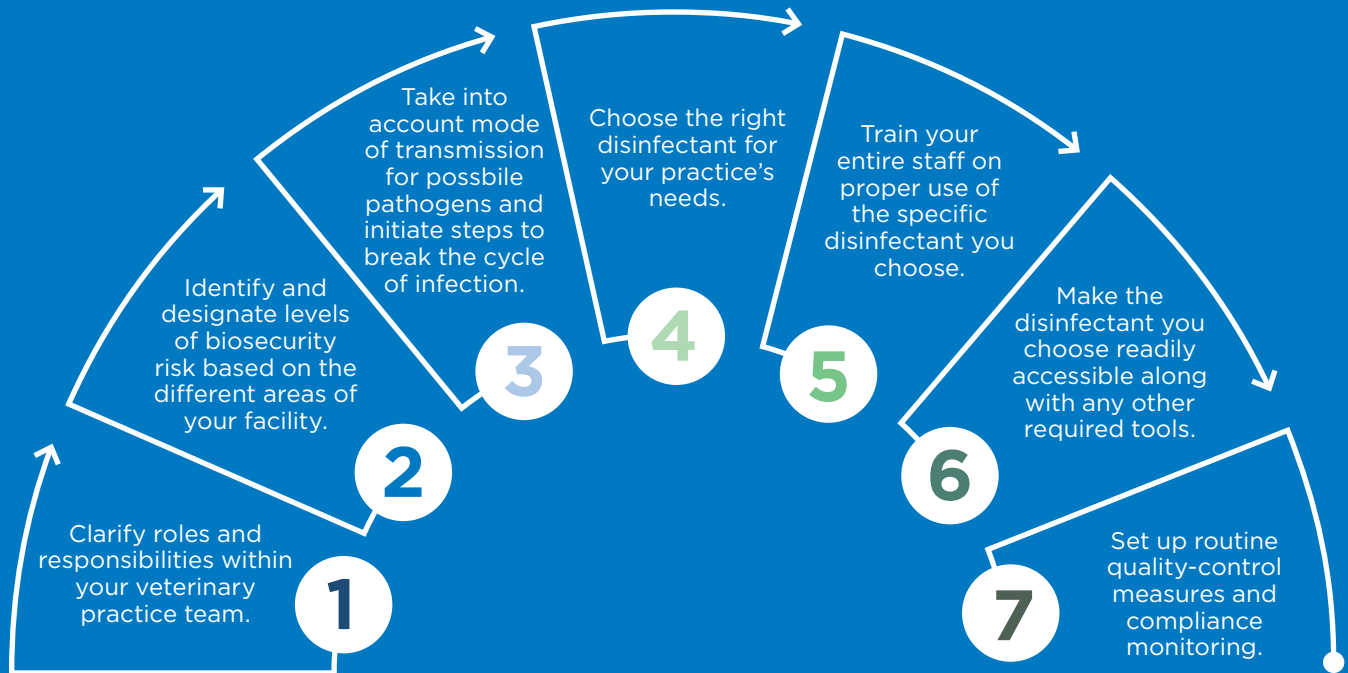


7 STEPS TO GOOD INFECTION CONTROL

You do not need to be an award-winning chemist or microbiologist to be good at infection control in a veterinary setting. Yes, the chemical and its proper use is critical, but think about infection control with the big picture in mind. It's a team effort based on several unique considerations for each veterinary practice.



