Small Animal Veterinary Surveillance Network

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RCVS Knowledge:

Welcome to the Quality Improvement Boxset by RCVS Knowledge, a series of webinars, podcasts, and video interviews, for practices and practitioners.

Pam Mosedale:

Hi everyone. Today I'm talking David Singleton. David is a vet, and an epidemiologist at the University of Liverpool. Hi David.

David Singleton:

Hi, good morning

Pam Mosedale:

Morning. I wanted to talk to you as part of our benchmarking series about some work that's been going on at SAVSNET at Liverpool. What is SAVSNET?

David Singleton:

So SAVSNET, the Small Animal Veterinary Surveillance Network is a two pronged project. One half we collect electronic health records from practice management systems in UK based veterinary practices, voluntarily provided I should say. The other side of the project collects diagnostic lab data from veterinary diagnostic laboratories, again across the UK. I guess today we're mostly talking about the first arm of the project, which is about collecting records from practice. This is to say, how it works essentially is that we have a popup window within the practice management system that asks the vet whether they want to contribute data or not. So every client, for instance, has the opportunity to opt out of providing data. Gladly most don't, so we collect data at the moment from around 250 practices in the UK. There's about 10% of that, and equates to about 4,000 to 5,000 records a day. So it's quite a big data set. These data are obviously coming in quite messy and all the kind of variety and complexity of what vet practice is in the UK and a large part of our role is about cleaning that data and making what we call it, research ready for a wide variety of research and surveillance projects. So that might be for instance, well, let's go topical it's, what was it? January 2022, there's lots of rumors at the moment going on about gastrointestinal disease in dogs in, I think particularly in Yorkshire. So that's something that SAVSNET data's being used for at the moment to investigate whether there is an outbreak or not. And maybe if we decide there is one, what can be done to help, what might be the causative organism, et cetera, et cetera. It's also used to, I guess, as a topic today for say Quality Improvement project. So trying to kind of improve the way the vets maybe approach treating clinical cases, and particularly when

it comes to antibiotic resistance and use of antibiotics. Of course, that is a particularly pertinent example.

Pam Mosedale:

Why do you think it's so important that practices measure what they do and be able to benchmark themselves against their peers really, against what other practices do?

David Singleton:

Yeah, absolutely. I've kind of had this idea for a while that to be a vet in a practice, in a consult room is a little bit like you're quite isolated, you're like an island almost, you're in your own little bubble in your own little world. You are making multiple clinical decisions every day, and of course you can leave that consult room and you can go to the consult room next door, you can go to the prep room, you can go to the office or whatever and say, you know, I've got this case, I'm not quite sure about it. What do you think? And we all do that, but do we actually have the time to do that, every case every day? Probably not. And particularly for things that we see more commonly, I think there's a risk sometimes that we can fall into a habit. We fall into a protocol or a standard work process, whatever you want to call it, that sometimes might not always reflect latest clinical guidance or not necessarily even what your next door neighbor in the next consult room would do. So I think benchmarking really has a role about making people stop think and reflect and say, actually, you know, I do tend to prescribe say amoxyclav, for example, for my UTI cases. Is that something that other people do, is that the standard practice, when should I be doing susceptibility testing? Is what I do necessarily right compared to my peers. And I think that's where benchmarking plays a role. It makes you stop think, and maybe start those conversations to reflect on your practice

Pam Mosedale:

And they're bigger conversations than just within your own practice as well, aren't they, that you can find out not just what the other people in your practice or in the next consulting room are doing, but what the profession generally is doing.

David Singleton:

Yeah, absolutely. I think there's a fair body of evidence to suggest that practice culture is quite a big factor. So, classically speaking, sorry, but slightly flippantly, the idea that as a new vet qualifying, you've got all these new ideas and new evidence, and then first week in the job, your boss says, well, we don't do it like this in this practice. And that changes the way that you approach practice as a result. And you can fall into the same habits as a result. The idea with what we're talking about today is that actually we start to compare with other practices on a national level, essentially to say, actually, where do you fit into the much bigger scheme of things, and that hopefully again, provides an even more powerful impetus to kind of reflect on your own practices.

Pam Mosedale:

I agree totally. I mean, it's a missed opportunity if practices when they get a new graduate, don't listen to what the new graduate has to say, but also listen, just as effectively to the people with the experience and use the two things together. I think that's the important thing, isn't it. But getting onto AMR then, antimicrobial resistance, how are SAVSNET involved in that?

