

An overview of the current Vaccination Regimes being used by RSPCA Tasmania

- Due to the demonstrated high susceptibility of dogs and cats to viral pathogens in the shelter environment, it is important for animals to be vaccinated ASAP on intake. Vaccination prior to exposure is the goal.
- Because many animals that arrive into shelters are susceptible to the "core" viral and bacterial diseases and the risk of exposure to these diseases is so high, the rapid onset of immunity is essential, in order to maintain the health of each individual animal as well as of the total group of shelter animals, and to prevent outbreaks of these specific diseases. <u>Modified Live Vaccinations are advised in the shelter environment.</u>
- Every animal over 4 weeks of age MUST be vaccinated on arrival to the shelter, regardless of their health status on arrival.
- If an animal is so ill that it is considered unsafe to vaccinate them, they should be in a veterinary hospital, not a shelter.
- Killed Virus Vaccines are not useful in the shelter environment, as it takes a significantly longer period for the vaccines to provide protection.
- Intranasal vaccines work directly on the mucosal surface, are not influenced by maternal antibodies and should provide a quicker immunity to kennel cough than
 parenteral vaccines, they should be used within the shelter environment. Intranasal KC vaccines work from an earlier age and will provide protection to KC within hours
 following administration.
- The risks of vaccinating a pregnant animal has to be weighed up against the animal coming up against a virulent virus from the shelter and not only becoming a risk to the individual but to the rest of the shelter animals. If the animal has been seized, it is prudent to either house it off site until the unborn are born, or gain permission from the owner or body responsible for the animal's seizure.
- Nursing animals should be vaccinated on entering the shelter; the nursing young should rely on maternal antibodies for most disease protection. This is difficult with feline URTI and foster off site should be considered with kittens <4 weeks of age, ASAP.
- Never freeze MLV vaccines, either prior to' or after they have been reconstituted with sterile diluent. (1°-3°C for storage)
- Store reconstituted vaccine for <4days.
- Reconstituted vaccine should not be used after 2-4 hours at 21°-26°C.
- Never mix killed vaccines with MLV vaccines.

Useful reference: Infectious Disease Management in Animal Shelters; P.62, Miller and Hurley, 2009.

Animal Type	Disease	Vaccine	Regime/Frequency	Comments
Puppy (<10 weeks) (Also between 10-16 weeks)	 Canine Distemper virus Canine adenovirus (Hepatitis) Canine Parvovirus 	Nobivacc C3 (MSD)	 Puppies >4 weeks but <10 weeks in shelter environment vaccinate every 2 weeks until 10 weeks of age. Puppies >4 weeks but <10 weeks in foster care vaccinate once until 10 weeks of age. Final Nobivacc vaccination at 10 weeks of age. Between 10-16 weeks of age, one vaccination will protect for one year. Follow-up with a booster in 1 year. 	 <2-4 weeks MLV vaccines are not safe to be used on animals due to their poorly developed immune system. 7 days onset of immunity With MLV Distemper vaccination, immunity develops within hours following administration. With MLV Parvo vaccination immunity can be demonstrated within 3 days following administration. Proven clinical protection and prevention of viral shedding for ALL known Canine Parvovirus field strains (2, 2a, 2b and 2c) The distemper virus does not survive long in the environment. Dogs >16 weeks receiving the Nobivacc C3 don't require a C3 booster for 3 years. Pregnant bitches: This is "off label use". It is registered for pregnant bitches in the UK and in NZ but not in Australia. Protects against clinical disease and shedding for at least 3 years for CPV-2, 2a and 2b if used on adult dogs (>6 months).
Puppy (<10 weeks) (Also between 10-16 weeks)	 Parainfluenza virus Bordetella bacteria 	Nobivacc KC (intranasal) (MSD)	 Puppies <4 weeks in shelter environment vaccinate at 4 weeks of age. Puppies <4 weeks in foster care vaccinate at 4 weeks of age. Final Nobivacc KC vaccination at 4 weeks of age. Between 4-16 weeks of age, one intranasal vaccination. Follow-up with a booster in 1 year. 	 <2-4 weeks MLV vaccines are not safe to be used on animals due to their poorly developed immune system. Rapid onset of local immunity, within hours following administration. At least 12 months duration of immunity. Requires a yearly booster. Significantly reduces organism shedding. Intranasal vaccines prevent infection and decrease signs of disease (compared with parenteral vaccines that do not act locally to prevent pathogen entry). Use from 4 weeks of age. Maternal antibodies don't affect the efficacy of the vaccine. Stimulates protective immunity even in the presence of maternal antibodies. Pregnant bitches: Registered and Safe Never administer intranasal vaccine containing MLV Bordatella parenterally, as they can cause a severe local reaction, and in rare cases, death due to acute hepatic failure.

