Adapt, Improve, Achieve: RCVS Knowledge quality improvement stream at SPVS VMG Congress 2020

Podcast transcript: Richard Killen and Angela Rayner from CVS discuss how to embed 'systems thinking' into a practice team, and what CVS have been doing to improve quality and safety.

Introduction: Welcome to an Adapt, Improve, Achieve session by RCVS Knowledge which was recorded at SPVS-VMG Congress on the 25th of January 2020, at Celtic Manor Resort in Newport as part of the quality improvement stream. In this session, we will hear from Richard Killen, former Director of Clinical Services at CVS and RCVS Knowledge Quality Improvement Advisor, and Angela Rayner, Clinical Services Manager at CVS and current RCVS Knowledge Quality Improvement Advisor. In this session, Richard and Angie discuss what CVS have been doing to improve quality and safety. They take a few key examples to provide a practical overview of what they've been doing, how they have approached it and what impact their work has had.

Richard Killen (RK): Thanks very much, Jacqui for the kind words and also thanks for this excellent conference, and for asking Angie and myself to talk today. You have got two of us. Yeah, I do have to say I've just recently retired from CVS, because some of you think I'm still working there but I've actually recently retired and actually, when I was there, obviously I was responsible for QI, Angie's now taking over the work and all my responsibilities. So hopefully it all goes well for you, I'm sure it will. And just a declaration of interest, I put this up because this is relevant to later on in the talk and what we just heard from Suzette. Angie, as Jacqui just said, is doing a Master's at Edinburgh University in Patient Safety and is doing quite a lot with the board here, RCVS Knowledge board. Now for myself, I think this is a thing that I really want to point out, I'm a Vetlife trustee and I think this is something Suzette talked about just now, and I would like to reinforce what she said.

I think QI is a major, major part of wellbeing in practice and practice teams and it's just sometimes overlooked, the benefits of doing QI in practice. And obviously me, as a Vetlife trustee, I don't know if you know, but our work is doubling every year at the moment. And so it's really relevant. So, if we move on, and we also talked about practice standard schemes, we talk a lot about that, and we'll come onto that in this talk a little later on, I can see Pam smiling at me down there. So, for today, why quality improvement? I just want to give you some stories. Obviously what we're talking about today is systems and Angie's going to give you some discussion about those. And as Jacqui just said, this is going to be a bit more of a practical talk, we've heard some really high end talks so far. But this is a bit more where, actually, it's done on the ground floor, working, and we're going to give you some examples of what we've done in CVS where hopefully things have made a difference using systems and things like that.

So I thought, why quality improvement? And I want to tell you a story because I am passionate, you see vets are passionate about animal care, I was actually passionate about QI and I always think that people used to ask me why. And so when I was a new graduate, I was a new graduate and I worked in a very 'James Herriot' practice. It couldn't be worse. This is 36 years ago, some of you might not have been born [laughs] but this story may be also relevant to some people here as well. We had no nurses obviously, we only had three vets. We had a very bossy boss, I think is the word. We were still using ether, so it was that basic. And anyway, I was carrying out my first cat spay, actually it was probably my third cat spay and you know, I was a new graduate and I was having trouble finding the uterus, as you know. And I asked the senior partner guy to come over to help, and obviously he couldn't find the uterus either. And sure enough, we lifted up the drape and it was a tomcat.

His reaction there was to give me an absolute bollocking, he really tore me to pieces. Obviously I was incredibly upset, and obviously distraught, and you start to question your reasoning for becoming a vet, for your future profession. So it really hurt me. And obviously we did not have checklists. We did not have any QI in that practice. And we talked about the just culture, I love the words 'just culture', we always talk about no blame culture and we've been discussing that for a while, at CVS, about how we can use better wording, and I love 'just culture', it's really nice.

