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Implementing a 3-year canine vaccination program in practice: new vaccine allows on-label compliance with AAHA guidelines

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The American Animal Hospital Association (AAHA) and leading universities now recommend triennial revaccination protocols for core canine vaccine antigens. This bulletin provides information to help veterinarians examine their practice protocols and implement 3-year vaccination protocols into their practices to better serve clients and patients. It also provides information about a new vaccine that has earned United States Department of Agriculture (USDA) approval for core canine vaccination at 3-year intervals.

The 2003 Canine Vaccine Guidelines and Recommendations published by the American Animal Hospital Association (AAHA) Canine Vaccine Task Force took a bold step. In these guidelines, the AAHA bypassed traditional annual revaccination protocols to recommend triennial protocols for certain core canine vaccines, including canine distemper virus (CDV), canine adenovirus-2 (CAV-2), and canine parvovirus (CPV).¹ However, the AAHA did not recommend to veterinarians how they should implement the guidelines into their practices. As a result, many veterinarians have struggled with whether to accept or reject the guidelines in their own practices and how to incorporate use of triennial protocols for core vaccines.

One of the main hurdles for veterinarians who have wanted to incorporate the AAHA guidelines has been a lack of vaccines approved by the United States Department of Agriculture (USDA) for use at 3-year intervals. Until recently, veterinarians who wanted to implement triennial revaccination had no choice but to use 1-year vaccines on an off-label basis (with the exception of rabies vaccine). Although off-label vaccine usage is an option at a veterinarian's discretion, some legal experts caution that using a vaccine less frequently than is recommended on its USDA-approved manufacturer's label may increase legal risks.^{2,3}

USDA approval backs use of new vaccine in 3-year protocols

Continuum® DAP (Intervet Inc.) offers a new option for all veterinarians, particularly those who want to progress to 3-year protocols but do not want to use vaccines less frequently than their approved labels recommend. This new vaccine has earned full USDA approval and is also backed by a manufacturer's label for CDV, CAV-2, and CPV vaccination at 3-year intervals (as recommended by the AAHA).⁴



Michael Coyne, VMD, PhD

This is the first time that a nonrabies vaccine has received 3-year duration-of-immunity label approval from the USDA in full accordance with the 9CFR licensing standards.

Challenge-of-immunity data supports new vaccine

Continuum DAP was evaluated based on Code of Federal Regulations (9CFR) criteria for both serologic and real-time challenge-efficacy results.⁵ This is the first time that a nonrabies vaccine has received 3-year duration-of-immunity label approval from the USDA in full accordance with the 9CFR licensing standards. This makes Continuum DAP an ideal tool for veterinarians who now are ready to implement vaccination protocol changes to follow the AAHA guidelines.

When evaluating vaccines for use in triennial protocols, practitioners should look for real-world challenge-of-immunity data, which is considered to be the gold standard when assessing immunity in dogs.^{6,7} “There is too much dependence on serology as a measure of efficacy,” says Michael Coyne, VMD, PhD (Intervet Inc.). “Efficacy needs to be evaluated based on challenge.”⁸ This is particularly true because vaccines vary tremendously in postvaccination duration of immunity based on route of administration, immunizing strains and antigen content, potency, master seed virus, production method, adjuvant used (if any), level of attenuation, and whether the vaccine contains killed or modified live virus.^{1,7,9}

Continuum DAP challenge study protocol

Test animals were held in strict isolation for 3 years (36 months) following vaccination with Continuum DAP. Following this postvaccination isolation period, the dogs were challenged sequentially, first with virulent CAV-1 (intravenous challenge), second with CPV (oral/nasal challenge), and third with CDV (intracranial challenge). For each individual virus challenge, a new group of six age-matched, nonvaccinated control dogs was also challenged. Control dogs were not challenged sequentially. Immediately prior to each challenge, blood samples were drawn from each dog and evaluated using serum neutralization (SN) and/or hemagglutination inhibition (HI) testing methods to determine serologic status at time of challenge.

