

Advancing Oral Healthcare: A Roundtable Discussion

Why should oral care be an integral part of your small animal practice?

Moderator



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Periodontal disease is one of the most common—if not the most common—disease seen in small animal practices. Besides the obvious malodor issue, there are also systemic health concerns associated with periodontal disease. Recognizing the importance of optimum oral health and providing strong recommendations to all clients on how to maintain oral health in their pets should be an integral part of every small animal practice.

Dr. Karyl Hurley: Dr. Bellows, would you help us characterize periodontal disease in dogs and cats?

Dr. Jan Bellows: Periodontal disease is a multifactorial problem that affects dogs and cats. By multifactorial, we mean that some animals with horrible home care don't develop periodontal disease, while others receiving home care have raging periodontal disease. Periodontal disease starts with plaque, causing gingival inflammation, which progresses in some cases to end-stage periodontal disease, including bone, support, and tooth loss. In other cases the pet may only develop stage 1 or 2 periodontal disease.

Dr. Margie Scherk: Periodontal disease is a progressive disease; however, there are many points at which the veterinarian can interrupt the process, starting with the deposition of plaque. Plaque must be deposited before there is an inflammatory response. Once the inflammatory response begins, there are still many opportunities to stop progression before you reach irreversible periodontal disease.

Risk factors

Dr. Barron Hall: Toy breeds and brachycephalic breeds are more prone to periodontal disease because toy breeds

have more tooth surface area in relation to their body size than large breeds, and brachycephalic breeds crowd the same number of teeth into a much smaller space.

Bellows: About 85% of dogs more than 3 years old will have evidence of periodontal disease. When we perform spay or neuter surgery, we encourage clients to include an Oral Assessment, Treatment, and Prevention, or Oral ATP. The larger the breed, the less they tend to have periodontal disease, except for greyhounds.

Hurley: So risk factors seem to include age, breed, and size. Is there a genetic bias?

Bellows: Yes. Some cats, such as Egyptian breeds, are more prone to periodontal disease.

Hall: I've also seen it in breed lines. I remember a miniature schnauzer breeder in Texas. One of her prize stud dogs had horrible periodontal disease—I extracted 18 teeth. Since then, anytime we would see a miniature schnauzer from her line, it usually needed some teeth extracted by the time it was 2 to 3 years old.

Bellows: Another factor is diet. Semi-moist diets tend to stay next to the gingiva longer. Periodontal disease starts with bacteria deposited in plaque, which irritates the gingiva. That initiates an inflammatory response, and in many cases it is a downhill spiral from there.

Relationship with systemic health

Hurley: Are animals with periodontal disease more predisposed to certain diseases?



Dr. Richard Goldstein: This is a complicated question because if we say that older or smaller dogs are more prone to periodontal disease, older or smaller dogs are also more prone to other diseases. Deciding which comes first is not easy. Studies in people suggest that periodontal disease can be the cause of marked systemic inflammation, either contributing to or causing the morbidity elsewhere in the body; there are negative effects of periodontal disease on the body other than just the mouth.¹ People with heart disease and periodontal disease may have a shorter life span than if they had the same degree of heart disease without periodontal disease.² Poor oral health has been associated with increased mortality in elderly people.³ We also know in people that obesity and diabetes correlate with periodontal disease.^{4,5} While there are fewer studies in dogs and cats, we suspect that the same processes occur.⁶

Scherk: Do underlying viral infections, such as calicivirus, feline immunodeficiency virus, or feline leukemia virus, predispose cats to periodontal disease?

Bellows: We're talking about different diseases. Gingivostomatitis is actually a syndrome that some people believe is related to calicivirus because 97% of these cats have calicivirus infections. That is different than your routine periodontal disease. Feline chronic gingivostomatitis appears to be a hyperimmune response to plaque.

Clients' commitment to oral care

Scherk: I think veterinarians underestimate the degree of discomfort pets with periodontal disease experience. Pets feel better by undergoing a thorough dental prophylaxis and maintaining good dental—and whole body—health.

Hurley: If veterinarians underestimate the impact of periodontitis on how animals feel, how aware do you think clients are of the need for prophylaxes or preventive care?

Debbie Boone: If it's something that the doctors focus on, you'll have good dental care compliance.

