one (same quadrant or barn, proximity of the stable). The stable, material, and surfaces in contact with that horse will be disinfected as necessary depending on the disease.

14.2. Action protocol

Hazard categories

Animals hospitalized or attending consultations at hospital facilities should be classified according to the following Hazard categories, based on their potential to transmit potentially contagious diseases to other animals or their possible zoonotic potential.

Within the isolation area, all necessary materials for clinical activities must be placed; no exchange of any material with the outside is allowed. Containers for used material must be exclusive for use in this area.

If external equipment needs to be used, necessary means for its cleaning and disinfection must be employed once the procedures are completed.

Green Zone: Normal Hospitalization	<ul style="list-style-type: none"> - Animal Reception Area - Stallion Hospitalization - Hospitalization of animals with non-infectious diseases or without Hazard of contagion to other animals or people: - Non-surgical lameness, elective surgeries, trauma, wounds... - Non-infectious reproductive problems - Non-infectious medical problems and colics - Ophthalmological patients - Non-contagious neonates
Yellow Zone: Limited Hazard Hospitalization	<p>Hospitalization of animals with infectious diseases or suspicion of these, but with low or limited Hazard of transmission:</p> <ul style="list-style-type: none"> - Non-contagious infectious medical problems that do not meet isolation criteria - Colics - Lower respiratory tract diseases such as pneumonia and pleuropneumonia
Red Zone: Isolation Hospitalization	<p>Hospitalization of animals with infectious diseases with moderate-high Hazard of transmission or with zoonotic potential and meeting isolation criteria.</p> <ul style="list-style-type: none"> - Infections caused by multiresistant bacteria - Diarrheas - Contagious skin infections - Viral respiratory problems (influenza, herpesvirus) - Mumps - Neurological problems not attributable to trauma or congenital diseases - Abortions - Animals suspected of zoonotic diseases
White Zone: Park Hospitalization	Practice animals, as well as other healthy animals housed in outdoor parks (teaching farm).

Exclusion/entry criteria for the hospitalization area

If the Hazards of infection with the disease by other hospitalized patients or staff are too high, compared to the Hazard to the health of the animal itself, the animal may be refused entry to the hospital or hospitalization. Only clinical veterinarians (not supervised veterinarians) can decide to reject an animal based on the hospital's occupancy situation and the prevention of potential contagion. The rejection criteria for large animals are as follows:

- Suspected respiratory infectocontagious diseases (cough, nasal discharge, fever < 2 weeks) if the animal's life is not in danger.

- Suspected equine mumps (swollen submandibular lymph nodes, nasal discharge, cough, fever, or suspicion of guttural pouch empyema and/or chondroids in the guttural pouches) if the animal's life is not in danger or if surgery is not needed.
- Suspicion of the neurological form of Equine Herpes Virus 1 (EHV1), (acute ataxia with presence or history of fever) if the animal's life is not in danger.
- Abortion, if the life of the mare is not in danger. The placenta and fetus can be sent to the pathological anatomy service.

Management of animals in green zone

A hemogram will be performed on all animals entering surgery or undergoing a traumatic/stressful procedure. Samples for culture will be taken from any animal suspected of being affected by an infectious process, upon arrival at HVULE or during their stay.

Management of animals in yellow zone

Cleaning materials or other individual materials will not be shared between animals. For this purpose, the material for each area or animal must be properly identified according to the area, box, or animal it belongs to. Disinfection and replenishment of individual materials will be carried out each time the animal is discharged from the hospital in which they were used. Disinfect and/or sterilize the material used between animals: nasogastric tubes, files, mouth openers, endoscopes, cleaning material, clipping blades... Stethoscopes, thermometers, hoof picks, twitch (change rope): clean with soap to remove microscopic dirt and disinfect with surface products (Limonseptic®, Finvirus®...).

Barrier measures (such as wearing gloves and shoe covers, maintaining strict hygiene with each animal and box, using disinfectants, and avoiding sharing materials) should be used in the following cases:

- Neonatal animals
- Animals affected by fungi
- Animals with colic or diarrhea (that do not meet isolation criteria)
- Animals with open wounds (during bandage changes or if exposed)
- Animals with infections
- Immunocompromised animals
- Animals with fever.



Changes of dressings on wounds infected with multiresistant agents should be done in low-traffic areas that are easy to disinfect. Contamination of personnel or the environment must be avoided.

Rules for the care and management of patients with suspected or confirmed contagious diseases.

The responsible personnel (service staff, cleaners, etc.) must be informed when patients with infectious-contagious diseases are placed in isolation areas.