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Dog (>16 weeks)	 Canine Distemper virus Canine adenovirus (Hepatitis) Canine Parvovirus 	Companion C3 (Intervet)	 Under normal circumstances dogs between 12- 16 weeks will be protected with a single dose, in the shelter circumstance, a booster dose 2-3 weeks later is suggested for dogs given a primary dose <16 weeks. Dogs >16 weeks fully vaccinated with a single dose. Follow-up with a booster in one year. 	 With MLV Distemper vaccination, immunity develops within hours following administration. With MLV Parvo vaccination immunity can be demonstrated within 3 days following administration. The distemper virus does not survive long in the environment. Parvovirus will last in the environment for months but is susceptible to certain disinfectants. Companion C3, will require yearly boosters. Store btw 2°C-8°C (refrigerate; do not freeze). Protect from sunlight.
Dog (>16 weeks)	• Parainfluenza virus • Bordetella bacteria	Nobivacc KC (intranasal) (MSD)	 One intranasal vaccination. Follow-up with a booster in 1 year. 	 Rapid onset of local immunity, within hours following administration. Require a KC booster every year for protection. Pregnant bitches: Safe
Kitten (<12 weeks)	 Feline Panleukopenia (feline infectious enteritis; feline parvovirus) Feline Herpes Virus Type 1 (FHV-1; feline rhinotracheitis virus) Feline Calicivirus (FCV) 	Companion F3 (Intervet)	 Foster Kittens between 500-800 gms are to have a vaccination before foster. Foster Kittens <500gms with their mother are not to be vaccinated until 500gm or 4 weeks of age. The queen is to be vaccinated on admission to the shelter. Kittens > 800gms (8 weeks) are to have 3 booster vaccinations at monthly intervals. Kittens 8-12 weeks are to have 3 booster vaccinations at monthly intervals. Follow-up with yearly boosters. 	 MLV Feline Enteritis vaccination has shown almost immediate protection from administration. Vaccination provides a high level of long lasting protection. Will provide at least 12 months protection following the required monthly booster once >12 weeks of age. Shedding of Herpes virus creates a serious risk in unvaccinated cats and kittens in the shelter environment. Store btw 2°C-8°C (refrigerate; do not freeze). Protect from sunlight.
	Feline Imunodeficiency (FIV) virus.		 >12 weeks: 3 doses at 2-4 week intervals. Yearly boosters. 	Currently not a core vaccination.Off label use in pregnant queens.
Cat	 Feline Panleukopenia (feline infectious enteritis; feline parvovirus) Feline Herpes Virus Type 1 (FHV-1; feline rhinotracheitis virus) Feline Calicivirus (FCV) 	Companion F3 (Intervet)	 Cats >12 weeks will require 2 booster vaccinations 3-5 weeks apart. If vaccination History is in doubt: give 2 booster vaccinations 3-5 weeks apart. 	 MLV Panleukopenia vaccination has shown almost immediate protection from administration. Shedding of Herpes virus creates a serious risk in unvaccinated cats and kittens in the shelter environment. MLV Herpes vaccination will provide immunity from as early as 7 days post vaccination and protection for up to 3 years. Cats >12 weeks will require 2 booster vaccinations 3-5 weeks apart. Vaccination provides a high level of long lasting protection. Will provide at least 12 months protection following the required monthly booster. Not recommended for use in "pregnant queens", however will provide the best protection for a cat population in the shelter environment, a risk worth taking. Spay all queens ASAP. Store btw 2°C-8°C (refrigerate; do not freeze). Protect from sunlight.
	Feline Imunodeficiency (FIV) virus.		 >12 weeks: 3 doses at 2-4 week intervals. Yearly boosters 	 Currently not a core vaccination. Off label use in pregnant queens.

