

Small animal general practitioners discuss nutrition infrequently despite assertion of indication, citing barriers

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OBJECTIVE

To determine what perceived factors prevent small animal general practitioners from discussing pet nutrition with clients during healthy and sick pet appointments.

SAMPLE

403 veterinarians in small animal general practice.

PROCEDURES

An online survey was used to gather veterinarians' opinions on perceived barriers, knowledge levels, and confidence regarding pet nutrition discussions.

RESULTS

Reported barriers to discussing nutrition during healthy pet appointments included client resistance to changing brand (149/359), time constraints (146/359), misinformation online (138/359), and difficulty keeping up with products (132/359). Reported barriers to discussing nutrition during sick pet appointments included client cost concerns (101/349), pet not accepting new food (99/349), and time constraints (83/349). Veterinarians reported discussing nutrition less during healthy pet appointments, compared to sick pet appointments, and were significantly less confident with their knowledge regarding non-therapeutic food, compared to therapeutic food. Veterinarians also reported that they perceived conversations about therapeutic foods to be more positive than conversations about nontherapeutic foods, and veterinarians with more years in practice more commonly reported that there was nothing that would dissuade them from discussing nutrition. Veterinarians who reported barriers to discussing nutrition described a need for resources and reliable information for health-care teams and clients.

CLINICAL RELEVANCE

Results demonstrated a substantial gap between veterinarians' assertion that nutrition conversations are indicated and the frequency with which they discuss nutrition during appointments. Veterinarians reported that they felt their nutrition conversations were frequently positive; therefore, it is important to overcome barriers to engage with clients about pet nutrition.

Nutrition is considered the fifth vital assessment along with temperature, pulse, respiration, and pain, as established by the American Animal Hospital Association (AAHA) and World Small Animal Veterinary Association. As one of the pillars of wellness, nutrition should be discussed and questions addressed at every veterinary appointment.^{1,2} Pet owners face numerous challenges in determining the best food to feed their pets, with many finding nutrition to be the most difficult aspect of pet ownership.³ Studies³⁻¹¹ have shown that clients want their veterinarian's advice on their pet's nutrition and general practitioners continue to be the most commonly sought-out source of nutritional information.

The veterinary health-care team plays a central role as an expert source of information for optimal pet nutrition. Nonetheless, initial research has shown that veterinarians are not consistently discussing nutrition during appointments. In a recent survey¹² of veterinary health team members, obtaining a dietary history was reported to be

consistently taken in less than half (43.4% [452/1,043]) of the practices represented. A previous study¹³ of 284 recorded veterinary visits revealed that only 60% (170/284) of veterinarians discussed pet nutrition, and of those, 12% (34/284) recommended long-term changes in a pet's diet primarily due to health-related needs. For example, the prevalence of veterinary conversations surrounding weight and specifically pet obesity has been studied.¹⁴ Nutritional assessment was reportedly more likely if patients had an existing or suspected health complaint, dietary-related condition, or evidence of malnutrition.¹² Therefore, veterinarians often focus on therapeutic foods as part of their recommendations for medical management of various diseases, but discussion of diet during appointments of healthy pets appears to be limited.⁴

There are many speculated reasons for veterinarians not initiating a discussion involving nutrition with clients, but there is little known about why veterinarians are reluctant to discuss nutrition during wellness

appointments specifically. One reported barrier was limited consultation time, which can impact the veterinary health-care team's ability to provide a nutritional recommendation for every patient.^{3,9-12} For example, if a veterinarian foresees a long conversation regarding a patient's diet, it may be a deterrent to address nutrition during a wellness appointment. Additionally, continued expansion of the pet food market may prohibit practicing veterinarians from developing a thorough knowledge of and subsequent confidence in every available diet.^{12,15} Veterinarians may also have limited interest in nontherapeutic pet nutrition, especially if they feel overwhelmed or are unfamiliar with the large number of over-the-counter pet food options.^{16,17} Another factor that may preclude veterinarians from discussing nontherapeutic nutrition is the notion that an owner may be reluctant to change their pet's diet because of higher cost of a new food or palatability concerns.⁸ Finally, to preserve a positive veterinary-client-patient relationship, veterinarians may want to avoid a debate over pet food with clients who seem unwilling to discuss or change their pet's diet.¹⁶ Recent publications^{13,18} have described the need for veterinarians to partake in communication training surrounding the complex and possibly delicate topic of nutrition. A better understanding of specific barriers to communication is necessary to plan effective nutritional counseling.