So, that's the reason I like QI, that's why it's important, and look at those wellbeing effects. I was really upset. I was distraught. You know, going back to my Vetlife hat, obviously we know we've heard a lot about making things better and it is really important we do that. And this is something that, okay, I'm a corporate, we're corporate, but everyone can do it. Small, James Herriot practices can do it. The mixed practice can do it, large, equine, even referral, so everyone could do it, independents or corporates. And the culture, we've talked a lot about culture today and I'll tell you a wee bit about what we found in CVS when I first started and how important it is to have this 'just culture', but also supportive leadership and a supportive boss, but it can be fun.

One word that we were talking about earlier on, I think a lot of practices, a lot of fun's gone out of practice, I'll be honest, and I think QI can be fun and something we can help as well there. So, systems. The first thing I personally think, this is all going to be very practical as I said, the first thing I think is you need a system to identify areas for improvement. There may be reasons and I, this is my view, and this is my view and I'm very much into significant events reporting in practice. If you're going to start off, or where are you going to start? And I really like this. Some of you may have heard of VetSafe, Catherine Oxtoby, the lovely Cath Oxtoby, has developed the VetSafe system, which is available on VDS and we rolled it out at all CVS practices and I know a lot of the other corporates have and I think it's also going into independents as well, but I do think you need to know where you need to improve.

Clinical auditing, Angie's going to give some examples of that. We talked earlier about client concerns, client complaints. I think this is a real area, this is a significant event in my opinion, and I think when you get a client complaint you should look at it and see what did go wrong. We talked, we've obviously gone on a bit more about the way to look at things when things go right, but this is something that we can start off at, we've got to start there as well, and make it better. And obviously other methods of things, like client questionnaires. So, I thought I'd just show you in CVS we've been using VetSafe for about a

year and we obviously gathered significant events. It is interesting what Suzette said about people not reporting things. VetSafe I do like actually because it's anonymous and so therefore we are encouraging people to report as much as possible, because the more data we get, the more we can act on. And so this is CVS, significant event reporting via VetSafe, the results go up to September 2019, and this reflects the NHS actually, so we're not any worse or any different. And obviously you can see treatments and medications is by far the biggest cause of significant events, which isn't a surprise because, as we said, the NHS has the same problem.

It's interesting again, why that is, and obviously it's the wrong dog getting the wrong drug, the wrong drug given to the dog, or the other thing is the wrong amount. It's interesting that we, in CVS, and I don't think we had vets that would sack our nurses after three bad doses. I think we're a bit more, hopefully a bit more softer, but Angie's going to talk to you a wee bit about some of the things we did, to respond to that and simple systems we put in place. So I'm just going to hand over to Angie now and obviously Angie is going to talk about the actual systems, but if I just go back to there, there are other methods like client questionnaires, but I still think you need to find out, what is your problems, where are the areas to improve, and then you then go from there.

Angela Rayner (AR): Okay, we were talking a lot about systems today, I think all of our speakers have talked about systems. So let's just think for a second about, sorry, is my mic okay? That's sounding really weird for a minute. Okay… about what is a system? Let's define what that is first of all. And there can be systems inside systems, and all of that. So, let's talk a bit about that first. And so the definition is a set of interconnected components that are organised for a purpose, with elements of those components that are interacting with a human being or many human beings. Okay. So I've got a list of just some examples there, of systems, making coffee, things we do every day, driving a car, using a phone, taking a blood sample. As we said, systems within a system, you can take a blood sample in a cat ward inside of the vet practice.

And so they all sort of get more complicated the bigger we get. And so if we use the example of making coffee, something, or tea, something we do every day and we put the kettle on and boil some water and put the tea bag in or put some coffee in. And you might, if you're in practice, you might have a system where you have a graph of what everybody takes in their coffee or their tea, milk or sugar or something like that. And that's probably as complicated as it gets. But then if you really want some good coffee, you then, let's go to the Italians and their espresso machines that they use, more parts that are interacting within that espresso machine. You probably need some training and some experience on how to make good coffee.