- Boxes should be visibly labeled with the classification criterion (red) and the infectious agent of interest, along with the necessary biosecurity precautions. It is very important to communicate the Hazard agent(s) of these patients so that all personnel with access to the animal and students can take the necessary precautions to protect themselves from exposure to humans and to ensure that cleaning and disinfection procedures are used.
- If there is an animal with a respiratory (nasal discharge, cough, fever), digestive (diarrhea and fever), or contagious dermatological process, it should be placed in the isolation area. If it is occupied by infectious animals, it will be housed in a hospitalization box located at one end, away from the rest, and identified on the door and headboard as an infectious animal.

- Strict attention to hygiene and the use of barriers are absolutely critical for the adequate containment of contagious disease agents.
- Before and after examining each patient, hands should be washed with soap and water, and an alcohol-based hand disinfectant should be used.
- Surfaces or equipment contaminated with fecal material, other secretions, or blood must be cleaned and disinfected immediately by the staff and students in charge of the patient.
- Special care must be taken with dirty hands, gloves, or boots to avoid environmental contamination.
- All disinfectant mats found should be used.
- Environmental hygiene is the responsibility of all staff working in the Isolation Unit for the sick. Waiting for a technician or other staff to proceed with cleaning should never be expected; it is everyone's responsibility. Contamination of antechambers with straw or manure should be avoided, and help with general cleaning and maintenance should be provided whenever possible.
- Students and interns assigned to contagious cases are responsible for routine cleaning and organization of antechambers if hospital cleaning staff cannot do so. This includes cleaning and disinfection containers, door handles and knobs, changing footbaths when necessary, and emptying trash into appropriate containers.
- Access with food is not permitted in the Large Animal Hospital, nor in the infirmary or isolation unit.
- Clean examination gloves should always be used when working in the Perimeter Isolation Unit, antechambers, and patient boxes. Gloves should be changed between working in different antechambers and always between animals.
- In addition, disposable gowns and shoe covers should be used, which should be changed between different antechambers and between animals.

Handling of biological samples

All biological samples must be handled with appropriate protective measures according to their characteristics (gloves, mask, etc.). Urine, blood, feces, aspirates, swabs, etc., samples should be treated as potentially infectious material. All sample tubes or

containers must be correctly identified before taking the sample. These samples will be stored in the laboratory until analysis/shipping to an external laboratory.

Other measures

RESPONSIBLE use of antibiotics is necessary, as well as reporting any incidents during their use.

Circulation of other animals in the equine area should be avoided (including walking dogs in the corridor).

The plan for rodent control, pest control, and disinfection (DDD) will be complied with

14.3. General hygiene protocols

Measures to be taken in the yellow zone or quarantine area

It is mandatory to wash hands with soap and water before and after examining a patient, or use an alcohol-based hand cleaning lotion if washing is not possible.

Surfaces or equipment contaminated with feces, secretions, or blood must be cleaned and disinfected immediately.

Special care is needed to prevent environmental contamination from dirty hands, gloves, or boots. Footbaths and mats should be used at all times.

All staff working in containment and isolation areas are responsible for environmental hygiene, avoiding contamination of corridors and antechambers with shavings and manure.

It is not allowed to eat, drink, or bring pets (dogs, cats, etc.) into areas where animals are hospitalized or in quarantine.

All existing measures to avoid the presence of vectors (insects, rodents, birds, etc.) in the different areas must be applied.

Measures to be taken in the red zone or isolation area

In addition to all the measures previously mentioned, mandatory use of gloves, disposable gowns, and shoe covers or protective boots for exclusive use when attending these animals must be included. Entry to these areas should only occur when absolutely necessary. Staff should not enter the boxes unless it is necessary to have contact with the patients and when doing so, they must take appropriate precautions. If possible, patients will be monitored through cameras to minimize contact with animals and staff traffic. If entry to the sanitary barrier occurs:

- existing footbaths should be used before entering
- a disposable gown available at the entrance to this unit should be used.
- If it is necessary to enter a box located within the sanitary barrier:
- disposable gowns and shoe covers should be used
- hands should be washed or disinfected before entering each box, and gloves used
- footbaths located before the entrance to the box should be used.
- staff handling, caring for, and feeding patients in this area must change their gown and wash their hands between patients.

Exiting the box:

- use the footbath before exiting
- clean with alcohol any material/equipment not assigned to the case
- wash or disinfect hands properly.

Exiting the sanitary barrier:

- remove the disposable gown or coverall and shoe covers
- use the footbath before exiting (if only one animal is hospitalized in this area, it will be sufficient to use the box's footbath).

