

Interim clinical considerations for North American companion-animal vaccination practice during the COVID-19 pandemic

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In the face of the global coronavirus pandemic, and as emphasis on social distancing and sheltering-in-place continue to limit client and patient access to routine veterinary care, the following considerations have been developed to address vaccination protocols for dogs and cats seen in clinical practice.

At the time of this writing, it is not possible to predict when exposure risk for humans to the novel coronavirus SARS-CoV-2 will end. Therefore, it is the responsibility of the individual veterinarian to determine when conventional vaccination schedules can be reinstated for the population of patients seen in the practice.

If pets are presented for vaccinations that are deemed a priority, other wellness care, including additional vaccinations as appropriate, could be provided as long as there is not an increased risk of coronavirus exposure for people.

General considerations

- The health and safety of veterinary personnel and clientele during the course of the COVID-19 pandemic is a priority. Therefore, amended vaccination schedules for dogs and cats should be considered.
- The impact of social distancing and self-imposed travel restrictions on exposure risk of dogs and cats to infectious disease is not known. However, it can be assumed that certain groups, based on age, geography, and/or environment, do have sustained risk that justifies priority consideration for vaccination (see tables below).
- Some coronavirus outbreaks, SARS (Asia, 2003) and MERS (Saudi Arabia, 2012), have resulted from human-animal interaction. Clients who are concerned over the ability of dogs and/or cats to transmit coronavirus to humans should be reassured that there is no evidence supporting pet-to-human transmission. Updates from the CDC on this topic can be found [here](#).
- Although coronavirus vaccines are licensed in the US for administration to dogs (canine enteric coronavirus) and cats (feline infectious peritonitis), neither vaccine (nor any veterinary-licensed vaccine) should be administered under the premise that it will either limit exposure to the novel coronavirus or prevent COVID-19 in a pet.

Canine vaccinations

VACCINE	CONSIDERATION
<p>Canine distemper (MLV or recombinant)</p> <p>Canine parvovirus (MLV)</p> <p>Canine Adenovirus-2 (MLV)</p> <p>Administered as a combination vaccine that may or may not include other vaccines.</p>	<ul style="list-style-type: none"> Young dogs (between 6 to 20 weeks of age) should be vaccinated with 3 to 4 doses of a combination vaccine administered 3 to 4 weeks apart. Adult dogs (>1 year of age) with a prior history of vaccination are at low risk for infection, even if overdue for a scheduled booster dose. Administration of scheduled booster doses can be delayed if needed to protect client and staff health. <p><i>Note:</i> A single, initial dose of a combination vaccine administered in the absence of maternally derived antibody (traditionally considered after 20 weeks of age) will likely immunize for at least a year. Emphasis, therefore, can be placed on the last 1 or 2 doses in the initial series.</p>
<p>Rabies virus</p>	<p>Exemption from state or local vaccination requirements may not be optional. State/local public health authorities must be consulted.</p> <p>See rabiesaware.org for state-level contact information.</p>
<p>Leptospira (inactivated)</p> <p>Injectable</p>	<ul style="list-style-type: none"> Administration of <i>Leptospira</i> vaccine as a priority is at the discretion of the individual clinician and should be based on a reasonable assessment of exposure risk.
<p>Borrelia burgdorferi (canine Lyme disease)</p>	<ul style="list-style-type: none"> Administration of <i>B. burgdorferi</i> vaccine as a priority is at the discretion of the individual clinician and should be based on a reasonable assessment of exposure risk. <p><i>Note:</i> Appropriately administered topical or oral tick preventive is expected to significantly reduce risk of infection.</p>
<p>Bordetella bronchiseptica (Oral, intranasal, AVL) (Injectable, CAE)</p> <p>Intranasal vaccines (AVL) may be combined with parainfluenza virus vaccine and adenovirus-2 vaccine</p>	<ul style="list-style-type: none"> Administration of <i>B. bronchiseptica</i> vaccine as a priority is at the discretion of the individual clinician and should be based on a reasonable assessment of exposure risk. <p>Consider utilizing an oral or intranasal vaccine, since only one dose is required to provide immunity, whereas the injectable vaccine requires two doses 2 to 4 weeks apart for a dog <16 weeks of age or if an adult dog is significantly overdue.</p> <p>Unvaccinated, young dogs (<6 months of age) appear to be at greater risk for complications from infection and may be considered a priority for vaccination if there is a clear risk for exposure.</p> <p>Current social distancing for people limits opportunities for exposure (dog shows, boarding, dog parks, etc.)</p>
<p>Canine Influenza Virus H3N8 and/or H3N2</p>	<ul style="list-style-type: none"> Administration of either influenza strain as a priority is at the discretion of the individual clinician and should be based on a reasonable assessment of exposure risk. <p>Current social distancing for people limits opportunities for exposure (dog shows, boarding, dog parks, etc.)</p>

Crotalus atrox toxoid (Western Diamondback rattlesnake)	<ul style="list-style-type: none"> Administration of the rattlesnake (toxin) vaccine as a priority is at the discretion of the individual clinician and should be based on a reasonable assessment of exposure risk.
Canine coronavirus	<ul style="list-style-type: none"> Not recommended. Although coronavirus vaccines are licensed in the US for administration to dogs (canine enteric coronavirus), this vaccine should not be administered under the premise that it will either limit or prevent COVID-19 in a pet.

Feline vaccinations

VACCINE	CONSIDERATION
Feline panleukopenia virus (FPV) Feline herpesvirus-1 Feline calicivirus (Injectable, intranasal) (Administered as a combination, MLV or inactivated vaccine; may or may not include other vaccines)	<ul style="list-style-type: none"> Young cats (between 6 to 20 weeks of age) should be vaccinated with 3 to 4 doses of a combination vaccine administered 3 to 4 weeks apart. Adult cats (>1 year of age) with a prior history of vaccination are at low risk for infection, even if overdue for a scheduled booster dose. Administration of scheduled booster doses can be delayed. <p><i>Note:</i> A single, initial dose of a combination vaccine administered in the absence of maternally derived antibody will immunize against FPV for at least a year. Emphasis therefore can be placed on the last 1 or 2 doses in the initial series.</p>
Rabies Virus (Injectable) (Recombinant [live canary-pox vector], inactivated)	<p>Exemption from state or local vaccination requirements may not be optional. State/local public health authorities must be consulted.</p> <p>See rabiesaware.org for state-level contact information.</p>
Feline Leukemia Virus (Injectable) (Recombinant [live canary-pox vector], inactivated)	<ul style="list-style-type: none"> Initial vaccination: Kittens between 8 and 16 weeks of age <i>and</i> at risk for exposure to infected cats should receive two doses 3 to 4 weeks apart. Administration of feline leukemia vaccine as a priority in older cats is at the discretion of the individual clinician and should be based on a reasonable assessment of exposure risk.
Feline Coronavirus (Feline Infectious Peritonitis, or FIP) (Intranasal)	<ul style="list-style-type: none"> Not recommended. Although coronavirus vaccines are licensed in the US for administration to cats (feline infectious peritonitis), this vaccine should be not administered under the premise that it will either limit or prevent COVID-19 in a pet.

Abbreviations

MLV: Modified live virus, or attenuated

AVL: Avirulent live (bacteria), or attenuated

CAE: Cellular antigen extract, or inactivated (killed)