For veterinary medicine to provide real value to pet owners and real financial success for veterinarians, there is a need to focus on being proactive, appreciating risk factors, closing compliance gaps and managing through evidence-based guidelines. This is the essence of personalized medicine and an opportunity that veterinarians should embrace.

I define pet-specific care as veterinary care tailored to individual pets based on their risk of disease and their likely response to intervention. It could also be regarded as the right care, for the right pet, at the right time. This is a common sentiment in medicine, and it is known by a variety of other names, including lifelong care, client-centric care, personalized medicine, precision medicine and genomic medicine. At its core, pet-specific care focuses on prevention, early detection and evidence-based management using a pet’s individual risk factors and circumstances to determine the best course of action.

The Situation

All veterinarians intend to practice the highest quality of veterinary medicine possible, but this is not always the case. For example:

- Animals continue to contract infectious diseases even when highly effective vaccines exist.
- Animals get parasites despite the widespread acceptance that all pets should have year-round parasite control.
- Diagnoses are often not made until a pet has overt clinical signs of an illness.
- Genetic predispositions are not always considered for each pet in a proactive manner.
- Even well-understood chronic diseases like atopic dermatitis and osteoarthritis are sometimes treated with on-again, off-again regimens despite the lifelong timeline.

Imagine the difference to the health of patients and to the bottom line if we ensured that preventive care was provided to all pets in the practice, that we embraced an early-detection model for disease surveillance based on risk rather than waiting for pets to get sick, and that we tailored treatment to patients on the basis of consistent guidelines rather than by relying on individual expertise to dictate how patients are managed.

Most veterinary practices are aware of the importance of prevention, but inconsistencies between doctors in the same practice, a failure to address compliance gaps, and not standardizing hospital-wide recommendations mean too many pets are not receiving optimal care. Practices lose the compensation that would be associated with such care.

Currently, many pet owners only appreciate the need to see a veterinarian for vaccination, routine care or serious illness. This failure to grasp the true value of pet-specific care can adversely affect the health of pets and the financial health of veterinary practices.

Be pre-emptive

The area with the most need for improvement is early detection. Veterinary health care teams are very good at working up patients with clinical problems (such as polyuria/polydipsia), confirming a diagnosis and instituting treatment. However, a goal of pet-specific care is to identify problems when they are subclinical and the pet still appears well and when the most options are often available for management or prevention.
An Introduction to Pet-specific Care

So, for example, our human physician counterparts would not be as satisfied with diagnosing diabetes mellitus in a patient; the preferred goal would be to identify the pre-diabetic patient and then manage the condition so that it might never evolve into clinical diabetes. For us to achieve the same level of care, we need to embrace early detection and not wait for animals to be clinically ill before we start routine screenings and intervention.

A comprehensive history, physical examination and appropriate periodic diagnostic screenings are the key components of early detection. Diagnostic screenings might include genotypic testing (e.g. DNA) and phenotypic testing (e.g., laboratory findings or imaging) for heritable or otherwise predictable medical issues.

Early detection is easiest if we first take the time to appreciate risk. Some animals are going to be at higher risk for specific conditions than others, based on genetics, family history, breed predisposition, lifestyle, exposure and other factors. Doesn’t it make sense to screen pets at risk for a variety of conditions proactively rather than waiting until the conditions become problematic?

The earliest screening is typically genotypic testing, which can be done as early as 1 day of age but for practical purposes is usually done at around 12 weeks (and after pet health insurance is in full effect, for pet owners who desire this form of risk management). With recent advances it is now possible to cost-effectively screen for dozens of genetic diseases with a single panel. Such panels include things like von Willebrand disease, progressive retinal atrophy, cardiomyopathy, degenerative myelopathy, MDR1 and cystinuria. A variety of laboratories, such as Orivet, Canine Health Check, Embark and Mars, provide comprehensive panels. However, the goal of such testing is not necessarily to identify problems, but to provide most pet owners with peace of mind that there are not underlying monogenic diseases that need to be addressed. This is the purpose of neonatal screening in human hospitals - to identify the rare individual with genetic errors, but to provide comfort to the majority of parents that worrisome disorders were not found in such screenings.

Genotypic testing is new and exciting, but it won't uncover all risks, so phenotypic testing is needed for many conditions, including diabetes mellitus and orthopedic disorders, based on a pet’s individual risk factors. While genotypic testing can be done early in life since DNA does not change as a pet ages, phenotypic testing, such as blood work, urinalysis and radiographic studies, is usually performed at ages and intervals that vary with the breed and condition being detected.

Diagnostic screenings can provide baseline values and facilitate long-term monitoring to establish trends that might help to identify subclinical disease. Without early detection and management, many of these conditions can lead to a significant decrease in a pet’s quality of life.

Shared standards of care

The final aspect of pet-specific care is evidence-based management. Hospitals should endeavor to codify best practices that are common to all veterinarians in a practice and based on the most current guidelines available. These standards need to be periodically reviewed and updated as new evidence becomes available.

Clients want veterinarians to provide health guidelines in accordance with their pets’ actual needs, so adopting and implementing guidelines, protocols and evidence-based care pathways allows the veterinary practice team to satisfy this desire while simultaneously better meeting practice revenue objectives. A suitable starting point is to consider thorough assessments or questionnaires to determine which risk factors might influence the decision-making process, using the information to establish prevention protocols and early-detection opportunities, and then monitoring pets throughout their lives, modifying action plans as needed.

Early therapeutic intervention has been shown to offer the best chance of successful long-term management of many conditions. Clearly distinguishing between curing a medical condition and long-term control is important when discussing the benefits of intervention and disease management with pet owners.

Citation: Lowell Ackerman. “An Introduction to Pet-specific Care”. EC Veterinary Science 4.1 (2019): 01-03.
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The bottom line

It doesn't take much imagination to see that personalized medicine allows for the delivery of better medicine. With improved prevention, early detection and evidence-based treatment and monitoring, as well as closing compliance gaps, there are many more opportunities for revenue generation just by providing better medicine. In fact, the American Animal Hospital Association has suggested a significant increase in revenue is possible over the life of a pet just by providing the level of care that most veterinarians already acknowledge is needed.

When will you incorporate pet-specific care into your practice?

Acknowledgement

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