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Rabbit	Rabbit Calicivirus (Rabbit Haemorrhagic Disease Virus)	Cylap RCD Vaccine <i>(Zoetis)</i>	 For baby rabbits, 10-12 weeks of age followed by a monthly booster, then 6 monthly boosters. For rabbits older than 10 weeks, an initial course of 2 boosters 2-4 weeks apart is required. 6 monthly booster is required for life. 	 Haemorrhagic viral disease that is highly fatal. Can affect a rabbit within 12-18 hours of transmission. Clinical signs may last 3-5 days before death. A small number of rabbits can experience a small, localised, skin reaction after a vaccination, at the vaccination site. In most cases this irritation causes a small scab and some hair loss. This usually resolves after two weeks. RHDV2: CYLAP RCD is not fully protective against. But vaccination will assist in body defence mobilisation. The specific vaccination is not currently available in Australia but the suggestions for using the Cylap vaccination are apparently effective.
Ferret	Canine Distemper	Nobivacc DHP (0.2-0.5 X dose) (MSD)	 Under 14 weeks: two boosters given at 10 and 14 weeks. Over 14 weeks: two boosters given two weeks apart, then an annual vaccination. 	 Ferrets are extremely susceptible to the canine distemper virus, and the fatality rate of ferrets that contract canine distemper is virtually 100%. Anaphylaxis is possible, usually within 60 minutes post vaccination. Passive immunity: usually 9 weeks. Never vaccinate pregnant female ferrets, unless they are to be spayed. Usually spread via sneezing. Canine Distemper in ferrets has an incubation period of 6-10 days. The distemper virus does not survive long in the environment.
Horse	<u>Clostridium Tetani</u>	Equivac 2in1 (Zoetis) (Tetanus / Strangles)	 2 vaccinations 4-6 weeks apart (usually we use 2 in 1 vaccinations to vaccinate the horses that arrive at the shelter. And so 3 vaccinations, 2 weeks apart are given to account for the Strep Equi component) Booster vaccination 12 months later. Then to ensure strong long lasting immunity, horses should be vaccinated every 5 years or at the time of injury. Vaccinating mares and giving them a booster 2 weeks prior to foaling can protect foals younger than 3 months old. Foals: from 3 months 	 The Tetanus disease is caused by a neurotoxin that is released by the bacteria Clostridium tetani. This bacteria is always present in the horse environment as spores that persist for many years. Spores gain entry into the horses body via a wound symptoms occur within 4-12 days These symptoms include stiffness and cramping of body muscles, eventually leading to death. Treatment is expensive, time consuming and generally unsuccessful. At the time of injury tetanus toxiod is not an effective protection for unvacinated horses. These horses should receive a <u>tetanus antitoxin</u> as well as <u>tetanus toxoid</u> at the time of injury. The antitoxin gives immediate protection that will last three weeks and the toxoid will help to develop a long lasting immunity to disease.
	<u>Streptococcus equi spp equi.</u>	Equivac 2in1 (Zoetis) (Tetanus / Strangles)	 3 vaccinations, 2 weeks apart. Booster every 12 months. Vaccinating mares and giving them a booster 2 weeks prior to foaling can protect foals younger than 3 months old. Foals: from 3 months 	 Mostly infects young, non-vaccinated horses but an infect other, non-vaccinated horses Highly infectious and upper respiratory tract infection and the formation of abscesses around the throat area. directly by contact with infected horses or subclinical carriers or indirectly by contact with water troughs, feed bins, pastures, stalls or tack that are contaminated with nasal discharge or pus draining from the lymph nodes of infected horses.