If you're like me, I just go to a cafe and order a coffee. So you can see how we have a very simple system, of kettle system, to espresso system. And the more parts that we interact with, the more complicated it gets and there's more of a chance that there are opportunities for that system to break down, or for us to potentially make errors or where things don't go as planned. So we've talked a lot about today how healthcare systems are complicated. It's messy, but we adapt and we achieve good things anyway, despite that. So I'll talk a bit more about that. So, when we start thinking about systems in practice, systems thinking really is looking at the big picture. Okay. Not just looking at sort of what individuals are doing, but what's the big picture?

And so when we start looking at tasks such as taking a blood sample, we think, oh, you know, what's so complicated about that? We decided we want to take the blood, we'd get all of our equipment together, we take the blood, we label the blood tubes and we fill out the form and send it off to the lab. When you stop and think about it, it's really about, well, we need someone to hold the animal for us. And we all know that that is super critical. They need to be really good at that. Otherwise game over. We also need someone who's skilled at taking a blood sample. Hopefully you're having a good vein day that day. But also probably you need your IT system to be working. And also you'd need someone to take the sample to the lab and you need a system to also, a system within a system, to track that blood sample and make sure it's coming back to you and you can report the results back to the client. So you can see what we think is linear is actually pretty messy and complicated when you stop and look at it.

So when we take that big picture view, we now see that events are not usually caused by a single action by a person or a single decision that that person has made, but by many interactions between people, the tasks that they're doing, that technology that they're using, the conditions that they're working in. But also they can be affected by management decisions, as you saw in Suzette's lecture previous to this one. Also policy and our regulators can also very much affect what we're doing. But the benefits of system thinking is that because we're looking beyond the individual and we're focusing on improving systems of care, we now have longer term learning and lasting change. I think we all have practices where we may have staff turnover, staff coming in. But because we have those systems embedded in place, we now have longer-term learning. And even if it's something that we can't immediately affect, such as a policy or something that's required of us by regulation, we can start to accumulate an evidence base for change. Okay. So I think what we're starting to do is accumulate an evidence base for lookalike medical packaging, when you've got labels and bottles that look exactly the same thing, they look the same in appearance, how can we provide that evidence to make a change for the future.

So when we're looking at designing our systems for practice, we need to keep a few things in mind and it's good to see this sort of echoed in people's earlier presentations, that if the design of our systems and our equipment that we're using or the technology that we're using does not accommodate how we actually work every day, then we are more prone to things going wrong, or not to plan. All right? And then, and when that happens, our stress levels goes (whistles), don't they?

We will never eliminate human error. We are human beings. We make mistakes. Quite often the environments that we work in, whether we have bad systems in place or no systems in place, it can make us more prone to error. But we can design systems that are resilient to our limitations as human beings.

And again, systems must be designed by the people doing the work. This is work as done, rather than work as imagined, as Suzette was talking about 'safety I' and 'safety II'. It's no good for a manager to design a system and say, this is how you're going to do it. It'll fail. All right. The people who are doing the job must provide this, must be involved in designing the solutions.

So here's just some examples of things you can do to design systems. You can develop protocols or guidelines or checklists, but also sometimes there's a technology solution or look at workflow design

within your practice, or solutions to improve the environment that people are working in. Potentially you might need some new equipment, but also look at the design of that equipment. And we've talked about packaging and labelling as well.

Systems can be simple. What Richard alluded to earlier, within CVS, our significant event reporting. Medication errors are our top area of reporting. And so they can be simple such as ensuring that the correct medication gets to the correct patient. Identify your patient. Quite often you hear stories about two black cats getting the wrong medication 'cause they're similar in appearance. So identify your patient, label your syringe, make sure, try and make sure that you're picking up the right syringe. So these are things that can just hopefully help.

And there's an interesting story in Atul Gawande, the Yoda of QI I call him, Atul Gawande's book, 'Better', which is notes on a surgeon's performance. And he has a really interesting story about the army, and it was an army hospital in Afghanistan. And I think the army is really good at efficiency. They measure everything it seems. And so it was a good example of… they had a really high surgical mortality rate and they weren't quite sure why that was. So they took a step back and they started looking at why that was. And to make a very long story short, was that their advice was, soldiers wear your flak jacket. They just weren't wearing their flak jacket. And so when they were in the field, their injuries were much more life-threatening. So it can be simple, really simple advice like that.