Daily clinical examinations were performed on all dogs beginning 4 days prior to each challenge and during the postchallenge observation period as mandated by 9CFR guidelines. Clinical signs for the particular challenge virus infected were recorded daily.

Continuum DAP challenge study results

In challenge studies performed starting 36 months after vaccination, clinical signs of CDV, CAV-1, and CPV were prevented in 100% of dogs vaccinated with Continuum DAP (Table 1).⁴



Table 1: Clinical signs and deaths following CDV, CAV-1, and CPV challenge⁴

Treatment Groups	No. of Dogs	Clinical Signs/ Infection	Deaths
CDV			
Vaccinates	22	0	0
Controls*	16	16	11
CAV-1			
Vaccinates	23	0	0
Controls	6	6	3
CPV			
Vaccinates	22	0	0
Controls	6	6	2

* This group included 6 age-matched controls and 10 seronegative, 10- to 12-week-old pups that were included to verify the severity of CDV challenge.

Implementing triennial revaccination protocols

With the introduction of the new 3-year licensed vaccine backed by real-world challenge-of-immunity data, now is an ideal time to evaluate your current vaccination practices. Establishing one practice philosophy before communicating with staff members is the first step toward successful implementation of vaccination protocol changes.

“Large practices with several DVMs on staff will likely have differences of opinion. Argue it out. Put the issues on the table, research them, and decide,” says Dr. Coyne, who is also a veterinary practitioner in Bear, Delaware. “Doctor-to-doctor challenges can be healthy—for the practice as well as, ultimately, the pet.”⁸

As a practice, you can accept the core and noncore vaccines recommended by the AAHA or adapt them for your geographic area.¹⁰ After veterinarians have reached consensus, communicate your updated vaccination philosophy first to your staff and then to your clients, emphasizing the ultimate goal of improving the total healthcare you provide to your patients.

Preparing and communicating with staff members

For a practice to successfully implement protocol changes, all veterinarians and staff must clearly understand and support the new protocol. Hosting a meeting or series of meetings may be helpful. Listen to your staff—they are your internal clients and will provide insight to help you communicate with your external clients. What are their concerns? What do they hear and think regarding vaccination protocols?¹⁰ Your staff members need to understand what is changing in your protocol and why. What prompted the changes?





Samuel Geller, VMD

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“Team members are looking for guidance and convictions from their doctors when something as significant as vaccine protocols is changed. Deciding amongst the doctors first that the 3-year protocols are the way to go is the first step,” says Paige Garnett, DVM, DABVP canine/feline, owner of Care Animal Hospital in Arvada, Colorado, who incorporated 3-year feline vaccination protocols in 1998 and 3-year core canine vaccination protocols in 2000.

“The new protocol must be presented to the support staff with conviction and clarity. Staff members must feel that the decision is sound and in the best interest of the animals we care for. They must know that we are going to implement the new protocols on our own animals as well.”

“What I emphasize to my staff and what they hear me explain to clients is that there is now challenge data—which we didn’t have earlier in the vaccination protocol debates—to support 3-year protocols,” says Samuel Geller, VMD, of Quakertown Veterinary Clinic in Quakertown, Pennsylvania. “Challenge data was really the catalyst for us to change in our practice and allowed the veterinarians in our practice to feel comfortable making the transition. This is an important point that staff can both feel confident about and help emphasize with clients.”

Communicating with clients

Emphasize to clients that you continually review vaccination and other healthcare information to stay current and provide the best healthcare possible. Encourage staff members to reassure clients that your clinic is always evaluating new information regarding vaccination protocols, new vaccines available, duration-of-immunity data, as well as the influence of geographic and individual pet lifestyle risks.¹¹ Consequently, your practice will make changes in its recommendations from time to time as needed to provide the best, most current care possible. Emphasize the fluid state of medical knowledge and your efforts to keep up with the latest and best information.¹⁰

“I emphasize to clients and have my staff reiterate that our practice follows the latest studies and research,” says Courtney Rebensdorf, DVM, owner of Oaklawn Animal Hospital in Cranston, Rhode Island, who started using 3-year vaccination protocols several years ago. “Now that there is a 3-year vaccine backed by scientific studies conducted in full accordance with 9CFR, there is no reason to delay incorporating 3-year vaccination protocols into practice. In fact, the veterinary oath says first do no harm and unnecessary vaccinations can do just that—vaccines are not necessarily benign.”

