Infectious Disease Protocol: Canine ParvoVirus (CPV)

Basic Disease Information:
- CPV is a highly contagious unenveloped virus, durable in nature, and capable of producing severe/life threatening disease in dogs. Young puppies often die without aggressive treatment.
- Spread mainly by contaminated feces, but can also spread by fomites, vectors and can be aerosolized by power washers. The virus can also live on the dog's hair coat and serve as a means of transmission long after dogs have recovered, therefore bathing with an antibacterial shampoo is important.
- **Incubation Period**: Average 4 – 6 days (could be up to 10 – 14 days).
- **Shedding Period**: 2 -3 days post-exposure and up to 2 wks post-recovery.
- No carrier state.
- We vaccinate all dogs on intake against CPV (part of the DA2PP Core vaccine).
  - **Adults**: Revaccinate once in 2 – 3 weeks (preferably 2 weeks), if still with us in the shelter.
  - **Puppies**: Begin at 4 - 6 weeks of age and revaccinate every 14 days until 18 weeks old.
  - MLV can protect within 3 – 5 days (in absence of maternal antibody interference).

**General Policy:**
Treatment of CPV infected animals should only be undertaken in an animal centre if sufficient facilities exist to isolate the patient such that the rest of the population is not put at risk, and staffing resources (time, skill level) are adequate to ensure humane and appropriate care. These animals must be examined by a Veterinarian and have their treatment plan prescribed by the Veterinarian.

**If you see or suspect the following signs:**
- More common in puppies under 6 months of age.
- Often have mild to severe diarrhea (often bloody and foul smelling).
- Dehydration.
- Lethargy.
- Vomiting.
- Loss of appetite.
- Fever.

**Follow these next steps:**
Ontario SPCA – Infectious Disease Protocol: **Canine Parvovirus** v.07/2016
Diagnosis:

When to Test:
1. Any dog with diarrhea or vomiting that is also exhibiting signs of systemic disease
2. Any dog that has had a known exposure to parvo within the preceding 14 days that then develops diarrhea
3. Except as noted above, do not test dogs that have diarrhea but are bright, alert, active, eating or drinking normally

Who performs the test: Veterinary medical staff or Animal Centre staff trained in use of the test

How to test: In-House fecal ELISA tests (ie. IDEXX SNAP® test)

Where Housed:
- Isolate all positive cases in a separate room used only for this purpose (ie. Not in a bathroom)
  - If no isolation room is available, isolate separately at a Vet Hospital
- Quarantine exposed dogs for 14 days
- If neither isolation nor quarantine are an option, the only other humane alternative is euthanasia
- Work with a Veterinarian knowledgeable in shelter medicine to develop a plan for other dogs in the facility

How Cleaned:
1. Don proper PPE for ANYONE coming in contact with a suspected animal or entering isolation – disposable gloves, disposable gown, impermeable shoe covers
2. Continue with your Animal Centre’s cleaning protocol as approved by the Department of Shelter Health & Wellness
3. Staff must wear full PPE (gloves, gown, shoe covers) in any room identified as a quarantine room
4. Disinfect using (whichever is your normal disinfecting agent):
   - Oxidizing Agents: Such as Prevail®, Peroxigard Plus™, Trifactant®, Virkon®
5. Outdoor cement runs can be cleaned with a detergent solution and then disinfected using an oxidizing agent
6. Gravel areas can be raked up and disinfected using an oxidizing agent – you can try this but there are no guarantees that it will completely disinfect the area
7. Carpets should be steam-cleaned (temp. over 75°C inactivates parvo)
8. Dishwashers should be used in place of mechanical scrubbing, when at all possible
9. TWO CONSECUTIVE CLEANINGS (VERY thoroughly cleaned, disinfected, dried) within a short period of time (ie. 24hrs) is sufficient, prior to re-use of kennel
**As a reminder where staff is responsible for cleaning multiple housing units, the sequence they should be cleaned is: From clean to dirty,**

1. Adoptable kittens/puppies
2. Adoptable adult animals
3. Stray/Quarantine kittens/puppies
4. Stray/Quarantine adult animals
5. Isolation areas

**Tips:**
- Can persist in the environment for months or years (in dark, wet areas). No way to fully decontaminate dirt and grass areas

**Which animals to treat:**
- Treatment of CPV infected animals should only be undertaken in an animal centre if sufficient facilities exist to isolate the patient such that the rest of the population is not put at risk, and staffing resources (time, skill level) are adequate to ensure humane and appropriate care. These animals must be examined by a Veterinarian and have their treatment plan prescribed by the Veterinarian
- Other options could include off-site veterinary clinic or transfer to another animal centre with sufficient facilities
- All animals should be treated, as long as they are a good adoption candidate and as long as there is appropriate isolation (separate room isolated from different species) and adequate resources to support treatment and housing

**Treatment:**
- Treatment needs to be done under veterinary supervision
- Re-vaccinate all dogs that have not been vaccinated in the last 14 days
- Supportive care (including broad spectrum antibiotics for secondary infections and deworming, fluid therapy if necessary)
- Bathe with Pure Oxygen Ultra Shampoo™ to remove virus particles from the animals coat before being placed back out in adoptions. Wear protective clothing to prevent fomite transmission during the bathing

**Monitoring:**
- ACA or RVT is responsible for daily monitoring and proper documentation
- The Animal Centre Manager, RVT or Senior Animal Care member is responsible for scheduling veterinary rechecks
Recovery/Treatment Failure:
- To be determined by the supervising veterinarian

Adoption:
- Recovered dogs will be placed back up for adoption after they have SNAP® tested negative, have been bathed and successfully quarantined for 2 weeks
- Exposed dogs will be up for adoption after being successfully quarantined for 2 weeks and bathed
- Continue vaccinating puppies following the normal vaccination schedule

Documentation:
- All animal centres are required to provide pertinent information as per the Ontario SPCA Adoption Sharing and Caring Policy

References: Koret Centre, Shelter Medicine – UC Davis
https://www.sheltermedicine.com/library/guidebooks/?r=canine-parvovirus