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TOP 5 Vaccine Myths

Liza Wysong Rudolph, BAS, CVT, VTS (CP-CF, SAIM)
East Coast Veterinary Education
Aberdeen, Maryland

The veterinary healthcare team often encounters clients who bring their pets for a wellness visit but are unwilling to vaccinate because they do not believe in vaccines. Team members must be able to dispel myths and educate clients about the need for preventive healthcare.

Top 5 Vaccine Myths

- Vaccines Are Not Necessary
- Veterinarians Just Want to Make Money
- Vaccines Made My Pet Sick
- Vaccines Do Not Work
- Vaccines Often Cause Cancer

The following can help dispel these common vaccine myths.

1 "My pet does not spend time outside. Vaccines are not necessary."

Vaccine administration should be considered for each individual patient based on exposure risk, geographic location, and pet lifestyle. Vaccines have been divided into core and noncore groups. A one-size-fits-all vaccine protocol does not exist.[1-5] (See **Vaccine Guidelines**.)

- **Core vaccines**, some of which are required by law, protect pets against diseases that have public health significance, are highly infectious, and pose risk for severe disease. Core vaccines are considered high-benefit and low-risk to the general patient population.
- **Noncore vaccines**, which are typically recommended for patients only at risk because of their specific location or population, should be administered based on the risk associated with vaccine administration versus the pet's risk for contracting the disease.

An in-depth conversation with a client about his or her pet's environment is an absolute necessity and can help make the client feel part of the decision-making team. That the pet does not often leave the home may be true, but during the discussion, the veterinary team may learn the pet goes to a groomer or visits a local pet store. Such small facts change a patient's risk factors. Additionally, the vaccination status of other animals the pet encounters outside the home cannot be known.

2 "Veterinarians just want to make money from vaccines."

When developing vaccination protocols for the veterinary practice, current evidence-based guidelines (see **Vaccine Guidelines**) should be reviewed. Multiple core vaccinations for dogs and cats have a proven duration of immunity (DOI) of more than one year, and administration is recommended every 3 years after the initial series.[2,4] However, noncore vaccines have a shorter DOI and will need to be administered at more frequent intervals.[2-4] Vaccine administration is based on the individual risk factors for that patient, not financial gain. Therefore, vaccination recommendations may vary between patients based on each patient's risk factors.

TAKE ACTION

1. Be comfortable and confident conversing with clients about the misperceptions of vaccinations, and be able to point out problems clients were not aware of (eg, their pet coming into contact with other animals whose vaccination status is unknown).
2. Always administer vaccines based on a patient's individual circumstances and lifestyle.
3. Be familiar with the AAHA and AAFP vaccine guidelines, and know that no vaccine works for every disease.

With young animals, a window of susceptibility can occur when the maternal antibodies are high enough to block the immune response to the vaccine but not to protect the pet from an active infection.

3 "My puppy was vaccinated and then got parvovirus. The vaccine made my pet sick."

Vaccination is particularly important in young animals because they are generally more susceptible to infection and tend to develop more significant disease. Although modified live vaccines can rarely revert to their pathogenic form and cause disease in the patient, maternal antibody interference is more likely to be the culprit in this situation and is the reason pediatric patients require a series of vaccinations. The maternal antibodies need to fall below a certain level before vaccination is effective. The level, which is variable, can occur between 8 and 16 weeks, depending on the mother's vaccination history and the successful transfer of maternal antibodies via colostrum.[2,3,6]

Unfortunately, the maternal antibodies can be high enough to block the immune response to the vaccine but not to protect the pet from an active infection. This window of susceptibility is a significant reason why an appropriately vaccinated pediatric patient can contract a disease despite being vaccinated.[6]

4 "My dog was vaccinated last year and got sick anyway. Vaccines do not work."

Vaccination has been widely used in humans for more than 200 years and in companion animals for more than 50 years and has proven effective in controlling a range of major infectious diseases. The goal of vaccination is to create an adequate level of protective immunity to infectious disease.

Vaccine Guidelines

- 2011 AAHA Canine Vaccination Guidelines. **aaha.org/professional/resources/canine_vaccine.aspx**
- 2013 AAFP Feline Vaccination Advisory Panel Report. **catvets.com/guidelines/practice-guidelines/feline-vaccination-guidelines**

Vaccine Adverse Events

WHAT CONSTITUTES AN ADVERSE EVENT?

- An adverse event is any undesirable ocurrence associated with the use of a medical product.[8] Possible adverse events of vaccination include mild reactions (eg, local inflammation, swelling, pain, irritation). More severe events include anaphylaxis, immunosuppression, autoimmune disorders, transient infections, and the development of long-term carrier states. Failure to immunize is also considered an adverse event.

WHAT IS ADVERSE EVENT REPORTING?

- Any adverse event for any medical product should be documented and reported. This aids in the monitoring and recognition of trends in the adverse events of vaccination. If a pet has any type of vaccine reaction, record the event in the medical record so preventive measures can be taken in the future. The AVMA and the WSAVA encourage the reporting of any adverse event to the technical services department of the vaccine manufacturer and regional/governmental oversight committees (eg, US Department of Agriculture's Center for Veterinary Biologics, Canadian Food Inspection Agency). Reporting forms and procedures can be found in the *2011 AAHA Canine Vaccination Guidelines*.

An effective vaccine mimics the immune system's natural response.[6] A vaccine's failure to produce the anticipated results is considered a rare adverse event and should be reported to the vaccine manufacturer.[2] (See **Vaccine Adverse Events**, page 21.)

A more common scenario is a lack of client education regarding vaccination goals. A good example is canine infectious respiratory disease complex (CIRDC), which encompasses a wide variety of pathogens. Vaccination may completely prevent some pathogens (eg, canine distemper) but only lessen the disease frequency and severity in others (eg, *Bordetella bronchiseptica*, parainfluenza). Many other CIRDC pathogens do not have vaccines available,[7] which can confuse clients because the term "kennel cough" is commonly used to describe their pet's illness. Many clients equate kennel cough with *Bordetella bronchiseptica* and believe the vaccine given to their pet was not effective.

5 "My cousin's cat had to have his leg amputated. Vaccines often cause cancer."

Feline injection-site sarcoma (FISS) is a rare but serious adverse event in cats. Reported rates are variable and current estimates are likely below 1 in every 10 000 vaccinations.[4] Adjuvanted vaccines have been implicated in FISS formation because they may trigger a more significant inflammatory response, but this is controversial because many injectable products likely produce an inflammatory reaction.[4] The AAFP recommends administering subcutaneous vaccinations in cats' distal limbs to assist in identifying the likely causative agent for local reactions and neoplasia and to aid in management after a sarcoma has formed.[4]

The veterinary team must be prepared to educate clients about the goals of vaccinations for their pets.

Conclusion

Rumors travel quickly when something like a vaccine is perceived as a danger rather than an aid to disease prevention. The veterinary team must be prepared to educate clients about the goals of vaccinations for their pets and explain why vaccinations are an important part of any wellness program.

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LIZA WYSONG RUDOLPH, BAS, CVT, VTS (CP-CF, SAIM), has been working as a veterinary nurse since 2000 and began practicing in internal medicine in 2006. She earned her bachelor's degree in veterinary technology from St. Petersburg College, Florida, and most of her clinical experience has been related to internal medicine and emergency and critical care. She enjoys educating and training veterinary nurses through consulting, lecturing, online continuing education, and publishing.

FUN FACT: Liza has never owned a car that was not a Volkswagen. When she is not working, writing, teaching, or lecturing, she enjoys gardening, a good campfire, and a new beer.