But as we know, life isn't always so simple. So we need to really have a framework for how we can identify all of these factors that can contribute to when things don't go to plan. RCVS Knowledge brought this lovely checklist to us to be able to identify all these factors. And you can see there's also a lot of human factors in here as well. And I think, quality improvement, I think, a real lesson that I've learned today really is about people, building relationships, how we work every day and how we work together every day. So this framework is really taken from the London protocol, which is a framework that human healthcare uses quite a bit. So if you're interested, you can Google the London protocol and you'll get the paper on that.

But I think we're really good at when we look at significant events and this is anything significant to the patient or to the client or even to the practice, you can apply this sort of thinking. We're really good at, focusing on the individual, oh, they did this wrong or something about what they were doing, or well they didn't do this right and they should have done this and maybe we need to give them some more training. Well that's sort of an individual focus. So let's take a step back and look at the systems that we're working in and this will hopefully be able to identify, or prompt you to ask the questions and prompt you to look at different areas you may not have thought about before. So, patient and owner factors, was there anything about your workload or staffing issues, leadership, design of equipment and drugs, physical factors. I know in the summertime when it's 30 degrees outside and you're working in a hot surgery, and also, any sort of policies that may affect you and your culture within your organisation.

So I'm going to hand it over to Richard now, he's going to talk about control drugs recording. Which was an issue that we had within CVS and how we applied this framework.

RK: Many of you in practice, know this is a really troublesome area. Me, as a practice standards scheme assessor, when I go around often I see quite a lot of practices struggling with all the legislation and all

the requirements for controlled drug use. And it is really a big problem. CVS, everyone thinks corporates are good and they must have everything sorted out and I can tell you we were not good at this. This is what happened in 2016 when I joined, we did an audit of CVS, controlled drugs across all the practices, of what... we were auditing what they were buying, recording they were using and then obviously making adjustments of stock. And we had a 70% variance. It was terrible. It was a right mess to be frank, the VMD allowed just 10%, up to 10%. We were 70%.

We had issues obviously with poor recording and obviously we were concerned about were there other more serious factors such as theft or misuse. So we had a real problem and this is a significant event for CVS. So we looked at this, obviously the contributing factors which Angie just mentioned and how these all apply to us and you'll see how they sort of worked with our example. And this is where we were. This is where we were when we looked at, obviously, controlled drugs. No one took charge. You'd have multiple people in charge often. Obviously there's some exceptions, there's some very good, but this is a sort of generalisation. No one was in charge. Everyone was busy. We talked a bit about time earlier on, we talked about unfamiliar procedures. People didn't actually know what was required of them. They didn't understand what was the legislation around it.

Leadership. This was really interesting. So I sat as an executive in CVS, the executives just didn't care. They weren't interested. The CEO wasn't that bothered by this, even though he would possibly be in jail and all that. And that just filtered down, we talk about leadership earlier on, but how strong, how important is leadership, but we'll come to that later on, on driving it right down to practice level and directors. I think Pam would probably support me here. It was flippant. The use of controlled drugs in practices in some cases unfortunately was flippant, particularly in equine actually and large animal, they're the worst. So then, but we were then going on about drugs. Even our cabinets. Key safety was a joke. They were kept in first aid boxes, they were kept in drawers, they were hanging from hooks all over the place.

It's because it hasn't been important in CVS and our drug registers were also a big joke, loose pieces of paper in files up to the complicated hospital books that no one knew how to fill in and often the gaps in the books are so small, you can't fill the information in anyway. So we had all listened, CVS gave no training. It's interesting about guidance policies. There was a sort of loose one that had been in the past. The typical messages that people get 'make sure you do your control drugs properly'. But that's it. That's ticked a box. Just do it. Alright, just do it [laughs]. And obviously we had no communication, no training, and lots of areas, which on the contributing factors, you can see, fitted in.