The primary objective of this study was to determine what perceived factors prevent small animal general practitioners from discussing nutrition with clients during healthy pet (eg, wellness) appointments compared to sick pet appointments. Additional objectives were to evaluate the following: (1) whether veterinarians felt a nutritional recommendation was provided more frequently and conversations surrounding nutrition with clients were perceived to be more positive during sick pet appointments versus healthy pet appointments; (2) whether veterinarians felt less confident in their own knowledge, as well as their support staff's knowledge, regarding nontherapeutic versus therapeutic food; and (3) what resources veterinarians identified as being helpful regarding discussing nutrition with clients during appointments.

Materials and Methods

Survey participants

The study population included small animal veterinarians responding to an anonymous and confidential online survey link distributed through a series of email invitations from AAHA from August 16, 2021, through September 3, 2021. One thousand veterinarians in small animal general practice were selected randomly from the AAHA membership database, and 2,997 veterinarians in small animal general practice were selected randomly from an AAHA-owned database of nonmember small animal veterinary practices. Initial email invitations were followed up by 3 reminder invitations sent at intervals of 3 workdays. Participation was voluntary, and for those veterinarians who agreed to participate, consent was indicated by electing to continue with the survey. All responses were anonymized. The purpose of the survey was outlined for participants at the beginning of the survey: "Thank you for taking a few moments to share

your experiences regarding client discussions on canine and feline nutrition. Your candid responses will help inform the development of resources and tools dedicated to making these conversations easier." This study was conducted through the AAHA Research Team and exempt from Human Subjects review by the University of Wisconsin-Madison Education and Social-Behavioral Science Institutional Review Board.

Survey design

The survey (**Supplementary Appendix S1**) was developed in partnership with the University of Wisconsin-Madison Survey Center and the AAHA Research Team and complied with good practice methodologies. Prior to survey development, the authors reviewed published studies^{5,7,8,10} that included evaluations of pet owner preferences for pet food for content and style. The survey was previewed by academic clinicians and veterinary nutritionists to gather feedback on survey content, terminology, and understanding, with the intent of achieving face validity (ie, the degree to which the survey appeared effective in its objective). Members of the Survey Center then reviewed all survey questions for clarity.

The survey was generated and self-administered through the use of electronic data capture tools hosted at the principal investigator's institution (Qualtrics version XM; Qualtrics). The 22-question survey consisted of both Likert-type and multiple-choice questions as well as open-ended response questions. The survey concluded with 5 demographic questions, including how many years and in what type of clinic the veterinarian had been practicing.

Statistical analysis

All data were analyzed with CRAN-R statistical software (version 3.3.3; The R Foundation). Normality of 5-point Likert categorical scores was determined by means of visual assessment and measurement of skewness, where values between -1.0 and 1.0 indicated a non-Gaussian distribution. One-way or paired *t* tests were used to compare normally distributed data between groups (eg, type of visit), and Wilcoxon-Mann-Whitney tests were used for nonparametric data. Values of *P* < .05 were considered significant.

Results

Of the 3,997 surveys distributed to 1,000 AAHA members and 2,997 non-AAHA members, 403 veterinarians (131 AAHA members; 272 non-AAHA members) elected to participate in the survey (10% response rate); however, some respondents did not answer every question. Of those who responded, 87.2% (351/403) indicated that they worked predominantly in companion (small) animal general practice, whereas 12.8% (48/403) indicated that they worked in specialty, emergency, or another type of practice; 28.8% (116/403) of respondents reported that they graduated within the last 10 years; 39.5% (159/403) indicated graduating between 11 and 24 years ago; and 31% (124/403) indicated graduating 25 or more years ago.