David Singleton:

Yeah, so antimicrobial resistance, AMR, now it's so widely known that I won't spend forever going on about it again, I think it is recognized, by well, hopefully everyone watching this podcast, but, essentially, I mean, even last week it was on BBC news, one of the leading items that there's a new paper that has estimated that last year, I think, or 2020, it was 1.2 million people died from resistant infection or associated resistant infections. And that's just now, you know, it's estimated up by 2050, around 10 million people per year will die from resistant infections, which would make it the leading cause of death in the world. Which is shocking. And of course, I'm just talking about the people. I say just in maybe an interesting way there, but when you think about what the impact then on people, you can imagine what the impact there'll be on animals, indirectly and directly. So directly of course, resistant infections, where SAVSNET monitors resistant infections and we try to characterize them, and there is at least a consistent problem of resistant infections in clinical practice, that's companion clinical practice. That is, you know, a very direct motivator for vets to want to watch what they prescribe. Because prescribing is the single biggest risk factor for development of resistance, so the more we prescribe, the more resistance. It's slightly more complex and than that, but actually not a great deal more complex. It really is the more we prescribe, the more resistance we see in an overall population level kind of figure, if you like.

Pam Mosedale:

So what kind of data do you collect on this then from the practices?

David Singleton:

Yeah, so from practices, we collect prescription data, pretty much, so that might be sales data, product sales data, for instance. And we link that with, if you remember I briefly mentioned earlier about this window that pops up, in that window, once a vet has decided and the clients have decided to submit data, it asks you to list one of 10 reasons for the main reason the animal presented. And that might be, you know, healthy animals for vaccinations, post-op checks, et cetera, but it might also to be unhealthy animals. So gastroenteric disease, respiratory disease, renal diseases or trauma, et cetera, et cetera. And this allows us to, one benchmark overall what the species level is, how frequently animals are prescribed antibiotics within a practice, but it also allows us to go a little bit further and start saying suggestions for why and what presentations are more or less frequently resulting an antibiotic prescription. And we found it certainly very useful because again, it asks those questions, the why question, a little bit more strongly and allows us to kind of start to link a little bit more closely with existing clinical evidence. So for example, one of the buttons I just mentioned earlier is gastroenteric disease, there's increasing body of evidence to suggest that certainly for at least acute diarrhea, that the justification for prescribing antibiotics is very low. There are, of course, a minority of cases which would benefit, but it is looking increasingly like the minority. So for a practice that say has a relatively high prescribing rate for gastroenteric disease, it immediately asked the question and says, maybe you do want to review your clinical approach in this case as just one example

Pam Mosedale:

And so do the practices have access then to their results and they are compared to everybody else's?

David Singleton:

Yeah, they do. So, this is where I should sort of start to bring in mySAVSNETAMR as well as SAVESNET, there's a distinction between both projects. So SAVSNET is this idea of routine collection of data, which happens with any practice management system. They have access to an online portal, that they can

review their as prescribing, compared to their peers who also take part in SAVSNET. SAVSNET is great, but it does work with a relatively limited number of practice management systems, and that reflects the complexity of practice management system providers in the UK. There's 20, 30, there's even more, we don't actually know how many there are. So to work with all of them at once is practically very difficult. So that's where mySAVSNETAMR comes in. And the idea of that is to say, okay, you can't take part in SAVSNET for whatever reason, but we can use some of the techniques and technologies developed through SAVSNET to help you to submit your data and to get your own benchmarking, which is compared with both mySAVSNETAMR practices and SAVSNET practices. So, I like to think it kind of opens the door a little bit to those who maybe are just starting to think about submitting data. And that is a little bit more accessible. It can be, okay, please sit down and monitor your prescribing over a week, for example, or maybe even less, if you want. Get a couple of hundred visits or appointments together, and let's compare that. Of course, there are limitations associated with that. If it's small volumes of data, then we make a point of kind of raising those kind of limitations with veterinary practices that we give feedback to. For now, at least at the minute, it's an interesting point of discussion itself. We then tend to leave practices to make their own conclusions. We understand that people are submitting data to us know their practices far better than we ever could. And then, to an extent, it would be maybe a little bit presumptuous of us to kind of start pointing at a series of findings to say, well, you prescribe amoxycillin more commonly than others, you prescribe this more commonly than those, you know, you should stop doing that, for instance. That's way too prescriptive if you like. We pretty much say, okay, yes, you do prescribe more of this more than others, what do you think? And then it's up to them to reflect and decide if it can be justified or not.

Pam Mosedale:

Absolutely, and that's a great discussion point, isn't it, for practice meetings and for the team in the practice, because that's the important thing, the team there on the ground in that particular practice, to discuss it because all practices are a little bit different. I know from locuming in lots of practices. So yeah, I think that's really important part of it. And it's broken down as to which antibiotics or which group?