OBLIGACIONES/PROHIBICIONES ESTUDIANTES, PERSONAL VETERINARIO Y PTGAS (Obligations/Forbiddances for students, staff and auxiliary personal)

HOSPITAL CLÍNICO VETERINARIO: Clase 4
(Veterinary Teaching Hospital: level 4)



Obligatorio uso pijama quirúrgico
Use surgery clothes



Obligatorio uso calzado sanitario
Use sanitary shoes



Obligatorio uso tarjeta identificativa
Use identification card



Obligatorio tapar heridas
Covered wounds



Obligatorio llevar gorro
Use cap



Obligatorio uso bata desechable
Use disposable apron



Obligatorio uso calzas
Use overshoes



Obligatorio uso pediluvio
Wash the shoes



Obligatorio uso guantes desechables
Use disposable gloves



Obligatorio uso mascarilla
Use mask



Solo personal autorizado
Authorized personal only



Prohibido llevar joyas/complementos
Forbidden to carry jewels or complements



Prohibido realizar fotografías
No photographs



Prohibido tocar al animal sin permiso del veterinario
Don't touch pets

14.4. Disinfection and cleaning

Management and Cleaning of Stables

Stables and boxes should be cleaned and bedded once a day (preferably in the morning), and walls should be cleaned if they are contaminated with diarrhea, blood, or other excretions/secretions. Footbaths should be changed daily (preferably in the morning).

If additional cleaning is needed, it can be done at any time of the day.

Do not enter the feed storage area with contaminated clothing, gloves, boots, or hands.

Exiting an Animal from the Red Zone or Isolation:

The animal should be brushed, cleaned of feces, bodily secretions/excretions, and hooves cleaned in the box itself. Just before leaving, wipe the animal's skin from head to tail with a cloth soaked in chlorhexidine solution and brush the hooves with a 0.5% chlorhexidine solution. Personnel moving the animal must dress appropriately and take the proper precautions. Staff handling the patients should avoid touching doors, exits, etc., with contaminated gloves or hands during patient movement. It is essential to clean and disinfect surfaces contaminated with feces or bodily fluids during the movement of these patients.

Cleaning and disinfection protocol for stables

The responsible veterinarian will be notified if it is necessary to take any samples before cleaning.

Green Zone, Corridors, and Scheduled Consultation Room

The box will be emptied of shavings and organic material with the shovel corresponding to the area it is in and removed to the external container.

Organic matter will be cleaned with a concentrated foaming degreaser cleaner (Daronit Extra Foam® or similar). It will be left to act for 15 minutes, then rinsed, and finally, the surface will be allowed to dry as long as necessary.

The box/consultation room will be disinfected with Limonseptic® (Finvirus® or similar) at a 1% concentration by spraying. It will be left to act for 15 minutes on all surfaces, then rinsed, and finally, surfaces will be left to dry. A sign will be placed on the door of the box/consultation room indicating they are disinfected.

Yellow Zone and Emergency Consultation Rooms

The box will be emptied of shavings and organic material with the material corresponding to each box and removed in green bags to the external container.

Organic matter will be cleaned with a concentrated foaming degreaser cleaner (Daronit Extra Foam® or similar). It will be left to act for 15 minutes, then rinsed, and finally, the surface will be allowed to dry as long as necessary.

The box/consultation room will be disinfected with Limonseptic® (Finvirus® or similar) at a 1% concentration by spraying. It will be left to act for 15 minutes on all surfaces, then rinsed, and surfaces allowed to dry. This same disinfection will be repeated after 24 hours. A sign will be placed on the door of the box/consultation room indicating they are disinfected.

These boxes cannot be used until negative culture results are obtained.

A rotation of disinfectant products will be carried out every 6 months.

Red zone

- The box will be emptied of shavings and organic material with the material corresponding to each box, disposed of in specific waste collection containers (black bins with airtight closure).
- Organic matter will be cleaned with a concentrated foaming degreaser cleaner (Daronit Extra Foam® or similar). It will be left to act for 15 minutes, then rinsed, and finally, the surface will be allowed to dry as long as necessary. Then, a second cleaning with Enzimatic Foam® (or similar) will be done on all surfaces, left to act for 20 minutes, rinsed, and left to dry as long as necessary.
- The box will be disinfected with Limonseptic® (Finvirus® or similar) at a 1 % concentration by spraying. It will be left to act for 15 minutes on all surfaces, then rinsed, and surfaces left to dry. This same disinfection will be repeated after 24 hours. A sign will be placed on the door of the box/consultation room indicating they are disinfected.
- After complete cleaning and evacuation of the isolation facility, air nebulization disinfection will be carried out with NouvAir®. Wait a minimum of 24 hours before entering the facility.
- These boxes cannot be used until negative culture results are obtained.
- Specific cleaning materials (shovels, brushes, etc.) will be used for each box in the isolation area (red zone), with staff wearing coveralls, shoe covers, and

gloves for cleaning, and this should be done last and, if possible by a different person than the one cleaning the rest of the facilities.

***IMPORTANT:** Whenever surface disinfectants are used, they should be thoroughly rinsed before contacting the animals.

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Last Revision: 23/01/2024

APPENDIX 1. CIRCULATION OF HORSES AND PEOPLE IN GREEN AND YELLOW AREAS