Veterinarians expressed that they were not discussing nutrition at every appointment. A significantly ($P < .001$) higher proportion of respondents indicated that they provide nutritional recommendations for their patients during a sick pet visit (186/370 [50.3%]) versus during a healthy pet visit (145/370 [39.2%]; **Figure 1**).

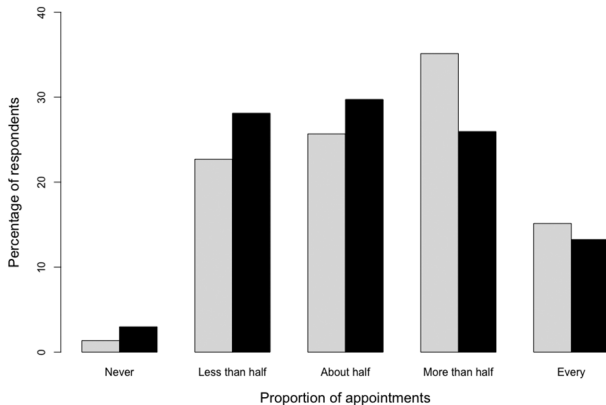


Figure 1—Percentages of 370 veterinarians in small animal general practice who reported in an online survey conducted between August 16 and September 3, 2021, how often (ie, never, less than half, around half, more than half, or every visit) they discussed pet nutrition during appointments for sick pets (gray) versus healthy pets (black). There were 403 total respondents; 33 did not answer these questions.

When given the opportunity to choose 5 items from a list of options in response to the question, “In general, what keeps you from discussing nutrition in a healthy pet appointment?” the top 5 responses were the following: “Clients do not want to change their current brand of nontherapeutic food” (41.5% [149/359]), “I have time constraints” (40.7% [146/359]), “There is too much misinformation online about nontherapeutic pet food” (38.4% [138/359]), “There are too many new nontherapeutic products to keep up with” (36.8% [132/359]), and “Clients are often concerned about the cost of changing to a new food” (20.6% [74/359]; **Figure 2**). Of those veterinarians who responded, 19.8%

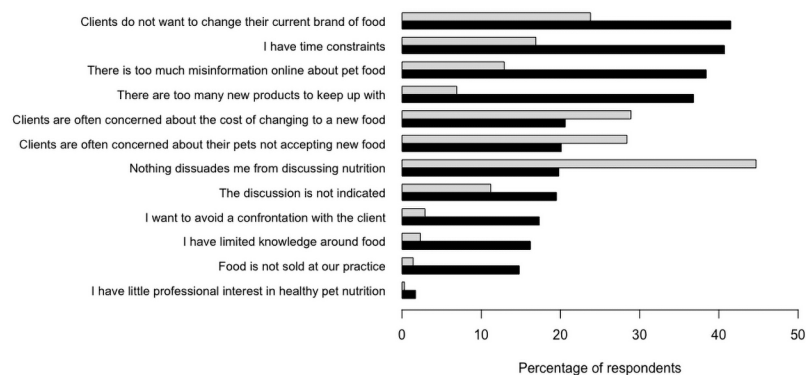


Figure 2—Frequency distribution of answer options selected by the veterinarians described in Figure 1 for the survey question pertaining to potential roadblocks in discussing pet nutrition during appointments for sick pets (gray; n = 349 respondents) versus healthy pets (black; 359 respondents).

(71/359) indicated that “Nothing dissuades them from discussing nutrition.” Only 19.5% (68/349) of responders chose the option that “The discussion is not indicated” as a possible barrier to discussing nutrition during a healthy pet appointment.