David Singleton:

Yeah. So, mySAVSNETAMR is broken down by overall prescribing, so you know, the percentage of visits that result in an antibiotic being prescribed. It's broken down by authorization route as well, so systemic, topical, et cetera. And it's also broken down into a group of antibiotics called the Highest Priority, Critically Important Antibiotics, HPCIA's. Sorry, bit of a mouth, but it's a group which is defined by the World Health Organization, European Medicines Agency, various people, as this group of antibiotics, that all antibiotics are important, just some are more important than others. And the HPCIA's are considered the group which are critically important for human health, that should ideally be reserved only for the very minority of cases. And that includes ones I think many of the listeners would recognize, like the fluroquinolones, and levofloxacin, pradofloxacin et cetera, et cetera. Third and fourth generation cephalosporins, so, cefpodoxime, cefixime, and of course cefovecin of relevance vets. And it also includes macrolides, ketolides and glycopeptides. Those are, again, it's much wider than the veterinary world. Macrolides of course, azithromycin for example, erythromycin would be more familiar to vets. There are others like glycopeptides and vancomycin, for example, which wouldn't be that familiar to vets, at least in the UK, but it does encompass that sort of broad category. I guess, for veterinary species, the question with these is really to the extent to which we should justify every single use. And that, you know, is quite a hanging question, I guess, in companion or maybe particularly feline practice at the

moment as to how we can justify our use of say third generation cephalosporins, for instance with such a regularity that we do seem to be seeing.

Pam Mosedale:

Yeah. And there can be practical reasons where it's very difficult to use anything else, but as you say, it's about thinking about it every time, isn't it, and thinking why you're doing these things. So that was interesting that you said that you let the practices know, but don't necessarily advise them about how they can change it. Do you think there's any possibility going forward that that might alter?

David Singleton:

Yeah, sure. So there is a strong possibility, we hope. So mySAVSNETAMR was, I'm going to call it like a version one project. It was almost like a proof of principle. We managed to persuade people to take part in SAVSNET before there's an opportunity for people who can't take part in SAVSNET to help. And so we launched mySAVSNETAMR, which, considering that we haven't been that active in promoting it, it's had a surprisingly good uptake, so we kind of sense a real appetite for any level of benchmarking. It is, however, to be totally honest, a bit of a kind of like a garage kind of project, kind of tinkered with in the background and it's a little bit Heath Robinson at times, you know, it's pretty much please send us some data and we can see what we can do, and whenever we can do it, we're kind of starting to recognize actually that the demand is great enough now to support a much more widely implemented project. So recently actually, without sort of going off on too much of a tangent, we conducted a trial a couple of years ago with practices to see about how benchmarking might help to improve prescribing. And we were quite lucky, it was quite surprisingly successful, actually. It did make a real impact and it made us realize actually what greater potential there is for benchmarking to help prescribing practice, particularly. We've now teamed up with RCVS Knowledge, and working with actually a human supplier of benchmarking kind of tools, a medical supplier, whatever words you want to use, to bring all of these together to the next level. So the idea is that yes, we'll have benchmarking, yes, we'll have some ability to actually be reflective in the system. But we'll also be providing a range of educational resources, CPD, et cetera, to try to kind of bring the conversation together. So the idea is, yes, benchmarking might identify a problem with a new practice. I used that term quite loosely, what you perceive to be a problem, it's slightly dogged in me kind of refusing to place judgment on practices, and previously, you know, that was for you to reflect and to maybe come up with ideas to change. Now, the idea is we're going give a little bit more to say, okay, these are maybe ideas, here's a community of people that you could work with to implement these changes. It's about, I guess it's the carrot versus a stick, if you'd like. We started to realize that you can identify a problem, and actually it's maybe slightly more useful for practices to then have stuff to help them with that problem rather than saying, okay, go off and learn. Hope that makes sense.

Pam Mosedale:

It does make sense. And I think it sounds like a great resource and, yeah, absolutely when practices start to look at their results to have somewhere to go, to give them some pointers. And I suppose there are practices too, who are doing really well. When they measure this, they're the ones who are doing really well and sharing good practice from them and little tips from them would also, I presume be a really useful part of this community.