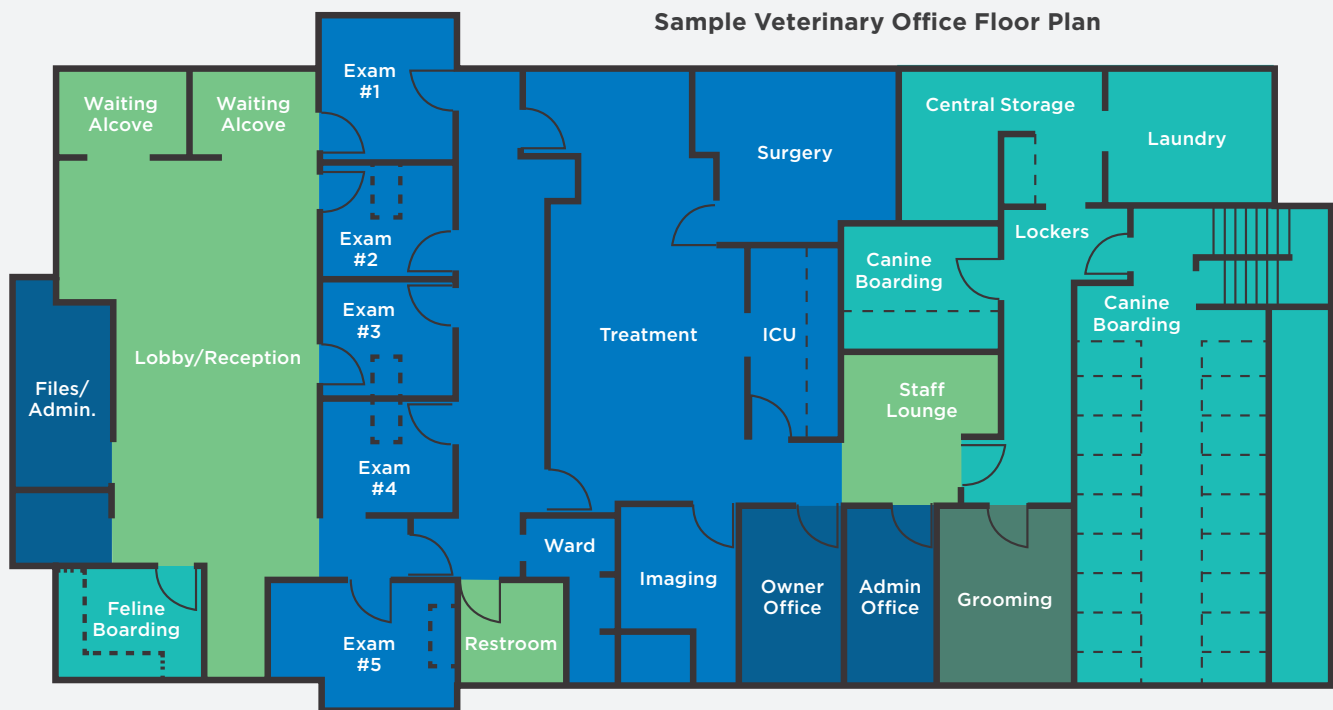
1 Clarify roles and responsibilities within your veterinary practice team.

Everyone needs to understand the protocols and processes involved as well as which team members will complete which parts of the infection control work. Create a functional group responsible for cleaning the animal care environments and equipment. Determine together who is responsible for cleaning each surface and piece of equipment in all patient rooms, treatment areas, surgical suites, and public areas, including the lobby and restrooms. Develop a schedule for cleaning frequency. If this division of responsibilities

does not occur, surfaces or devices will be overlooked.

How you divide up these tasks depends greatly on the size of your facility and your staff. Large practices often include staff members whose only job is cleaning and disinfection, whereas smaller ones must assign these tasks across various job descriptions. Here is one possible scenario (see next page).

Job Title	Cleaning/Disinfection Responsibilities
Receptionist/front office staff	Lobby and other public areas
Veterinary assistant or kennel assistant	Hospitalization and boarding areas
Veterinary technician	Exam rooms, treatment area, surgical suite, diagnostic equipment
Office or practice manager	Offices and administrative areas
Groomer	Grooming and bathing areas
Veterinarians	Personal equipment, such as stethoscope



2

Identify and designate levels of biosecurity risk based on the different areas of your facility.

Different areas of a veterinary facility pose different levels of biosecurity risk. You could use numbering or colour codes to designate these areas of risk. Often colours can be more quickly and easily understood by everyone involved with the care of animals within the hospital, including those responsible for cleaning and disinfection. For example, a kennel with a red tag hanging on the door tells the person cleaning that an animal with an infectious disease stayed in the kennel.

This means the cleaning and disinfection process must be more stringent before another patient gets placed inside.

Also, consider the movement of equipment and personnel between different biosecurity level areas. You would not want items from a red area regularly being taken into green areas.

Communication about each patient's status needs to be flexible as well. As a pet's condition changes, so might the infection control strategies required to maintain biosecurity in the veterinary practice.

Small-Animal Hospital	Biosecurity Level		
	Level 1	Level 2	Level 3
Outpatient exam room	●		
Emergency admission rooms		●	
Sick patient's exam room		●	●
Surgery suites	●	●	
Dental procedures	●		
Patient's ward	●	●	
Isolation ward			●
Intensive care unit		●	●
Oncology area		●	●

3 Take into account the mode of transmission for possible pathogens and initiate steps to break the cycle of infection.

Many decisions the team needs to make will be based on the mode of transmission of various possible pathogens.

