EVIDENCE BASED MEDICINE: WHO CARES?
James L. Cook, DVM, PhD, DACVS, DACVSMR
Comparative Orthopaedic Laboratory, University of Missouri, Columbia, Missouri

What is the best way to determine intestine viability? Which colic cases should go to surgery and when? How should colics be managed postop? These are clinically relevant questions that need to be asked and answered in order for us to provide optimal care to our patients and communication for our clients, but the question is how we answer them appropriately. An evidence based approach to delivery of veterinary healthcare is the answer I would suggest.

The current success of veterinary surgery cannot distract us from the need to continue to elevate the standards of practice. To the contrary, the increasing cost of surgical care and the financial success of surgical specialists make us accountable for more critically assessing the safety and efficacy of the treatments we provide. The application of the results from clinical efficacy studies to patient care is referred to as evidence based medicine. The concept of evidence based medicine has been adopted in the human medical field and to some degree in veterinary medicine. Unfortunately, veterinary surgery does not currently meet the highest standards in terms of producing data of high evidentiary value or developing and implementing new devices and procedures in a systematic methodology that ensures safety and efficacy prior to any clinical use. We need to pursue studies and processes that provide the “best” evidence or data for valid decision making, ethical application of diagnostics and treatments, ensuring patient safety, and accurately weighing the cost-benefit ratio for our clients. Studies of high evidentiary value include both clinical and basic science research and can have a variety of outcome measures; however, they need to be applicable in terms of time frame, species, model, application, and definition of success. The troubling fact is that the overwhelming majority of clinically applicable studies in veterinary surgery fail to meet this or even lower levels of clinical evidence. Subsequently, decision making is based extensively on substandard clinical studies, dogma, and the “personal experience” of ourselves or our mentors.

Evidence based medicine, or as I like to call it “outcomes based medicine,” can be defined as the conscientious, explicit, and judicious use of the current best evidence in making decisions for individual cases. What this really means is that we are employing a patient-oriented approach where evaluation of outcomes from all available sources is integrated to derive the optimal decision for a given case. It is critical to understand that the foundation for this approach is the individual clinician making decisions for the individual patient. The guiding purpose of an outcomes based approach is to allow the clinician to use clinically relevant evidence along with his or her knowledge base and experience for making optimal decisions for each patient with more confidence with respect to safety and efficacy. It is critical that we all understand and recognize that all evidence is important for addressing this purpose. However, not all evidence is equal with respect to applicability, relevance, impact, and power for optimal decision making. For example, recommending use of a certain surgical procedure for a given patient based on your experience in your practice and communicating that to the client is using the best current evidence when published studies using fair and direct comparisons are not available. However, suggesting that the procedure you will use is superior to another...
without that higher level of evidence is not valid, truthful, or appropriate. To illustrate this point, you would not simply accept that a sports team will be league champion, that a new car gets higher gas mileage, or that a new laptop stores the most data without a fair comparison based on a standard, reliable, and accurate assessment tool, would you? So, why then would you do that in veterinary medicine? While it may seem difficult, complicated, and labor intense to make fair and direct comparisons for our diagnostic, therapeutic, and management strategies, it is actually very possible and attainable for us in veterinary medicine. The way forward includes developing the tools needed to make standard, reliable, and accurate comparisons in a way that is easy and readily accessible, educating and training ourselves, students, and staff, and promoting outcome-based medicine for the benefit of our patients and clients. As such, veterinary surgeons have initiated a program to promote these efforts in the realm of veterinary orthopaedics.

The Canine Orthopaedic Outcomes Measures Program is a dedicated effort designed to address the perceived need in canine orthopedics for development of standardized and validated outcomes instruments allowing clinically relevant comparison studies of surgical, medical, and alternative treatments in veterinary medicine. In this program, a team of clinicians and researchers are developing clinically relevant owner (or lay observer) and clinician based outcomes instruments to assess measures of quality of life, pain, and function (including limb-specific measures). The final instruments will be available free of charge via the web to all investigators wishing to use them for clinical, translational, and comparative studies. This same approach can be used to develop validated outcomes instruments in any field or area of interest, including Equine Gastrointestinal Disorders.

Outcomes based medicine will allow us to provide optimal patient care and client communication. In turn, improved care and communication will improve our satisfaction, reduce client confusion, increase client compliance, decrease complications, and improve outcomes. Isn’t that what it is all about?

Suggested Reading: