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Integration of Nutrition into Clinical Practice

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Introduction

While some veterinarians enjoy the various complex aspects of owning and managing a clinical practice, many more take on these roles out of necessity rather than preference. In either case, this results in many clinical approaches being at least partially viewed through a "fiscal filter." Although this filter should not be fine enough to strain out appropriate medical decisions, it certainly requires that the economics associated with certain medical practices be considered. Therefore, this introductory chapter will discuss the "business" of nutrition in clinical practice, as an understanding of these basics will enable the practitioner to afford to implement the knowledge contained in the rest of this textbook.

Average Revenue from Food Sales and the Potential

In 2017, the average food revenue was static compared to 2015 at 3.5% of total veterinary practice revenue in the United States (range 2.8–4.3%; AAHA 2019). At the same time, average total revenue earned by practices in 2017 was US$1 271 402. The therapeutic food revenue-to-expense ratio has remained fairly static over time at 1.3, and is consistent across practice types (with regard to number of full-time clinicians, revenue level, years at current location, and American Animal Hospital Association [AAHA] member status). Practices with higher ratios may be managing expenses more efficiently (including consideration of costs related to inventory control) or have higher markups. Lower ratios may reflect undercharging relative to the cost of managing food inventory. Revenue from therapeutic diet sales, while relatively significant on average, can be higher, as practices that focus more on the large compliance gap with therapeutic food recommendations (this gap includes both veterinarians who do not actively recommend medically needed foods and clients who do not choose to feed them) can easily double gross profits from food sales with minimal additional effort or expenditures.

Theoretically, there is much opportunity for growth in revenues and profits if practices can successfully identify and correct barriers to care both for wellness and for chronic and acute disease management (Volk et al. 2011). In large part, the longevity and success of any given practice model will depend on the ability to remain flexible and responsive to changing client demographics, the impacts of the economic climate, and the continued growth in internet resources for both information and products. For some clients, the accessibility

Applied Veterinary Clinical Nutrition, Second Edition. Edited by Andrea J. Fascetti, Sean J. Delaney, Jennifer A. Larsen, and Cecilia Villaverde.

Box 1.1 Dietary Recommendations to Maximize Patient Outcome and Ensure Practice Sustainability

Few recommendations hold as much weight with clients about what to feed their animal companion as a veterinarian's recommendation. Many pet food companies are aware of this and invest heavily in the veterinary community, vying for the veterinarian's awareness of their products and, ideally, for their recommendation. Unfortunately, the resulting influx of generous support is increasingly viewed by some as creating a conflict of interest for veterinarians and resulting in a bias in dietary recommendations. This perception is increased by veterinarians who have limited recommendations beyond the products, brands, and/or companies they stock. Therefore, the goal of this chapter is to assist the veterinarian in methods to ensure they can afford to provide the best medical care for their patients and clients by fully integrating nutrition into their clinical practice.

and cost of veterinary care and products are a challenge, and the practitioner must effectively communicate the value of services and facilitate convenience in order not just to achieve compliance, but also to maximize both medical outcomes and revenue (Box 1.1). In fact, profits could be increased more than fivefold based on the low compliance found in a study by the AAHA, which includes sales of therapeutic pet foods (AAHA 2003).

Strategies to Increase Product Sales

Recommending an Effective Therapeutic Food

The surest way to increase compliance and therapeutic pet food sales is to recommend an effective one. This sounds simple enough, but can be quite challenging in practice. To start, one must make the correct diagnosis and select a food that can produce measurable improvement in the animal companion's condition or disease management. For example, clients feeding a "weight loss" food that does not result in weight loss are likely to stop feeding the ineffectual food. Similarly, trying to sell food that an animal companion will not eat is unlikely to be successful. Therefore, establishing expectations, performing a nutritional assessment to guide more informed food recommendations, monitoring the patient response, and providing a variety of options are vital for client compliance.

Establishing Expectations

Many clients choose not to start feeding a recommended therapeutic food, or choose to stop feeding one, because they do not clearly understand what is expected from the food. Expectations are built on the client's understanding of the purpose and mechanism of the food. For example, clients who understand that higher dietary phosphorus can cause progression of chronic kidney disease, and that most dietary phosphorus comes from protein-rich ingredients, are more likely to feed an appropriately lower protein- or phosphorus-containing food. Not surprisingly, human patients have better retention of medical information when verbal information is accompanied with written information (Langdon et al. 2002). Therefore, in the veterinary setting, client handouts can be a very useful adjunct to verbal client education. Equally helpful can be reinforcement of key points by veterinary staff at checkout or discharge. Veterinary staff can play an instrumental role in drafting these materials, as they are often aware of common questions and issues that should be addressed. Staff involvement is expected to enhance their investment in effective transmission of this information to clients, and helps maintain a unified approach to communication.