When given the opportunity to choose 5 items from a list of options in response to the question, “In general, what keeps you from discussing nutrition in a sick pet appointment?” the top 5 responses were the following: “Nothing dissuades me from discussing nutrition” (44.7% [156/349]), “Clients are often concerned about the cost of changing to a new food” (28.9% [101/349]), “Clients are often concerned about their pets not accepting new food” (28.4% [99/349]), “Clients do not want to change their current brand of food” (23.8% [83/349]), and “I have time constraints” (16.9% [59/349]; **Figure 2**). The option of “The discussion is not indicated” as a possible barrier to discussing nutrition during a sick pet appointment was listed seventh, at 11.2% (39/349) of respondents.

An open-ended question asked if there were additional reasons why veterinarians might not recommend foods during an appointment. Common themes emerged around overcoming misinformation from breeders, store associates, and the internet; forgetting about nutrition during busy or short appointments; trying to manage 1 problem at a time; and not needing to discuss nutrition because it was managed at a previous appointment.

When asked what motivated veterinarians to discuss a pet’s current food with clients during wellness examinations if the pet appears healthy, the top 5 open-ended responses were to change the type of diet away from something grain free, raw, or high calorie (37.5% [18/48]); discuss weight management (31.3% [15/48]); prevent medical problems (22.9% [11/48]); answer client questions (14.6% [7/48]); and dispel misinformation (12.5% [6/48]).

When asked about confidence in discussing nutrition with clients, only 140 of the 380 (36.8%) veterinary respondents reported that they were “quite a bit” or “considerably” confident (4 or 5 on a 5-point Likert scale) with their knowledge of nontherapeutic foods, whereas significantly ($P < .001$) more veterinarians (226/381 [59.3%]) reported that they were “quite a bit” or “considerably” confident with their knowledge of therapeutic foods. Similarly, the proportion of veterinarians who reported that they had “quite a bit” or “considerable” confidence in their support staff’s nutritional knowledge was significantly ($P < .001$) lower for nontherapeutic food (47/381 [12.6%]) versus therapeutic foods (87/370 [23.5%]).

Veterinarians indicated significantly ($P < .001$) more overall positive conversations with clients about therapeutic food than about nontherapeutic food. For instance, 36.2% (133/367) reported that they felt that recommending a diet change regarding therapeutic food was a posi-

tive client interaction more than half the time, 39.2% (143/367) reported the conversations were positive around half the time, and 24.5% (90/367) reported that the conversations were positive less than half the time. When asked the same question regarding nontherapeutic food, 25% (92/368) reported that the conversations were positive more than half the time, 32.1% (118/368) reported that the conversations were positive around half the time, and 42.9% (158/368) reported that the conversations were positive less than half the time (**Figure 3**).

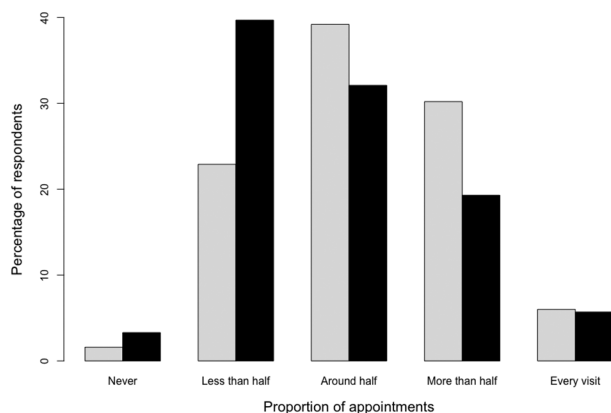


Figure 3—Percentages of the veterinarians described in Figure 1 who reported how often (ie, never, less than half, around half, more than half, or every visit) they felt that a client conversation about recommending a change to a therapeutic food (gray; n = 367 respondents) or a nontherapeutic food (black; 368 respondents) was a positive interaction.

Veterinarians with greater years in practice more commonly reported that nothing dissuades them from discussing nutrition. For those practicing 25 years or more, 31.8% (35/110) reported that nothing could dissuade them from recommending nontherapeutic food and 55.4% (61/110) indicated the same of therapeutic food. For those with 11 to 24 years in practice, 16.8% (23/137) said that nothing could dissuade them from recommending nontherapeutic food and 45.3% (62/137) said the same for therapeutic food. For veterinarians with 0 to 10 years in practice, only 12.0% (12/100) reported that nothing could dissuade them from recommending nontherapeutic food and 31.0% (31/100) reported the same for therapeutic food; however, these values did not differ statistically.