Bellows: I agree that clients don't always understand the importance of good dental health. The teeth are underneath the lips, so clients don't always look at them. We need clients to understand that gingivitis isn't normal, doggie breath isn't normal—it causes pain and disease, and we need to take care of it.

Boone: Veterinarians often have limited time and much to cover in an exam room. If you can train your staff members to discuss good dental health with clients and do show-and-tell, they are more empowered and happier about their job. Clients also perceive that staff members have no direct financial gain from additional services and, therefore, have the animal's welfare at heart, where sometimes they might question a practitioner's motives.

Scherk: We do show-and-tell using our clinic kitties. During comprehensive physical exams, I always pull the lip back and say, "Tell me what you see here." If they don't see anything I say, "Do the top teeth look the same as the bottom teeth?" I try to let it be a self-discovery process for the clients. Once they see this, then they are highly motivated to do something about it. Once the clients learn how to look in the mouth, they are going to keep checking. I tell clients to look in the mouth once a month.

Hall: Many practitioners had little, if any, dentistry in veterinary school. I had three hours of dentistry in school—I never was taught to extract a tooth or clean teeth. Dentistry, if offered, is most commonly an elective course in the veterinary curriculum. I don't know of any veterinary school that offers dentistry as a core curriculum course.

Goldstein: The good news is that times are changing. For example, Cornell did not have a dentistry curriculum until a few years ago, yet dentistry was one of the top things that students asked for year after year. We polled referring veterinarians to find out what they were looking for when hiring graduates, and dentistry was the number two skill that they wanted new graduates to possess.



Scherk: The veterinary profession can support periodontal wellness by increasing client awareness.

Hall: I agree. If clients see commercials or read about dentistry in pets, when the veterinarian talks to them about dental health, eventually it will sink in. Many clients think that if pets are eating, they are fine and are not in pain. That is one of the biggest myths. If they are not eating, then they are pretty darn sick.

Boone: Don't be discouraged if the first time you mention oral health, clients aren't receptive. You need to be persistent. If you just keep educating clients, they will usually comply with your recommendations.

Hurley: It's best to start when the animal is young. When you examine a puppy or kitten, tell the owner about preventive oral health care. Attitudes have changed, and people are treating their pets as family. Veterinarians are shifting from just a disease focus towards a prevention focus.

The Oral ATP

Hurley: Take us through your ideal preventive plan.

Bellows: First, the word *prophy* has to be eliminated from everybody's vocabulary (see *A dental misnomer*, page 4). Instead, we should say Oral ATP: the Oral Assessment, Treatment, and Prevention visit. Oral ATP covers the three steps of comprehensive oral health (see *The Oral ATP visit*, page 5). It starts when a client calls the office asking for a teeth cleaning. At that time, the receptionist explains what the client should expect. The client often asks about the cost, but you can't give an estimate because you don't know what is going on in the pet's mouth. It's impossible to know without a tooth-by-tooth exam with intraoral films under general anesthesia. In our practice, we give clients a list of all of our fees beforehand. We do not hide anything. Unfortunately we cannot tell them the exact fee until we have the opportunity to perform a thorough examination.

The first part of Oral ATP is the assessment under anesthetic. Some teeth are in great shape and some need to be extracted, but most are somewhere in between. Some have gingivitis and can be cleaned and do well. Some have small pockets in which we place Doxirobe (Pfizer) gel. Others require mucogingival surgery. Clients are given a second treatment plan and estimate of care once the exam is done and their pet is still anesthetized. Once we get an agreement from the client, then we perform the treatment. The third part of this comprehensive program is prevention. Each part is equally important.

We tell clients that pets need an Oral ATP visit at least once a year. Just like with people, they need to have their teeth cleaned on a regular basis. We have a Polaroid camera in each exam room. We take a picture, show it to clients, and say, "Put this on your refrigerator, and when your schedule will allow it, please let us clean these teeth and do the Oral ATP." That picture motivates them because now the oral disease is in front of their nose. Nobody wants a sick pet.

Hall: Without intraoral radiography, a thorough assessment is not possible. The assessment also requires a dental chart. Without adequate documentation to refer to when you see the patient again, you are basically starting from scratch.

Client compliance obstacles

Hurley: So what are the obstacles to this plan? Do your clients come back every six months?