Performing a Nutritional Assessment

An evaluation of the patient's medical status as well as lifestyle, life stage, weight trends, body composition, appetite, and diet history is a critical step to inform a confident food recommendation. The process of collecting this information, and assessing it in the context of the patient's clinical presentation, provides valuable data to the healthcare team. In some cases this may help achieve a diagnosis, while in other cases a specific treatment plan can be more confidently justified. For example, the clinician may need to discuss specific risk factors in the case of clients who feed raw meat to their omnivore or carnivore. Similarly, a different approach may need to be considered for a feline patient with recurrent constipation that has only ever eaten foods with high fiber content.

Monitoring Patient Response

Although therapeutic foods can be quite effective, not all foods work for every patient. A food's failure may be simply due to a patient being unwilling to eat the food. Therefore, monitoring both acceptance and response to a newly recommended food is crucial to improving compliance. Initially, the greatest risk to compliance is food refusal. Often this can be managed with appropriate recommendations for transitioning to the new food, as well as planned and periodic follow-up in the form of an email, phone call, or in-person office visit to address any issues that arise. Follow-up is equally important to reinforce the importance of the dietary recommendation. Recommendations that have no follow-up are more likely to be perceived as not being as crucial or important. Finally, checking on progress provides an opportunity to discuss and select an alternative but still appropriate food if the first recommendation is not successful. At times there can be a reluctance to perform follow-up since it often is "nonbillable" time; however, follow-up can be tiered or bundled, and veterinary support staff can be leveraged to assist. Many outbound calls can be conducted by veterinary staff, with elevation to veterinarians as needed. This "triaging" of sorts can increase efficiency, and often is welcomed by staff members who feel both entrusted and empowered.

Providing a Variety of Options

Since no food will work in every situation, it is important to have additional options for the client. A ready and specific alternative recommendation should reduce the likelihood that the client may choose a food by themselves, resulting in the potential for an inappropriate food to be selected and the possible loss of a medically justified sale. The tendency to stock only one "house brand" – while convenient from an inventory management perspective – decreases the ability to readily offer alternatives and can lead to a perception that there is only one option, or, worse yet, that the recommendation is made solely on the basis that the particular brand is all the veterinarian sells. Certainly, carrying every therapeutic food available (which now number in the hundreds for small animals) is not feasible in most practice settings. A selection of those foods most often used for the management of diseases seen frequently at the practice, along with a willingness to special order or even identify direct delivery options for clients, is probably the best approach.

Additionally, stocking more smaller bags can help increase the variety of foods offered without substantially increasing the "carrying cost of inventory." Small bags also can be useful for a trial, and if successful, a standing order for that patient in larger sizes can be created. Such standing orders then help to increase the number of inventory turns, thereby improving cash management. This "small bag" approach might also assist with reducing the labor involved in stocking larger bags as well as increasing the storage capacity of a facility. Some foods are also available in sample packs or starter kits, which are more cost effective and lower the commitment for clients who may be skeptical of acceptance or efficacy. In addition, most therapeutic food manufacturers

will accept return not just of foods under a "satisfaction guarantee," but also of inventory that has expired. For those manufacturers where that is not the case, carrying smaller package sizes and fewer of them can minimize "perishable shrink" by reducing the cost of any expired bag that cannot be returned.

The greatest value of carrying and recommending a variety of products for the same condition can be increasing options to account for co-morbidities or other individualized needs. In addition, clinical experience with more products increases the likelihood of making the best initial recommendation, as well as increasing options for alternative products in case the initial recommendation proves unsuccessful.

Recommending Therapeutic Treats

A growing category within veterinary product offerings is therapeutic treats. These treats often pair with a "matching" therapeutic food to give the client a nutritionally appropriate treat option. Treats generally do not offer anything novel to the nutritional management of the condition or disease, but rather assist with compliance by encouraging the patient's interest in the new dietary approach while preventing the use of potentially inappropriate treats. The same process as outlined earlier should be used when recommending an effective therapeutic food.

Recommending Nutraceuticals and Dietary Supplements

For more discussion on this subject, see Chapter 5.

From a financial perspective, stocking certain dietary supplements should be considered. Although the margin on such products can vary greatly, they generally take up much less shelf space than food and treats. Typically, products that are only sold through veterinarians should be considered, unless carrying nonexclusive products adds overall value for the client due to convenience. Caution should be used when recommending or offering products for sale at a premium if comparable human supplements of equal or even greater quality or potency are available for a similar or lower price. If such products are available from other retailers, whether "brick and mortar" or online, it is in the best interest of solid client relations to refer clients to that retailer, while being sure to give a specific product and retailer recommendation for clarity and convenience. If a product is widely available only online, then clients are generally willing to purchase such products directly from the veterinarian, who may be able to compete on the basis of reduced delivery time and cost.