Regardless of their tenure in the veterinary field, all veterinarians reported similar rates of feeling positive or negative about having conversations about nutrition. With that said, a significantly ($P = .002$) greater proportion of veterinarians with more than 25 years of experience reported higher levels of confidence in their own knowledge about therapeutic food (73/109 reported 4 and 5 on a 5-point Likert scale) when compared to veterinarians with 10 years or less of experience (52/100 reported 4 and 5 on a 5-point Likert scale). Similarly, a significantly ($P = .009$) greater proportion of veterinarians with more than 25 years of experience reported higher levels of

confidence in their support staff's knowledge about nontherapeutic food (47/109 reported 4 and 5 on a 5-point Likert scale) when compared to veterinarians with 10 years or less of experience (35/100 reported 4 and 5 on a 5-point Likert scale).

Veterinarians who indicated that they were hesitant to discuss nutrition during healthy pet appointments were asked to provide solutions to address the roadblocks they face by means of the following open-ended question: "If relevant, please tell us what could help you address any of the roadblocks noted during a wellness appointment." Of those responding, 63% (47/74) described a perceived lack of resources to offer to clients; 26% (19/74) asked for more handouts for owners; 15% (11/74) requested more information for the veterinary health-care team, including articles, links, videos, and handouts; 11% (8/74) asked for additional information on nontherapeutic foods specifically; and 7% (5/74) noted better training of staff to give nutrition recommendations from an easy resource. Additionally, 8% (6/74) of respondents reported that there should be more restrictions on pet food advertisement and development. Most of the remaining responses were already options chosen from the previous list of barriers.

Likewise, veterinarians who indicated that they were hesitant to discuss nutrition during sick pet appointments were asked to provide solutions to address the roadblocks they face by means of the same open-ended question. Of those responding, 21% (5/24) asked for all-in-one or specific guides on therapeutic diets, 8% (2/24) asked for more veterinary education material including online training for the entire veterinary health-care team, and 13% (3/24) of respondents asked to make the industry more transparent and provide more free samples to give to owners.

Discussion

Despite nutrition being 1 of the 5 vital assessments of small animal health, veterinarians reported on our survey that they are not discussing nutrition at every appointment and if a nutrition discussion does occur, it happens more frequently during a sick pet visit. Still, even when addressing a client regarding a sick pet, only 50.3% (186/370) of veterinarians reported discussing nutrition more than half of the time. Surprisingly, most veterinarians reported that they did not avoid discussing nutrition because they felt it was not indicated. Our finding for this lack of nutritional guidance, despite its known importance, was similar to what has been reported in previous studies.^{4,12,13} Intriguingly, when directly asked in our survey about what keeps veterinarians from discussing nutrition with their clients during appointments, the results revealed some themes that varied between healthy and sick pet visits.

When perceived barriers to discussing nontherapeutic food during veterinary visits were evaluated, the top response selected in this survey was "Clients do not want to change their current brand of nontherapeutic food." Pet food marketing centers on

the strong emotional connection between pet owners and their animals,¹⁹⁻²¹ and although owners may be passionate about their pets' diets,¹¹ veterinarians may erroneously assume most owners are unwilling to change their views on their choice of a pet's diet. However, recent²² and previous¹⁰ studies indicate that veterinarians do influence a client's choice of pet food when nutrition is discussed. Ninety-three percent (112/120) of pet owners were at least somewhat willing to consider changing their pet's diet on the basis of a veterinarian's recommendation if it was phrased as benefiting their pet's health.²² For pet owners who were very or extremely happy with their pet's diet, 52% (50/98) were either very or extremely willing to consider changing their pet's food if a veterinarian recommended doing so and it would benefit their pet's health.²² These findings demonstrated that most owners are open to changing their pet's food after receiving nutrition advice from their veterinarian, despite being satisfied with their pet's current diet. There appears to be an opportunity, utilizing these findings, to bolster veterinarians' confidence in their influence on client decision-making regarding pet food choice.