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Bovine (cow)	<u>5 Main Clostridial Diseases</u> <u>C. tetani</u> (Tetanus) <u>C. septicum</u> (Malignant Oedema) <u>C. chauvoei</u> (Blackleg) <u>C. perfringens</u> type D (pulpy kidney) (Enterotoxaemia) <u>C. novyi</u> (Black disease)	Ultravac 5 in 1 <i>(Zoetis)</i> 2ml S/C vacc'	 Vaccinate calves from 6 weeks of age: 2 doses 4-6 weeks apart. Un-vaccinated adult stock should receive 2 doses 4-6 weeks apart. A booster 12 months after the initial two shots. should confer lifelong immunity against tetanus and blackleg. 	 All animals should be vaccinated for the five, common clostridial diseases (tetanus, malignant oedema, enterotoxaemia, black disease and blackleg) with a '5-in-1' vaccine. A separate vaccine is available for protection against botulism if required. A separate vaccine is available for protection against Johnes disease if required. Annual booster doses should ideally be given around four weeks before calving to ensure that passive immunity is passed onto the new-born calf via the colostrum (first milk). Vaccine can be used for 30 days after opening providing correct storage instructions are followed Store at 2°C to 8°C (Refrigerate. Do Not Freeze) It is important that the vaccine is kept properly mixed before and during use. For subcutaneous use only.
Caprine (goat)	<u>5 Main Clostridial Diseases</u> <u>C. tetani</u> (Tetanus) <u>C. septicum</u> (Malignant Oedema) <u>C. chauvoei</u> (Blackleg) <u>C. perfringens</u> type D (pulpy kidney) (Enterotoxaemia) <u>C. novyi</u> (Black disease)	Ultravac 5 in 1 <i>(Zoetis)</i> 1ml S/C vacc'	 Vaccinate kids from 6 weeks of age: 2 doses 4-6 weeks apart. Un-vaccinated adult stock should receive 2 doses 4-6 weeks apart. A booster 12 months after the initial two shots. should confer lifelong immunity against tetanus and blackleg. 	 All animals should be vaccinated for the five, common clostridial diseases (tetanus, malignant oedema, enterotoxaemia, black disease and blackleg) with a '5-in-1' vaccine. Vaccinate at approximately 4-6 weeks of age with kids that come from a vaccinated doe. Earlier if doe is unvaccinated. A separate vaccine is available for protection against botulism if required. A separate vaccine is available for protection against Johnes disease if required. Use Tetanus Antitoxin (TAT) at castration and disbudding of kids. Store at 2°C to 8°C (Refrigerate. Do Not Freeze) It is important that the vaccine is kept properly mixed before and during use. For subcutaneous use only.
	<u>Cornybacterium</u> <u>pseudotuberculosis</u> Caseous Lymphoid Adenoma (CLA)	Glanvac® 6 <i>(Zoetis)</i>	• Kids: 6 months old • Booster: 3 weeks later • Annual booster	 This is optional and included in 6 in 1 vaccinations if required. Glanvac® 6 provides sheep and goats with protection against Cheesy Gland (CLA) and the five main clostridial diseases; black disease, black leg, malignant oedema, pulpy kidney, and tetanus.
Ovine (sheep)	<u>5 Main Clostridial Diseases</u> <u>C. tetani</u> (Tetanus) <u>C. septicum</u> (Malignant Oedema) <u>C. chauvoei</u> (Blackleg) <u>C. perfringens</u> type D (pulpy kidney) (Enterotoxaemia) <u>C. novyi</u> (Black disease)	Ultravac 5 in 1 <i>(Zoetis)</i> 1ml S/C vacc'	 Vaccinate lambs from 6 weeks of age: 2 doses 4- 6 weeks apart. Un-vaccinated adult stock should receive 2 doses 4-6 weeks apart. A booster 12 months after the initial two shots. should confer lifelong immunity against tetanus and blackleg. 	 Annual booster doses should be given around four weeks before lambing to ensure that passive immunity is passed onto the new-born lamb via the colostrum (first milk). Use Tetanus Antitoxin (TAT) at castration of lambs. Store at 2°C to 8°C (Refrigerate. Do Not Freeze) It is important that the vaccine is kept properly mixed before and during use. For subcutaneous use only. A separate vaccine is available for protection against botulism if required. A separate vaccine is available for protection against botulism if required. A separate vaccine is available for protection against botulism if required.
	<u>Cornybacterium</u> <u>pseudotuberculosis</u> Caseous Lymphoid Adenoma (CLA)	Glanvac® 6 (Zoetis)	• Kids: 6 months old • Booster: 3 weeks later • Annual booster	 This is optional and included in 6 in 1 vaccinations if required. Glanvac® 6 provides sheep and goats with protection against Cheesy Gland (CLA) and the five main clostridial diseases; black disease, black leg, malignant oedema, pulpy kidney, and tetanus.

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