



Research Focus: Practice-based research transcript

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RCVS Knowledge:

Hello, and welcome to this research focus podcast from RCVS Knowledge. During these podcasts, we'll be covering all aspects of veterinary clinical research from getting involved in research in practice to discussing published papers and evidence, with particular emphasis on how we can integrate them into our clinical practice.

Sally Everitt:

Hello, my name's Sally Everitt and I'm delighted to welcome to us today Alex Davies. Alex qualified from the RVC in the year 2020 and now works in First Opinion Practice in South Wales, as well as being nominated for the BVA Young Vet of the Year for his work with Vet Mentor, supporting students who are considering entering veterinary profession. Alex has also already developed an interest in carrying out research and practice. Welcome Alex, can I start by asking you what started your interest in research?

Alex Davies:

Hi, Sally. Yeah, thank you for inviting me here today. So, I think research today has always been part of people's journey throughout vet school. The vet schools are greater incorporating it into their curriculum because it's so important for veterinary medicine. It's such a key thing that drives the profession forward, progresses us and improves the standard of care that we deliver, which is amazing. I really started in my undergraduate degree, which is at the University of Liverpool, which was all about research and I did a research project looking at different types of genetic phenotypes of liver fluke. I was so inspired by it. It was so cool to be looking at all of these little micro satellite pieces of genetic information, that I thought this is something that I always want to be part of my job.

Alex Davies:

Now, I went on to do a clinical degree to become a vet and research didn't go away. Actually, it just kept coming and coming and coming. I was always asking questions, going out there, looking for the information and there was no information there. That's really what inspired me to keep going. I did a University's Federation for Animal Welfare studentship project at the RVC with Rowena Packer, who's done so many amazing things for dog welfare and animal welfare in general. We were actually looking at whether chronic stress in Border Collies was a big part of the idiopathic epilepsy, which is something that we don't know enough about yet. And, there's some dogs that are managed with lots of different

therapies, medications and still have seizures. So looking at their chronic stress profile, using the cortisol in their hair was such a noninvasive and exciting thing to do and that eventually went on to be published.

Alex Davies:

I think after that, I had a real taste for research and kept going and going and going. So most recently, I've got involved with RCVS Knowledge, looking at hypothyroidism treatments in cats and sticking with it, the cat theme, I've also been researching feline lymphoma, especially of the nervous system through a PetSavers grant that I received recently. But I think research really does compliment our clinical jobs so well and there's so many different skills that you can use that enrich what we do clinically. So I think it's just an amazing thing to be part of.

Sally Everitt:

I think it's amazing to have been involved with quite so many different research projects at this stage of your career. Now you've entered practice, how are you continuing your involvement in research?

Alex Davies:

Well, yeah, I guess that's the important question and that's what I really want to inspire people today because when I first went into practice as a new graduate, especially amidst COVID, I didn't really think there'd be any time to do anything else other than just cope with my day to day clinical job. But actually research is something that fits in really well with our role, especially as a primary care practitioner, I think it really does align well with what we do there. The ideas of practice based research is something we can all achieve and we all should achieve because what I've noticed, especially amongst my younger colleagues, is we're always asking questions. We're always going to each other with a case and asking each other questions. Did you know about this treatment? What do you think about this thing?

Alex Davies:

You go out there and you look at the data, you look at the research out there and there is no answer or there's no clear answer, not one with the reliability and the credibility that you want to apply it to your clinical decision making. So really, I think research fits in perfectly with the guys on the ground, working with the primary care vets, to find the answers that are going to help us with the animals when they first come to see us. There's so many different ways we can go about that and I think the first thing is to make sure the question you're asking is one that can be answered and I don't know if that's something you found challenging sometimes, Sally?

Sally Everitt:

Oh, absolutely and I understand one of the subjects that you had questions about, as you mentioned, was hypothyroid in cats and you went on to actually do a structured knowledge summary for RCVS Knowledge with that. Can you talk a little bit about that process, that maybe something people don't know about?

Alex Davies:

Yeah, absolutely. This was one of my first cases as a qualified vet and I was so excited because it was no longer one of the vaccine appointments or it wasn't a flea or worm problem. It was a real animal that was losing weight, appetite had change and I thought it was hypothyroidism and I successfully diagnosed it with a blood test and managed to get the bloods without asking for help for anything. So,

that was the first really exciting part of that case. But then comes part two when you have to start treating this animal. There were so many different options available to me, all the ones that I'd learned at vet school and I needed to tell the owner what the best thing was to do. So, I had the blood results. I hadn't told the owner the results yet. So, I thought I'd get all of my ideas together first, before I go onto this call, because it's really quite helpful to have an evidence base when you're going to talk to owners because they want to know what's the best decision.