To further determine whether a conversation about nutrition would be considered a debate by veterinarians responding, we included the direct choice of "I want to avoid a confrontation with the client" as an option. This barrier was chosen infrequently: 17% of the time by veterinarians when considering nontherapeutic food and only 3% of the time for therapeutic food. Additionally, veterinarians reported that while conversations were overall more positive about therapeutic compared to nontherapeutic foods, both conversations were considered to be positive interactions most of the time. These findings indicated that veterinarians do not necessarily feel that the nutrition conversation itself is confrontational with clients. This is interesting given that 3 client reaction barriers were in the top 5 reasons cited for not having nutrition discussions for both healthy and sick pets. It seems that assumptions about how clients will react to the conversation often keep veterinarians from engaging, but when they do choose to engage, they are frequently able to address client concerns in a positive manner.

Client concern about the cost of changing to a new food was a common barrier to discussing pet nutrition. There may be an assumption on the part of both the veterinarian and client that what is recommended will be more expensive than the current diet. With the proliferation of premium foods available in the marketplace, a comparison on a cost per feeding per day basis is important, as the current diet could cost the same as or be even more expensive than the recommended diet. Similarly, another top barrier for veterinarians was regarding client concerns about their pet not accepting a new food. Educating clients on methods of transitioning their pets to new foods and following up in the days after the visit are aspects of the conversation that can be effectively managed by veterinary support staff if they are well trained in nutrition and communica-

tion. To help overcome concerns about cost and new food acceptance, client education should focus on the importance of the diet recommendation to the pet's health and longevity.

In this survey, we found that not having enough time during an appointment was also a common perceived barrier regarding discussing nontherapeutic and therapeutic food with clients. This barrier has been reported in previous studies.^{3,9-12} Unfortunately, with the demand for veterinary services increasing, lengthening the amount of time dedicated to each appointment is an unlikely option for most veterinarians. One solution to the time barrier is to better utilize support staff for important nutrition discussions. Recently, Lumbis et al¹² found that while surveying the veterinary team, veterinarians were the most frequent source of nutritional advice in practice (96% [2,196/2,288]), followed by veterinary nurses or technicians (61% [895/1,468]) and reception staff (23% [127/552]). When veterinarians in this survey were asked about their support staff's nutritional knowledge, 12.6% (47/381) of veterinarians responded that they believe their support staff have quite a bit or considerable knowledge of nontherapeutic food, and that percentage only increased to 23.5% (87/370) when veterinarians were asked about therapeutic foods. Thus, a purposeful, more inclusive approach to nutrition education using the whole veterinary team and identifying "nutritional champions" within the practice may help promote nutrition discussions. Follow-up studies could survey veterinary support staff in a similar way to determine how frequently they are asked, or empowered, to discuss nutrition with clients. There may be undiscovered opportunities to leverage the support staff's time and expertise to make nutrition conversations more efficient and help alleviate the time pressure placed on the veterinarian during visits.

Lack of reliable information in an expanding market of pet foods available was also among the top barriers veterinarians reported, causing a reluctance to discuss nontherapeutic food specifically with clients. Overall, we found that veterinarians are less confident with their knowledge and subsequent conversations regarding nutrition options for healthy pets than for sick pets. Nonetheless, even when considering sick pets, only 59.3% (226/381) of the veterinarians surveyed felt quite a bit or considerably confident with their knowledge about therapeutic food. Previous research^{4,23,24} reports that practicing veterinarians feel inadequately trained in nutrition subjects prior to graduating veterinary school. Increasing the quantity and quality of small animal clinical nutrition education in both the veterinary and veterinary technician curriculum, as well as throughout a veterinary team's career, is imperative to ensure veterinarians and their support staff can confidently communicate with clients about their pet's diet.