Creating or Increasing Revenue from Nutritional Advice

Veterinarians' time is limited for both their own continuing education and client education. Therefore, there is an "opportunity cost" associated with spending time on nutrition. If a veterinarian earns more income from learning about and performing surgery, for example, than learning about and advising on nutrition, there is a financial incentive to focus on surgery and a disincentive to focus on nutrition. Certainly the generalist cannot pick and choose only the aspects of veterinary medicine that are most profitable, but recognizing the potential for fiscal disparity provides context for a discussion on nutritional advice revenue.

The value of a veterinarian's nutritional advice can also be diluted by the perception that they lack the expertise to make nutritional recommendations. There is no shortage of such claims, especially from online sources, which are often used to dismiss or minimize expert opinion in order to promote alternative ideas or products. The perception of veterinary ignorance about nutrition can be increased by the appearance of bias for a particular brand or company's food in one's recommendation(s), as already discussed, or by a variety of compounding factors. Another factor is the belief that nutrition is not a real science or that it is not

learned in veterinary school. These assertions are untrue, of course, since nutrition is such a key aspect of the management of many companion animal diseases. Thus, nutritional concepts are inherent in the veterinary curriculum, whether as distinct courses or rotations, or integrated into many other disciplines. In addition, continuing education and other resources related to nutrition are widely available to practicing veterinarians. Unfortunately, clients are not always aware that veterinarians who recommend a particular therapeutic food may choose to do so because such recommendations are based on scientifically proven strategies or have, in fact, actually been tested for the condition or disease in question. Certainly many therapeutic veterinary foods are in need of additional clinical study (Roudebush et al. 2004); however, they are largely based on very sound science.

Clients may also believe that nutrition is simple, after all, as they likely have successfully fed themselves for most of their lives. However, many people neglect to consider that many human foods are fortified with essential nutrients to address common gaps in intake, and that poor nutritional status in various human populations is not uncommon. Additionally, in circumstances where adequate intake is crucial, a carefully balanced diet (similar to pet food) is provided, such as in the intensive care unit, for baby formula, and when humans go into space or are involved in military operations. Finally, the field of nutrition is also beset by self-proclaimed "nutritionists" who have little, if any, medical or nutritional training, yet they still promote the idea that only they are experts in this discipline. Combined with the barrage of sometimes misleading and aggressive marketing used to promote a huge and growing number of pet food products, these factors have led to a level of discomfort for many on the subject, rather than the expertise or mastery they may feel on other veterinary medical topics. Thus, a climate exists where veterinarians acquiesce in the nutritional management of their patient, or at least fail to take a very active role unless intervention is absolutely necessary, such as in cases of hepatic lipidosis or food allergy. Therefore, the following recommendations are intended to encourage practitioners to take an active role in the management of all their patients' diets.

Nutritional Advice for Healthy Patients

The number one obligation of the veterinarian when advising clients about an appropriate diet for a healthy animal companion is to ensure that it maintains an ideal body condition (see Chapter 9 on the nutritional management of body weight). Keeping dogs lean is the only proven intervention to increase both the quantity and quality of life (Kealy et al. 2002). Although yet to be proven in cats or many other companion animal species, caloric restriction has repeatedly been shown to extend lifespan in mammals (Sohal and Weindruch 1996; Barja 2004). Therefore, avoidance of overweight and obesity should be a goal for the feeding of every patient.

In addition to weight management, an appropriate food should have an appropriate nutritional adequacy statement for the patient. This means that the food is appropriate for the patient's species, age, and reproductive status if the patient is a reproducing female. As would be expected, many foods meet these criteria, and further discrimination should be based on both client and patient preference. For a client, convenience, cost, and personal nutritional philosophy may be important in deciding which foods they select. For patients, ingredients and their associated impact on palatability, along with texture (i.e. dry, wet, semi-moist) and macronutrient distribution (e.g. protein, fat, and carbohydrate percentages), play key roles in the foods they consume when given a choice. Recognizing that no one food can meet all of these preferences and needs underscores why so many brands and varieties exist and what needs to be considered when advising clients about food options.

It can often be useful to have the client select a few foods they like and review these products with them during wellness visits. This method

helps to narrow down the very wide field of foods to consider, and typically provides an opportune time to exhibit some expertise, as well as an openness to discuss nutrition. If the client has no preconceived notions, then recommendations should favor companies that manufacture their own food and employ nutritionists. Such companies are more likely to have the technical expertise to address any issues that might arise, as well as the knowledge to make nutritionally sound and safe products.