Once an infectious pathogen enters a veterinary facility, it's up to the veterinary team to break the infectious cycle through cleaning and disinfection. Next steps include the following:

- ✓ Removing fecal matter and other body fluids or biofilms
- ✓ Cleaning all surfaces before disinfecting
- ✓ Disinfecting surfaces with properly concentrated disinfectant

A mistake in diluting the disinfectant or not following required contact times can lead to the pathogenic organism spreading rather than being contained and eliminated. Once you've removed visible soiling, start cleaning and disinfecting at the cleanest area working toward the dirtiest area of the item or space. This lessens the risk of contaminating surfaces as you work.

The major sources of environmental contamination are the patient's endogenous flora and the hands of healthcare workers.^{1,2}

Transmission Precautions for Dogs and Cats³

Precautions	Pathogen	Transmission Precautions
Airborne	<i>Mycobacterium tuberculosis</i> <i>Yersinia pestis</i> <i>Francisella tularensis</i>	Isolation, ideally negative pressure room Wear N95 respirator mask Barrier nursing
Droplet	Canine Infectious Respiratory Disease Complex Infectious feline upper respiratory tract disease	Isolation Space animals four feet apart or more Barrier nursing
Contact	Multi-drug resistant bacteria Dermatophytes <i>Leptospira spp</i> <i>Salmonella spp</i> Parvovirus	Warning signage on the cage Barrier nursing Dedicated equipment Isolation for certain pathogens (see table above) Limit movement of affected animals Hand hygiene precautions Proper cleaning, disinfection and disposal

¹ Rutala, William, and David J. Weber. 2014. "Selection of the ideal disinfectant." *Infection Control and Hospital Epidemiology* 35: 855-865.

² Stull, Jason et al. 2016. "Risk reduction and management strategies to prevent transmission of infectious disease among dogs at dog shows, sporting events, and other canine group setting." *Journal of the American Veterinary Medical Association* 249: 612-627.

³ Sykes, Jane, and J. Scott Weese. 2014. "Infection control programs for dogs and cats." In *Canine and Feline Infectious Diseases*, edited by Janes Sykes, 105-118. St. Louis, MO: Elsevier.

4


Choose the right disinfectant for your practice's needs.

Your team will need to determine your disinfectant needs:

- Will you use one product for cleaning and another product for disinfecting? There are different products and processes, and some disinfectants only work after the surface is already visibly clean, while others will disinfect in the presence of organic matter. Cleaners are not necessarily disinfectants and disinfectants are not necessarily cleaners. However, one-step cleaner disinfectants do exist.
- Will you use one disinfectant for daily use, then switch to another in cases of serious infectious issues? Or will you use something that's more protective all the time? For example, practices that see a lot of emergencies likely need a disinfectant with a broader spectrum of kill than a more wellness-focused practice that primarily does check-ups, vaccinations, and routine surgeries. Some products offer multiple dilutions to meet the needs of different facilities.

- What form of the chosen disinfectant will you use (ready-to-use solution, concentrate you will dilute, ready-to-use disinfectant wipes)?

Your answers to these questions will depend on the kinds of surfaces you need to disinfect as well as the possible pathogens you come across in your patient population. Some are much harder to kill with disinfectants than others.

	Micro-organism
 <p>Most Difficult</p> <p>Least Difficult</p>	Bacterial spores
	Mycobacteria
	Small nonenveloped virus
	Fungal spores
	Gram negative bacteria
	Large nonenveloped virus
	Gram positive bacteria
	Enveloped virus
	Mycoplasmas

5

Train your entire staff on proper use of the specific disinfectant you choose.

You can get everything you need to know, including training materials and even onsite workshops or lunch-and-learns, from the disinfectant manufacturer or sales reps. Make sure everyone reads the OSHA-mandate Safety Data Sheets (SDS) as well. Typically, you'll find the information you need about a product's safety profile, hazards, and

toxicology data in Section 2 and Section 11 of the SDS.

Pay attention to dilution calculations and required contact times so that whatever disinfectant you use works to the best of its ability.

6

Make the disinfectant you choose readily accessible along with any other required tools (such as measuring devices, bottles, buckets, clean cloths, and so on).

Even staff members with the best training and intentions will do things their own way if you don't make following the cleaning and disinfecting protocols as convenient as possible. Depending on the size of your veterinary facility, this means setting

up several stations to keep cleaning and disinfection supplies handy. Moving around the facility less during cleaning lowers the chance of accidentally contaminating other areas.

7

Set up routine quality-control measures and compliance monitoring.

Examples include making expiration dates on disinfectant concentrates and diluted product and maintaining cleaning logs where staff make notes about what they've cleaned and when (date/time).

When you spot-check staff's adherence to protocols, use your results to provide positive feedback when a job is done well. Perhaps more importantly, take the opportunity to coach and improve cleaning practices if you find issues.