Sally Everitt:

Yeah.

Alex Davies:

Now in that phone call, they absolutely, point blank refused any type of medical treatment long term because the cat was difficult and it wouldn't really fit with their schedule. I completely understand and agree with that from their perspective. I knew that there was more concrete, long term solutions that we could apply and those were a surgical approach and radioiodine treatment. There are lots and lots of papers out there that evaluate radioiodine treatments on its own and also evaluate surgical treatments on their own but very few that actually compare them together.

Alex Davies:

It was really difficult to gauge which the best option was for my patient. Now I asked my boss, who's a complete themed in surgery, absolutely loves it. That's her complete career is surgery. I asked them and straight away thyroidectomy, do it. Because it was a surgery to do and referring to do radioiodine treatment is still, I think sometimes a little bit daunting maybe for us as vets and also the owners. Giving your pet away for a good few weeks, away from home to have this, that's I guess, seemingly complicated treatment and risky treatment is quite scary. I didn't quite like that my boss had just said surgery. I found myself in a position where I was actually asking a typical PICO question. Is radioiodine treatment or surgery better at controlling and leveling out thyroid hormone in cats? And that's where this all started.

Alex Davies:

I collated all of the information. We got a huge data set of all of the different papers that have been published in this area, with thanks to RCVS Knowledge for getting that together. That was very helpful. I started going through those papers one by one to find out in what types of cases each treatment would be best and that's where I'm at right now. So that paper is going through the review process right now and I'm hoping that it'll help other vets, especially new graduates, who are coming into the game and see lots of hypothyroid cats with their clinical problem solving.

Sally Everitt:

That's really interesting and I think it brings out another point that we sometimes forget about, with all the broader thing about evidence based medicine, is the owner's values in this are important. The textbook may tell you, you can treat medically, surgically or with radioactive iodine. That's the factual bit.

Alex Davies:

Yeah.

Sally Everitt:

But actually how you apply that knowledge to the case in front of you is sometimes quite a lot more challenging and as you say, then being able to give the owner, they've already narrowed it down to two, some objective information that can help their decision making. Because there's no right or wrong answer in this case, it's both are perfectly legitimate treatments. So yeah, really interesting. Did it come out firmly on one side or the other?

Alex Davies:

I found that more radioiodine treatment was the best approach to go when looking at risks and outcome. But again, there was a lot more papers seemingly on radioiodine studies but again, like you said, I think it helps make a patient based decision by having all of that information, like looking from a distance, just comparing two types of treatment for one disease, in one species is actually a small part of a much bigger picture clinically.

Sally Everitt:

Absolutely.

Alex Davies:

But you'd be surprised how all of these little bits of information eventually accumulate into really increasing our delivery of care to animals and I think that's why it's perfect for primary care vets. Anyone can do any type of research. It can be the tiniest little question but I guarantee it'll have the biggest impact, long term because it'll help so many other vets with their decision making.

Sally Everitt:

Brilliant. So, what advice would you give to anyone in practice who'd like to get involved in research?

Alex Davies:

First of all, you need to have a way really of taking note of these questions that you're asking on a day to basis, because I think research is most rewarding when you're answering a question that you've asked, a problem that you've faced in your day to day clinical job. But you don't have to, there are a huge list of questions available on RCVS Knowledge and just generally out there amongst universities and other research organizations. So, if you want to just lend your hand to some research activities, then there are questions that you can answer that somebody else has thought of. There's two options, but personally, I think if you can answer one of your own questions, you'll enjoy it a whole lot more. It's certainly what I found anyway. So, that's the first thing. Then you need to make sure you've got some support behind you, whether that's to help you identify the literature in the background or help you with things that can be quite hard, like statistics and data analysis.

Alex Davies:

There are so many places out there that can do that. I know RCVS Knowledge has lots of resources there that can help you through the whole research process, from start to finish but also when I worked with PetSavers, there was support there through the universities and the organization and again also when I worked with [U4 00:11:45], they had people in the organization that would help with those more difficult things. You have to remember that you're not alone when you're doing research. Research is

definitely not a lone activity. You're a part of a really big team and you have to make sure you're utilizing that team to help you.