Bellows: You will have attitudes at either end of the spectrum. Some folks would like to have their pet's teeth cleaned every three to four months, and some folks don't believe in this at all. When I advise some clients that their pet's periodontal disease is getting worse, they don't want to hear about it and actually get upset about my constant pestering. I write down my findings on the medical record and type an alert, "Do not mention the teeth." I have no idea what is in that client's head, but I don't want to alienate them. On the flipside, the people who accept our dental care recommendations are so proud of their decision. The effect is amazing when the clients expend effort on their pet's teeth and gums. We have scores of patients that are 8 or 9 years old and their teeth look like they are 1 year old.

Scherk: It's good to start providing oral care for puppies and kittens, but the majority of patients I see for the first time are not puppies or kittens. I agree that lifting that lip and showing clients the condition of their pet's teeth is a process of self-discovery. When clients aren't emotionally or financially prepared to proceed at that time, the next year we need to say, "I noticed grade I or II dental disease last year. Chances are it has not gotten better on its own, so let's have a look and see where it's at now." But keep it light rather than punitive.

In my practice, a good motivator for clients to proceed with assessment under anesthesia is our three-tiered dental system. Tier I is when we predict, based on a comprehensive physical examination, that there is minimal disease. In Tier I the cost will be less and the anesthetic will be shorter. Tier II is more advanced, and tier III is yet more advanced.

A DENTAL MISNOMER

The term *prophy* must be eliminated from the vocabulary of everyone who works in a veterinary clinic. Prophylaxis is used in people because you are taking your very clean mouth that you brush twice a day and going to the dentist. The dentist may find a bit of calculus, but in most cases, you don't have raging periodontal disease.

In veterinary medicine, patients are often not seen by the veterinarian until the mouth really smells, which means they have periodontal disease. This is not a prophylaxis because it is not preventing anything. Instead of scheduling patients for prophylaxis visits, I recommend the term Oral ATP: the Oral Assessment, Treatment, and Prevention visit.

—Jan Bellows, DVM, DAVDC, DABVP

Goldstein: In general, clients are responsive about vaccinating, deworming, and preventing tick exposure, and they are becoming more responsive about preventing obesity. The challenge for clients is to keep their pets as healthy as possible. It is not necessarily our role to be the sole health provider for their pets. Veterinarians are in charge of monitoring them and diagnosing problems, but it is each client's primary responsibility to keep the pet healthy. If a cat can't have its teeth brushed, then nutrition or treats can be used. People can try other things that contribute to their pets' oral health.

In geriatric patients with kidney disease, diabetes, or hyperthyroidism, for example, lengthy anesthetic procedures are not good for them. If we can shorten the time the pet is under anesthesia by having a healthier mouth to begin with, that is a huge benefit for the pet. So keeping pets in that first or second tier is a much healthier option than requiring the third tier every year or every six months.

Bellows: We also have to urge clients—even being a little pushy—to get this done. We saw a 12-year-old Yorkshire terrier that fractured its lower jaw because of periodontal disease. The referring veterinarian told me that he had recommended dental care since the dog was 1 year old, but the client was afraid of anesthesia and didn't want to spend the money each time. We had to extract every tooth in the dog's mouth. We estimated the cost of annual veterinary visits for 12 years compared with what our procedure cost—the client would have been ahead

financially coming in yearly. The take-home point is that the veterinarian needs to be the pet's advocate. The dog had to live with that mouth for a long time. When a client tells me, "I'll speak to my husband" or "I'll think about it," which really means no, I put on my animal advocate hat and say, "Just think about it from your dog's point of view—this mouth hurts!"

Scherk: We have to find out what concerns clients have. It's anesthesia for some and cost for others, especially cat owners. We need to emphasize the subtle signs of sickness and how much disease cats hide. We are not aware of their pain. I ask them to try to stand in the cat's shoes and tell them, "If your mouth looked like this when you went to the dentist, how do you think it would feel?" I put a little bit of guilt in there—there is nothing wrong with that. It's not manipulation; it's teaching them what they should know and helping them choose what they should have all along.

Boone: Sometimes veterinarians and staff members pre-judge how much the client will pay, but it's not our position to do this. We need to offer clients the best medical advice for their pets and let them decide. They've made an effort to come to the clinic and seek our knowledge, so it's our job to spend the necessary time to understand and overcome any fears they may have. The fact is very few animals die during anesthesia.