David Singleton:

Yeah, absolutely. Yeah. We want the community, the word you used there, I think is the key word. It is about forming community. It's about joining all these islands together, almost, of all these individual consult rooms, these individual practices, these individual groups, and say, look, a problem like AMR is a global issue, needs a global solution. But the reality is that global solutions are made up of all these tiny little parts, all joining together. It's about forming the network, the community, and yeah, you're absolutely right. That there will be some practices that will do this benchmark and go actually, at the moment we look like we're doing okay, we can justify prescribing. We're using diagnostic tests, we're on trend with current evidence and I think it would be a really good thing for those practices to share their knowledge and to share their experience and to really work together. There's always this idea, I don't think alone issue to antimicrobial prescribing, but there's always this issue that you come across of, dare I call it the disreputable practice down on the road, the idea of, okay, I've got this cat in front of me. It's got, let's say it's cystitis, the owner doesn't want on to do the diagnostics. They've heard about that antibiotics will cure it. Do I, or don't I give in to the client demand if you like, and quite often the voice in the back of your head says, well, if I don't do it, they're just going to go to a practice down road who will do it instead. Again, I've used this for AMR, but I think you could pretty much any clinical scenario where you're debating about gold standard versus pragmatic practice. And I think that's a way benchmarking can really help is because it actually says maybe there isn't a practice down the road, which is distributable. Maybe by doing, sorry, this has been a little bit too judgmental, but maybe by giving in, you'll be becoming that practice, perhaps. It's about just giving that knowledge to practitioners to make more informed decisions

Pam Mosedale:

And confidence, I think as well, from what you're saying. Confidence to think, yeah, you know, this is the right thing that we are doing or the best thing that we know of at the moment. And it's easier to justify it to clients if you do have that feeling that you're doing this because it's the right thing for the animal and the right thing for all animals and people as well.

David Singleton:

Yeah, absolutely. And if these kind of projects, this project just plays a role in giving people that little bit of backup, that little bit of confidence, I think it will have been a success. Because I've certainly, you know, myself been in a scenario where I've had a more senior colleague saying, why aren't you giving an antibiotic for that ear condition? I would've. And I'm slightly obsessive about AMR. I live and breathe AMR every day. I should have the confidence to be able to enter that and say, well, no, this is why not, but I found it difficult to refuse the wishes of a senior colleague. And I mean, I'm by no means a senior expert vet or anything like that, but I work in this field every day and if I'm finding it difficult, people who have to balance so much more in every day are going to find it just as difficult. And it is about giving confidence, you're right.

Pam Mosedale:

And the team all discussing it together. I think that's the other important thing, like with all QI activities, involving everybody in the team. Not just the vets, and even not just the vets and nurses, involving the reception team too, because they're going have people saying, well, why won't the vet give me antibiotics when they come out of the consult or, ringing up for antibiotics et cetera. So it's important that they understand what the issues are too, isn't it?

David Singleton:

I completely agree. I think it is about the vet team as a whole team that has to kind of be behind this. I think perhaps particularly nurses, I think they can play a really good role in using the word you just use there, why. You know, a vet decides to prescribe something, the vet nurse says why, and it just makes you think, because we can all fall into habits. And that is an understandable thing to do.

Pam Mosedale:

This has been so interesting, David, and those figures you gave about what's going to happen in the future, or may happen in the future if we don't sort this problem out are so scary.

David Singleton:

Absolutely. AMR has been called a silent pandemic. Personally, I'm starting to go off the silence bit of the pandemic, because actually with that many people dying per year from resistant infections, it's anything but silent in truth. Sorry, that's rather a bleak statement. But, I think probably, you know, let's be more positive. Yes, it is a real problem and it's a building problem, but at least there are things that we can do by sort of reviewing our antibiotic use more carefully, and trying to limit prescribing to only those people and animals who genuinely need it, we can conserve the use of antibiotics, at least while some very clever people are coming up with new antibiotics and vaccines and all these other ways of tackling AMR at the same time. This is about this community of people who are all tugging in the same direction, to, hopefully, mean that the antibiotics still work.

Pam Mosedale:

Yeah. And as you say, other things like vaccines and infection control are also really, really important too. And I think that's one thing that has taught us through this COVID pandemic, is how important these things are. But I suppose that at least we can still do something about it, and the first positive thing is to measure what you're doing. Would you say?

David Singleton:

Yeah, absolutely. If you don't measure, you don't know. Sometimes it is tempting to, I suppose, have a head in the sand kind of approach of saying, you know, life is so busy, I don't want to know that I'm doing something wrong. I don't think it is necessarily about doing something wrong, but I think sometimes the fear of what you might find is greater than the finding of it, if that makes sense. And once you know, you can do something about it, if indeed you need to do anything at all, you might not need to.

Pam Mosedale:

Exactly, you might be a practice that's doing fine and knowledge is power, isn't it. Just knowing where you are at is the important thing.

David Singleton:

Yeah, definitely. Definitely.

Pam Mosedale:

Well, thank you. That's been really, really interesting. Thank you for your time today, David, and hopefully everyone will get the message of how important AMR is. Thank you.

David Singleton:

Well, thank you very much

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