

Welcome to the EBVMA podcast. This is Erik Fausak, a health sciences librarian at UC Davis. Today we'll be discussing the transferability of research findings in veterinary medicine. We've named this final episode in our evidence anxiety series, Is a cat a small dog. Full spoilers, no.

As veterinary professionals, we strive to rely on scientific studies to guide our decision-making process when it comes to the care of our animal patients. Translating research findings into clinical practice is a crucial step in ensuring that scientific advancements make a real impact on the well-being of animals. It's not enough to have groundbreaking research sitting on the shelves; we need to bridge the gap between research and everyday veterinary medicine.

However, it's not always easy for veterinarians to incorporate research findings into their routine. Time constraints, lack of awareness, and limited access to research publications can be significant barriers. That's why collaboration between researchers and veterinarians is vital. By fostering strong partnerships, we can ensure that research findings reach those who can use them most effectively.

Let's start by examining a scenario where research results might not be applicable to your specific case. For instance, imagine a study that used young beagles to test the effects of a disease preventative. Now, if you're planning to administer this preventative to geriatric dogs of different breeds, the results may not directly transfer. Why? Well, the physiology, metabolism, and overall health conditions of geriatric dogs can significantly differ from those of young beagles. Therefore, the effectiveness and potential risks of the preventative may vary in older dogs.

Similarly, treatment protocols might have been investigated in rodent or human populations, but you want to know how effective they are in cats. The differences between species can impact the response to treatments, and what works in one species may not work the same way in another. So, it's important to consider these variations and gather species-specific research data whenever possible.

Another important aspect to consider is the context of the research. For instance, a study might have determined the sensitivity and specificity of a diagnostic test in otherwise healthy cattle that were deliberately exposed to a known quantity of an antigen. However, if you're dealing with a natural exposure situation or if the animals have underlying health conditions, the accuracy of the test might be different. So,

understanding the study's parameters and comparing them to your clinical scenario is crucial.

The ability to transfer research findings from one population to another largely depends on the similarity between the study population and your clinically relevant population. The more closely the two populations resemble each other in terms of species, age, breed, health status, and other relevant factors, the higher the confidence in transferring the results.

To ensure that you're making informed decisions in your veterinary practice, it's essential to critically evaluate the research you come across. Pay attention to the study's methodology, population characteristics, and how closely it aligns with your patient population. Remember that multiple studies conducted in different populations can help build a more comprehensive understanding of a specific condition or treatment.

In summary, while scientific research is invaluable for advancing veterinary medicine, it's crucial to recognize the limitations of transferring research findings from one animal population to another. The more closely the study population resembles your own clinical population, the more confident you can be in applying the results to your practice.

This podcast was initially scripted by Dr. Bob Larsen and fed into CHAT GPT (<https://chat.openai.com/>) with the directions to provide a five minute podcast with our 168 word script. We then also asked CHAT GPT (without a script): “make a five minute podcast transcript with a single host about translating research findings into veterinary clinical practice or external validity”. What we liked from that is highlighted in the text and added. Dr. Bob Larsen and Erik Fausak then read through the script and edited the content further resulting in a 542 word script. Suggested references were not hallucinated by CHAT GPT but produced by Dr. Bob Larsen.

For further reading:

White BJ, Larson RL. Systematic evaluation of scientific research for clinical relevance and control of bias to improve clinical decision making. J Am Vet Med Assoc. 2015 Sep 1;247(5):496-500. doi: 10.2460/javma.247.5.496. PMID: 26295554.

Cockcroft, Peter D., Mark A. Holmes, and Mark A. (Mark Adrian) Holmes. Handbook of Evidence-Based Veterinary Medicine. Oxford ;: Blackwell Pub., 2003. Print.