Scherk: We have to educate our clients and emphasize the care that we use in monitoring anesthesia.

Educational tools

Hurley: We mentioned showing clients photos of teeth. What other educational tools do you use?

Scherk: Dental models are helpful. You can compare a healthy side to a diseased side. I use one set of images to show the progression of gingivitis to periodontal disease in cats. I don't use brochures a lot—I think direct, hands-on learning is more valuable for clients.

Goldstein: Cartoons work well to show the bacteria and film that develop in Stage I disease. I explain that the calculus seen is not just a piece of inert rock—it is an active inflammatory process that eats away at the bone and gums in their dog's mouth. It's important for clients to understand the disease gets worse every day if we don't treat it.

Hall: I use dental models and radiography books. I also have a tooth collection to show clients.



THE ORAL ATP VISIT

Every annual Oral Assessment, Treatment, and Prevention (Oral ATP) visit should include the following three parts:

Assessment

The client is apprised about the Oral ATP process.

The veterinarian performs a general physical examination and obtains an oral history, including previous professional dental care, diet (including dental treats), and home care.

The veterinarian performs an external head examination, focusing on painful or swollen areas. The veterinarian then pulls up the patient's lips, exposing the underlying gingiva. If the patient allows, a brief examination of the caudal pharynx is also conducted.

Treatment

The veterinarian performs a tooth-by-tooth exam under anesthesia with dental radiographs. The veterinarian, or a staff member, then cleans and polishes the teeth.

The veterinarian creates a treatment plan based on exam findings and reviews it with the client.

After client approval, the veterinarian performs the therapy, and then the patient is released.

Prevention

The veterinarian provides the client with prevention instructions during the follow-up appointment.

In further follow-ups, the veterinarian monitors the pet's healing progress as well as the client's prevention efforts.

Scherk: Having clients match their dog's mouth to a photo can be quite convincing. The clients are also learning about potential problems, and we're acknowledging and addressing their fears.

Boone: After you make your recommendations to clients, step back, stop talking, and allow time for them to determine how they want to proceed. They may want to do it but need time to process it.

Scherk: Use an open-ended rather than a closed-ended question. Rather than, "Would you like to schedule this?" instead say, "When should we schedule this?"

Bellows: If they don't agree to the procedure, you can ask, "Is it the money?" If it is, then you can explain how CareCredit, a company that provides convenient payment options, allows them to spread out the payments (www.carecredit.com). This has made the biggest difference in the way we practice dentistry. Most clients want the best dental care for their pet but many can't afford it all at once.

Hall: I also tell clients that, depending on the severity, their pet may never have a normal mouth or a normal set of teeth. We can make the mouth as healthy as it can be, and from there, we are in a maintenance stage. We should help them understand that they can finance their pet's dental care through the years paying a smaller

amount coming in every six months to a year as opposed to waiting for years.

Home care

Hurley: What do you suggest clients do between visits?

Scherk: Ideally, they should mechanically disrupt plaque in more than one way. In my feline practice, I could probably count on two hands the number of clients who brush their cat's teeth. I don't brush my cats' teeth. I would rather work with other modalities, such as dental chews and dental diets and am prepared to perform hygiene regularly. I think you have a better chance of training dogs to accept having their teeth cleaned than cats.

Bellows: I recommend feline clients dip a cotton-tipped applicator in water-based tuna juice and use it as a toothbrush every day. It seems to work well. In dogs, I encourage clients to brush their pet's teeth, but practically nobody does it. I found DentAcetic wipes (DermaPet) that contain cinnamon and sodium hexametaphosphate to be more effective. I don't recommend rubber finger toothbrushes because you really need to get underneath the gingiva to remove plaque, and rubber bristles don't do that.

Diets with mechanical action, chemical action, or both, such as IVD diets (Royal Canin), Hill's Prescription Diet t/d (Hill's Pet Nutrition), or Eukanuba Dental Defense (Iams) are helpful. Rawhide chews impregnated with chlorhexidi-

BRUSHING: A STEP-BY-STEP PROCESS

When educating clients about how to properly brush their pet's teeth, break it down into steps so clients are not overwhelmed with information. Clients should spend at least 10 to 15 seconds multiple times a day performing each of the following steps, and they should only proceed to the next step when their pet accepts the previous step.