Make staff and clients aware of both sides of the controversy.¹¹ Staff should be aware of the vaccination protocol controversy and the history behind it, as well as the AAHA guidelines. Distribute and discuss the AAHA guidelines with your staff. If they are not fully aware of the controversy and information that is available from various sources, they could be blindsided by questions from clients.



“When communicating with my clients, I explain that there is controversy within the veterinary profession regarding vaccination protocols, so if they do go to another veterinarian they may hear a different recommendation,” says Dr. Rebensdorf. “For example, some of my clients go to Florida for the winter and it is not unusual for them to hear different vaccination recommendations when they take their pet to a veterinarian while they are there.”

Explain how you determine individual patient needs. Involve your clients—they’ll see how thorough you are in evaluating patient needs. Develop a pet lifestyle or pet risk factor questionnaire to obtain information from clients that will help you determine patient needs. Emphasize the importance of your physical examination findings, as well as lifestyle and historical information, in determining the protocol you recommend for individual patients.

Allow your clients to accept or reject your recommendations. Be sure to give clients all relevant information—then let them make a choice. Explain that there is no guarantee that every dog will remain protected; however, there is sound supporting evidence and now a vaccine that provides 3-year duration of immunity in accordance with 9CFR standards. Inform and involve clients in the decision-making process and consider using client waiver and consent forms.^{1,10}

“With the 3-year vaccination protocols, I feel there is actually less risk of litigation than with 1-year vaccines,” says Dr. Rebensdorf. “With fewer vaccinations administered, there is less chance of vaccine-induced fibrosarcomas or immune-mediated problems. Occasionally, I have seen these events happen and it is difficult to explain to clients why a reaction happened and why they hadn’t been informed of all possible risks.”

Emphasize the importance of an annual exam and a comprehensive healthcare program. Rather than viewing less frequent vaccination as a threat to practice income, view it as allowing you to use annual exams to focus on other health issues. Just as in human medicine, regular visits allow veterinarians to identify such problems as obesity or dental problems and more life-threatening diseases early.

“Emphasize the importance of frequent physical examinations and continuing ongoing care not related to vaccination. Use the protocol changes to create a more lasting bond with your clients. Your entire team needs to be convinced that your annual exam is worth it,” adds Dr. Garnett. “Staff members need to observe veterinarians doing a complete head-to-toe exam on their own furry family members. This way your staff can talk to clients about the worth of the physical exam, how much animals age in just 1 year, and how responsible it is for owners to bring in their pets on a regular basis.”

Dr. Geller agrees. “If a client says, ‘I’m here for vaccines,’ I reply that ‘No, you’re here for an exam. Your dog may have a heart murmur that he didn’t

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have a year ago, for example,” he says. “Make clients feel that they received value when they came to your office. Explaining and communicating is key.”

Dr. Geller suggests that veterinarians supply either an oral or written report card to clients that includes observations and recommendations such as, “Your dog weighs 38 pounds and he should weigh 30 pounds—here’s what you can do. Or look at this dog’s teeth (show the client)—we recommend a dental cleaning.”

“Five years ago our reminder cards asked clients to come in for annual pet vaccinations,” says Dr. Rebensdorf. “Today they remind clients to bring their pets in for an annual examination, laboratory health screens, and any vaccinations necessary (we still give Lyme and *Leptospira* vaccines annually)—we really emphasize the importance of the physical examination.”