From a fiscal perspective, such a review of potential foods or nutritional recommendations should not result in a unique charge for the client, but rather should be captured in the office visit fee. This assumes that any requested review does not require additional research and analysis outside the office visit. In cases where this becomes necessary, time should be charged either on an agreed flat rate or on a per-unit of time basis up to some pre-established maximum. Clients who do not wish to pay for the veterinarian's time should be advised that the evaluation is accordingly limited. Some veterinarians find it difficult to charge for researching an issue, but if the research is specific to a patient, most clients will accept that it is appropriate when the point is raised with confidence and the resolve that one's professional time is of value. In addition, consultation with a variety of specialists is increasingly available to other clinicians, and asking for input from a board certified veterinary nutritionist® can be a valuable tool as well (Box 1.2). It should be noted that a veterinarian's review frequently involves dietary supplements, and the variety and number of novel and often unconventional supplements greatly exceed those of pet foods, which are, in practice, more closely regulated.

At times, veterinarians have difficulty distinguishing the continuing self-study required as a veterinary medical professional and the work involved in researching unique supplements or foods. The best way to distinguish this in one's

Box 1.2 What Is a Board Certified Veterinary Nutritionist®?

A board certified veterinary nutritionist® is a licensed veterinarian who has undergone additional education and training in the field of veterinary nutrition. This typically involves additional graduate coursework and/or graduate degrees in nutrition, along with residency training at the secondary or tertiary referral level under the supervision of a board certified veterinary nutritionist®. In addition to clinical residency training and publication of animal nutrition-related research in peer-reviewed scientific journals, candidates for certification also complete formalized clinical case benchmark exercises to demonstrate mastery of the discipline. To complete certification, candidates must also pass a rigorous, multipart general examination that covers advanced physiology, pharmacology, and disease-related topics. Candidates must also pass a more focused, intensive specialty examination that covers advanced metabolism and biochemistry as well as basic, applied, and clinical nutrition. Candidates who successfully achieve all of the requirements can refer to themselves as board certified veterinary nutritionists® or "diplomates." There are currently two veterinary nutrition specialty colleges in the world, the American College of Veterinary Internal Medicine (nutrition is one of the six specialties of ACVIM, which is also the basis for most of the summary of requirements above) and the European College of Veterinary Comparative Nutrition (ECVCN). Members of the ACVIM Nutrition Specialty can be found in North America, the Caribbean, the United Kingdom, Europe, and Australasia, while most ECVCN diplomates are found in Europe. The majority of diplomates are employed in academia, industry, private practice, or the government. Attending veterinarians and specialists in other disciplines typically refer cases to diplomates of the ACVIM Nutrition Specialty or ECVCN in academia or at large referral hospitals.

own mind is that the veterinarian is not charging for the knowledge of how to interpret and find information, but rather for the act of applying their critical thinking and scientific knowledge to the patient's and/or client's specific products and/or needs. An analogy might be that one does not charge for the time it takes to learn a surgical procedure, but rather charges for using the resulting skills and knowledge to perform the surgery on particular patients.

Nutritional Advice for Unhealthy Patients

Most, if not all, diseases and conditions can be affected by diet. In some cases, this may simply be related to the adverse effects of inadequate caloric intake associated with illness-related hyporexia or anorexia. For many other diseases, there are specific nutritional management interventions that are the subject of most of the rest of this textbook. For these sick patients, both improved outcomes and revenue generation are more likely to occur through the use of veterinary therapeutic foods, treats, and/or parenteral solutions, or through procedures such as feeding tube placement, compared to specific nutritional guidance and/or advice involved in their selection. However, it should be noted that consultation with a board certified veterinary nutritionist® on specific cases will generate justified fees for such advice, and the primary veterinarian will need in turn to communicate this to the client. It is recommended that when a board certified veterinary nutritionist® needs to be consulted, the referring veterinarian charges for their time specifically if they act as the "conduit" for the consultation, similar to how clinical pathology reports may be handled.

A veterinarian should not hesitate to charge for their time, or to set up an office visit specifically to address an unhealthy patient's nutritional needs and educate the client accordingly. The veterinarian should be able to realize adequate revenue through nutritional counseling, product sales, and nutrition-related procedures, to justify the full integration of nutrition into clinical practice to the benefit of healthy and unhealthy patients. It is expected that the reader of the rest of this textbook should be better able to advise clients about the nutritional management of unhealthy patients and recognize when consultation with or direct referral to a board certified veterinary nutritionist® is indicated.

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