1. Spend time desensitizing the pet to having its face and lips touched.
2. Lift the pet's lips.
3. Open the pet's mouth.

4. Brush the pet's teeth with your finger, paying close attention to the area where the gum and teeth come together.
5. Put toothpaste on your finger and use that to brush the pet's teeth.
6. Begin using an appropriately sized, bristled toothbrush. Bristles are important because of the gingival sulcus, which is less than 1 mm in cats and 2 to 3 mm in dogs. That's where the plaque, calculus, and bacteria accumulate.

—Barron Hall, DVM FAVD, DAVDC

ent (CET HEXtra chews—Virbac) can be effective if the dogs actually chew—not gulp—the rawhide. We also prescribe Greenies (S&M NuTec) daily to practically every patient we see. Clients with cats get a bag of Feline Greenies.

We vaccinate every one of our canine patients with Pfizer's periodontal vaccine. I don't feel it is a panacea against periodontal disease, but reasonable research shows it will be effective in controlling one of the major pathogens.⁷ However, it's important to realize that other pathogens exist. Clients can't think that if their pet gets this vaccine they don't have to do anything else for dental health.

Scherk: Clients may need to do several things, one of which is altering their pet's diet. Some patients need a diet other than a dental diet for health reasons. That is why we need to look at what is appropriate for individual patients.

Hurley: What do you recommend, Dr. Hall?

Hall: Brushing is the "gold standard." It's important to talk clients through this process. I say, "You can't expect to brush their teeth right away. You need to take it step by step, and each step has to be done with positive reinforcement." We must give clients a step-by-step approach (see *Brushing: A step-by-step process*). Depending on the pet's temperament and age, each step may take days to weeks to accomplish. Again, not every animal will allow brushing.

Bellows: We ask clients to come back two weeks after the Oral ATP visit. We then show them how to clean the teeth first with a wipe and then apply OraVet (Merial). Each one of our patients receives OraVet gel, which attaches to

the tooth-gum interface to decrease plaque in that area.

Scherk: There also needs to be positive reinforcement for the client, or the behavior will not be repeated. We also ask them to come back 10 days later, and when we show them the mouth, they are pleased with how much it's improved. That alone is reinforcing.

Boone: A simple tip that I give clients is to have them elevate their pets to exam table height. For example, they can put them on top of the clothes dryer, which is a perfect level. They can clean ears, brush teeth, check feet and nails, and brush hair. It is easy on owner's backs, and it gets the animal out of its natural territory. It also gives them much more control over the pet's movements.

Educating veterinarians and technicians

Hurley: We touched on dentistry in the veterinary curriculum. How well educated do you think veterinarians and staff members are?

Hall: When I lecture to veterinarians and technicians, I give a one-page quiz that asks about basic dentistry and how much dental education they had in school. It's usually very minimal. Lectures are good, but I recommend that they attend wet labs.

Bellows: Veterinarians need to understand that periodontal disease is complex. There are four stages, and each stage is treated differently. Only during the last two stages do you even consider extractions. During the first two



stages, treatment aims to control the disease so it doesn't progress. Most veterinarians should take more responsibility for dentistry. In many cases, the technician anesthetizes the patient and cleans the teeth. The veterinarians are not part of the process because they probably feel that the technician is doing a good job. However, the technician shouldn't make the diagnosis or recommend treatment. We need to get the veterinarian more involved.

Hurley: How do you get the veterinarian more involved? What vehicles do we need? Is it attending more lectures?

Bellows: No, lecturing alone won't do it. Hands-on wet labs are very effective to help teach radiology interpretation and proper extraction techniques.

Scherk: Best medicine is for veterinarians to take radiographs and be involved directly in the dentistry (comprehensive ATP). However, we risk alienating the majority of veterinarians and preventing them from increasing their participation in dentistry if we insist that without dentistry, they aren't doing enough. Instead, we can agree with them that the technician is doing a superb job at scaling the teeth; however, the veterinarian should do the probing while the technician does the charting. That way the veterinarian gets more involved in the diagnostics. If we start with that, over time veterinarians may feel that they can invest in dental radiography.

Hall: If you don't have a dental radiography unit, you can take dental radiographs with a standard radiography machine and dental film. It is more difficult, but it can be done. Before you get into dental radiography, you need training. There is a learning curve, however, it is not as steep as the one for ultrasonography.