Individualizing patient protocols

Experts agree that variations exist among patients, their lifestyles, and related disease risks, as well as among individual vaccines. Thus, the best approach is to evaluate each dog’s risk factors and tailor vaccination to the specific needs of the patient rather than to a routine protocol.^{6,7} The AAHA and other groups suggest that veterinarians focus on a core vaccination program using their experience in their geographic area, patient and client profiles, and best current scientific data to determine the appropriate vaccination protocol for each patient.^{1,6,12}

“Core vaccines in our area include CDV, CAV-2, and CPV antigens, as well as *Leptospira*. In addition, we involve clients in reviewing each dog’s individual risk factors, such as possible exposure to ticks and Lyme disease, to determine the best healthcare and need for additional noncore vaccines for each pet,” says Dr. Rebensdorf. “For example, we have some dogs that never go outside and, in fact, almost never leave their owners’ laps—they have a different set of risk factors than dogs that go outside.”

Dr. Garnett has a similar approach. “In our practice, tailoring the vaccination protocol is done on an individual basis when it comes to noncore vaccines, but I do not change the 3-year directive because I think the protocol is sound for all situations. With noncore vaccines, like *Giardia*, *Bordetella*, and feline leukemia, we discuss with clients the environmental challenges that animals will face and add these vaccines if they are appropriate.”

Dr. Geller also segments his patients to determine the need for noncore vaccines. “I recommend Lyme vaccine in our area unless clients tell me they are not concerned with tick exposure or do not have their dog outside at all,” he says. “As far as core vaccines, I recommend CDV, CAV-2, and CPV for every dog. *Leptospira* is also a standard recommendation in our rural area where most dogs are exposed to wildlife. I again use this as a client education opportunity



to explain that raccoons and rodents spread *Leptospira* and that it is in our rainwater and ground water and may be transmitted to people.”

Clinching successful implementation

Switching to 3-year vaccination protocols certainly presents economic challenges to a practice, but they can be dealt with through planning and client communication. For example, Dr. Geller explains the costs of the 3-year vaccine up front to his clients, so there are no surprises when they go to the front window to pay for a visit. This avoids “sticker shock” and a potentially uncomfortable situation for both front-office staff and clients.

“I tell clients that this decision is not about money, but about what is safer for the pet. I explain that 3-year protocols are safer for their dogs and work just as well as 1-year protocols. It is better medicine and what we should be doing. I further explain that their costs are about the same for the new 3-year vaccine as they would be for three doses of annual vaccines. I emphasize that this is a new vaccine backed by 3-year challenge research—I did not take the same vaccine I offered on Friday and charge more for it on Monday. It’s worth making the 5-minute investment in client education—I have a 99.9% conversion rate.”

Dr. Garnett offers another approach with similar positive results for the practice, clients, and pets. “There was little transition at our hospital going from 1-year to 3-year protocols, because our focus was on a complete physical exam first and foremost in the health plan for each pet,” says Dr. Garnett. “We have further enhanced our focus on offering exemplary veterinary medicine by improving our dental care, our senior care, and our programs for animals with chronic medical conditions. Our clients have had very few questions about the protocol changes and look to us for guidance and knowledge in this area.”

Similarly, Dr. Rebensdorf has encountered little, if any, resistance to the protocol changes in her practice. “In fact, my clients are excited about the changes,” explains Dr. Rebensdorf. “They are savvy regarding vaccination information and sometimes ask me about giving vaccines less frequently. They appreciate the change and feel they’re getting better medicine. With Intervet’s new challenge research there is scientific evidence to support 3-year vaccine use, and I’m confident that we’re practicing the best medicine with the 3-year protocols.”

Conclusion

Veterinarians who want to implement the AAHA guidelines are no longer alone in trying to find a way. Publications for veterinary healthcare professionals are starting to offer suggestions and ideas for implementation, other practitioners are starting to incorporate 3-year protocols, and now you not only have the support of the AAHA, but a new 3-year USDA-approved vaccine as well.



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If you and your colleagues determine that you would like to follow the AAHA guidelines, Continuum DAP provides a new option that does not force you to choose between following the AAHA guidelines and following USDA-approved vaccine label instructions. The ultimate result of adopting the guidelines can be strengthened relationships with clients and improved healthcare for your patients.

For more information about Continuum DAP, talk to your Intervet supplier or visit our website at www.continuum3.com.

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