Alex Davies:

Now, the other thing, obviously being a primary care vet, it's a little bit different from when you're working in larger referral level practices, I guess, in that you have very little time in primary care practice right now, it's very busy. You have to set realistic time points on when you're going to complete different parts of the research project. Now, the beauty of doing your own project alongside your primary care role is that you can do it in your own time. You set the limits that fit with your schedule and you can even class it towards some of your CPD requirements.

Sally Everitt:

Absolutely.

Alex Davies:

Which is so important and there's lots of CPD time available. You have to make sure you are protecting those days.

Sally Everitt:

Yeah.

Alex Davies:

For your research, which is really quite a nice thing, I think, that you do research in your own time and at your own pace.

Sally Everitt:

Yeah and I think there are lots of people who are working perhaps even in referral practices or universities who very much want to work with primary care practice because we have the access to the first opinion cases, which they may be missing. So, I think there are lots of opportunities. And what I'd say is if you are interested in a subject, find other people that are interested in that subject and reach out and see if there are ways you can work alongside them. Do you think that's a appropriate thing to do?

Alex Davies:

Yeah, absolutely, because I found when I was doing my lymphoma study, I used lots of cases that had been referred to the RVC with central nervous system lymphoma. But really that actually creates quite a lot of referral bias in my population that I was studying. So you can access, there's lots of big networks that are collating primary care data, but really having a primary care mind in the team is really beneficial to any research team. So yeah, absolutely. Get involved with anyone else who is interested in this because it can help you get that research done more quickly or can also give you a different perspective on things sometimes.

Alex Davies:

When I did my feline lymphoma study, we initially started really just looking at how these cats present neurologically. So what the most common neurological signs are, which parts of the nervous system

were most commonly affected by lymphoma. But really that study became something else in that, what types of tests were done on these patients early on? Were there particular types of tests that identified the cancer more quickly and identified the phenotype more quickly and more reliably? And later on the data that I collated will end up becoming an outcome and prognosis study.

Sally Everitt:

Yeah.

Alex Davies:

That was from getting somebody else's perspective on the research we were doing from the oncology department at the RVC. So really I think multiple perspectives can help take this research in so many other directions.

Sally Everitt:

Absolutely. Thank you. So is it fair to say in summary that research starts with a question you don't know the answer to. The first thing to do I suppose, is to find out if somebody else knows the answer to it because there are lots of things that we don't know that somebody else or somewhere, someone might have done the research already and therefore some skills in literature searching and critical appraisal, just to see what is known on that subject. Because some of the answers are out there. And if that doesn't give you an answer, then you may have to think about getting involved in your own practice based research. We can't pretend that undertaking research isn't challenging and time consuming, whether that's literature reviewing or collecting data yourself but it's also very rewarding and important to remember that there are people and resources out there to help you. Is there anything else you'd like to add to that one?

Alex Davies:

Yeah, I think my other final point would be the types of studies that you do and you can... There's so many different types of studies available but what I found in a primary care setting, retrospective data can be a little bit more manageable, especially alongside our job. So that's using data that's already out there, clinical notes, clinical files and things like that to identify your answers. Prospective studies are still absolutely possible but they are a little bit more time consuming and difficult to set up alongside the pace of primary care practice.

Sally Everitt:

I suppose just one thing we have to remember is that any sort of research in practice, we have to think about the ethical applications and even with retrospective studies, making certain that we've got the right things in place in terms of ethical approval, consent from the owners and GDPR, which is the bane of all our lives, but making certain that we are using data in a way that's acceptable. Now, if you're working with a university, they will have those but for anyone not working in a university or with an institution, the Royal College of Veterinary Surgeons do have an ethics review panel and they can help you work your way through all of these things.

Sally Everitt:

And RCVS Knowledge have huge number of resources, both through the library, where they can get you access to journal articles but there are also resources and toolkits to help you find and critically appraise the evidence. And for anyone who wants to get involved, we also have resources to help you publish

your own evidence based knowledge summary. One other thing that I've been involved in doing is bringing together a collection of papers about the different stages of the research process. That talks through from study design, analysis and publication and links to all of these resources will be put on the website with this podcast. Thank you again, Alex, it's been a pleasure talking to you. Thank you for your time.

Alex Davies:

Thank you very much. And anyone I urge you, if you're interested in research, have a go. Visit knowledge.rcvs.org.uk because your impact on animal health and welfare will be absolutely tremendous and you're going to just absolutely love how rewarding the research process is. Bye.

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