Bellows: I agree with Dr. Scherk. Veterinarians who don't take radiographs should refer when a problem can be more adequately managed with the help of radiography.

Scherk: Exactly. That is why training is so important. The more you know, the more you know you don't know.

Bellows: They don't have to refer to a specialist. There are people in most communities that have a dental radiography machine. Let them take the radiographs. Referral veterinarians are good about returning the patient to the primary veterinarian—you don't have to be afraid of losing them any more.

Boone: The great thing about practicing digital radiography is that it doesn't cost you anything except time.

Resources for veterinarians

Hurley: What educational opportunities are available for veterinarians who haven't received adequate dental training? Where should they go (see *Educational resources*, page 8)?

Bellows: VIN (Veterinary Information Network, www.vin.com) is a wonderful online resource, both for its message boards and search capabilities. You can even view conference proceedings, so you get to see what is current on a specific subject like periodontal disease. VIN also offers online courses in the evening, including beginning through advanced dental modules. My technicians took these modules, and now they have a better understanding. Also, the American Veterinary Dental College's website lists the nomenclature of teeth.

Hall: The American Veterinarian Dental Society is a wonderful organization that anyone can join—including veterinarians, technicians, and clients. Members receive the quarterly *Journal of Veterinary Dentistry*, which includes research articles, technical data, veterinary dental CE, and basic information. It also lists information on continuing education sources. Veterinarians should always qualify the source and who is doing the instruction—make sure the instructor is board-certified in veterinary dentistry,

EDUCATIONAL RESOURCES

Practitioners can turn to the following sources for information on veterinary dentistry:

- Academy of Veterinary Dental Technicians (www.avdt.us)
- American Veterinary Dental College (www.avdc.org)
- American Veterinary Dental Society (www.avds-online.org)
- Greenies (www.vet.greenies.com)
- Selected dental specialists who offer CE courses in dentistry: Jan Bellows, DVM, DABVP, DAVDC (dentalvet@aol.com); Brett

Beckman, DVM, FAVD, DAVDC, in Punta Gorda, Fla.; Tony Woodward, DVM, DAVDC, in Colorado Springs, Colo.; Ira Luskin, DVM, DAVDC, (animaldentalcenter.com) of the Animal Dental Center in Baltimore

- Steve Holmstrom's VIN website (ce4vm.com), which lists all available continuing education
- Veterinary Dental Forum (www.veterinarydentalforum.com), which provides participants with three days of intense dental training
- VIN (www.vin.com)

a fellow of the Academy of Veterinary Dentistry, or has advanced training in veterinary dentistry. Do not be afraid to question training or certification. You are spending hard-earned dollars for your CE.

Hurley: What role do veterinary colleges have in helping to create awareness or interest in dentistry?

Goldstein: I think universities might be lagging behind private practice. I think it is the role of the universities to catch up and to develop dental programs. The first step is to realize its importance, introduce it to the curriculum, and then establish positions for dental specialists followed by residencies within the programs.

Boone: I think veterinarians in practice have to lead the charge for oral care before the staff can get on board. If someone in your practice is interested in dentistry, providing continuing education is a big help. I believe in training everyone. When a client asks a question, every staff member should have the answer or at least know enough to make a sensible reply.

Scherk: I think veterinary technicians play a huge role and do extremely well if they are trained properly. The problem occurs when veterinarians allow technicians to see dental patients without seeing the patient themselves.

Hall: Well-trained technicians, following protocol confirmed by veterinarians and under their supervision, can perform anesthesia, charting, and intraoral radiography. It is very important that they are a part of the process. The Academy of Veterinary Dental Technicians offers educational opportunities for technicians to get advanced certification in dentistry.

Hurley: Any final comments to add?

Scherk: We should emphasize the comprehensive physical examination, including an oral exam, and a good medical behavioral history. Getting patients in the office more often so we can offer advice and services in all aspects, including dental health, can only be beneficial.

Bellows: Just as in human medicine, preventive medicine is more cost effective and better than reactive medicine.

Hall: You do not have to do veterinary dentistry. If you are not going to get training or equip the hospital properly for oral care, then refer. All parties will benefit from this.

Hurley: Those are wonderful points to end on.

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