Despite findings that veterinarians do not often discuss nutrition during healthy pet appointments, common motivating factors were related to correcting potentially harmful diet choices and preventing obesity or other medical problems. There were also

very few respondents who answered, “I have little professional interest in healthy pet nutrition.” These findings are consistent with a recent survey,²⁵ which found that 78% (63/81) of North American and 74% (752/1015) of international veterinary respondents stated that “incorrect or inappropriate nutrition” is either “very important” or “important” regarding animal welfare. This is in part driven by pet obesity, which is the nutritional disorder most frequently seen in dogs and cats,²⁶ and the rise of pet owners feeding more unconventional diets such as homemade or raw foods.^{25,27} These findings indicate that veterinarians understand the importance of nutrition to health, even during routine healthy pet appointments. Nutrition conversations could be efficiently embedded into existing points in the physical examination, such as during assessment of body condition score and body fat index. Consistently discussing a patient’s body condition score and body fat index, even when normal, along with providing a nutritional recommendation at every appointment could have the additional benefit of making the sensitive conversation around weight management more manageable and less confrontational with clients.

The choice of “Nothing dissuades me from discussing nutrition” was the top option chosen by veterinarians when considering a discussion about therapeutic food, whereas it was the seventh most frequent choice when considering nontherapeutic food discussions, indicating that the respondents felt that there are fewer barriers to discussing therapeutic foods. Notably, this option was selected more frequently by veterinarians with more years in practice. This could reflect that tenured practicing veterinarians generally feel more confident in all aspects of their practice, or that they have had more chances to learn about clinical nutrition from quality resources, continuing education, and consultations with veterinary nutritionists. More tenured practitioners may be able to help early-career veterinarians overcome barriers that can hinder nutrition discussions. This would represent a targeted mentoring opportunity in a multidocor practice.

When asked how to address roadblocks to nutrition discussions, most veterinarians suggested increasing client resources, such as handouts. Other recommendations included articles, links, videos, and handouts for the veterinary health-care team (especially for nontherapeutic foods); all-in-one or specific guides on therapeutic foods; and training for veterinary support staff to provide nutrition recommendations. Many of these suggestions can be addressed in partnership with pet food manufacturers and other external organizations, including the AAHA, World Small Animal Veterinary Association, Association of American Feed Control Officials, and American College of Veterinary Internal Medicine, which now includes nutrition as one of its specialties. One specific example of a currently available tool is the *Nutrition Is Vital* booklet²⁸ recently published by the AAHA. Other existing tools include articles, links, videos, handouts, and online training modules. The entities that created them must ensure that veteri-

nary health-care teams are aware of their existence and help create ways to use them effectively to overcome barriers to discussing nutrition with clients.

There were several limitations to this study. The overall response rate was lower than expected, and some respondents did not answer all of the available survey questions. Respondents choosing to participate in this survey may have had greater interest in nutrition in general, which could have skewed the data. For example, a larger percentage of AAHA members participated versus non-AAHA members; these practitioners may be more knowledgeable about nutrition given AAHA’s advocacy of nutrition as the fifth vital assessment. The survey did not specifically address possible client concerns that both recommending and selling pet food is a conflict of interest. However, veterinarians did not report this as a concern through open-ended questions. Future studies could explore this directly, evaluating differences in nutrition recommendations for foods directly sold through the veterinarian’s practice or elsewhere.

This study demonstrated a significant gap between veterinarians’ assertion that nutrition discussions are both indicated and important and the frequency with which they are actually having nutrition conversations with clients during both healthy and sick pet appointments. Top reported barriers to initiating these conversations included perceived poor client acceptance or compliance to changing their pet’s current diet, lack of time, and a scarcity of reliable information in an expanding market of pet foods. However, this study also showed that veterinarians did feel their nutrition conversations with clients were frequently positive interactions, so finding ways to overcome barriers to starting these conversations may be the key.

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Supplementary Materials

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