So what did we do? This was a significant event, this was serious, my CEO was possibly going to jail. I did say I'd go and visit him and all that. And we got a new CEO now [laughs]. So it was all very serious and this is what we did. So we talked about systems. This is a multiple system. So we put lots of systems in place. And the first one was obviously, every practice had to have a dispensary. So we have someone in charge and we often have a deputy as well because obviously we can have people on holiday. We talked about, it's interesting, again Suzette talked about this, support. We gave these people massive support. We visited local practices as Angie and myself, we visited them, we talked to them on the phone and helped them and we gave them education. It was compulsory that every head of dispensary went on a day's course. We made everyone go.

And that was a big thing. So they knew exactly what was expected. And then obviously we did an audit, created an audit, which is quite interesting. And we did an audit of our cabinets and you know, we had 120 that were totally illegal. This is CVS and so we had to replace them. Then we were talking earlier on about equipment and things like that and we actually worked out, this is going to be the cabinet you're going to have 'cause obviously we'll make sure it meets the requirements and this is where you're going to get it, to make it easy for practice as well. We did a deal with the other corporates of witness waste disposal, cause there's a big problem about denaturing and we even put pressure with the VMD on the production of a 5ml ketamine, this is the power of the corporate.

And some of you know that ketamine is a big problem for wastage. The controlled drug register was obviously a real big issue for us. So we thought, right, no one fills it in properly and it's all over the place. So we designed a new one completely, with the VMD, with big gaps! So people could actually fill their name in and actually sign it. And we've designed it in such a way that you just had to fill it in correctly and therefore do the things that needed to be done. And we did this, we're talking about making sure you work with the people. We did it with the heads of dispensary. We asked, always we asked them, so we've got the people in place and they were our forum to help us get these systems in place. And obviously we did a policy and again one of the biggest queries we always got was, we eventually start doing weekly reconciliations, it's one of the requirements, and they discovered they didn't have the right amount of controlled drug and we were always getting phone calls, how do you do this, look for, how to look for, have you checked your pockets? You know, but we actually set up a policy, a way how investigate and believe it or not, that completely cut down the amount of queries that we got.

And internal communications. It's interesting again about talking to the people. So we had roadshows, clinical roadshows when I first started, and I explained this problem to them all and we actually have forums in the afternoon. So I did the talk in the morning and there were 600 people there, 600 vets and managers. So we've got to quite a lot of people. And then in the afternoon we ask them what can we do to help? So we did a lot of, sort of, come and throw in and all that.

And obviously I think you all know about QI. I'm a bit simple in where I had to think of things simply. It's interesting, we talked about language earlier as well. But with QI, my thinking is, you'd look at finding out what the problem is, do something about it and then remeasure it and see if you've improved it. And just keep that circle going around. And obviously we carried on doing auditing, which you'll see the results in a minute. And we did things like newspapers as well and all that. So we did a lot. This we did very fast, we didn't hang around and these are the results. And so it's a dramatic improvement. And this is QI, this is where QI, with systems in place, being put in place, and we're getting some good results. And so we went from 70% down to 8% and then we have, Angie talked about sustained culture and all that, and obviously we're now down to 4% which is fantastic.

And it's interesting about feeding back to your staff, feeding back to the teams and all that. So I did the roadshow and I did a roadshow this year and I showed them that, and I do it every year actually, we showed them the results and obviously we thanked them. This is interesting about thank you, and I'm a great believer in that as well and I thanked them all. And do you know, when I showed them this, they all stood up and clapped because they were so pleased, that's 600 CVS managers, can you imagine?

That's quite an achievement. But they really bought into QI, because they were seeing success and they could see how it was making a big difference. But anyway, I'm just going to now hand over to Angie with an even more complicated one that we've been dealing with, which is an interesting situation.

AR: Another project that we recently undertook, sort of within the last year or so, was to promote responsible use of highly important… highest priority, critically important antibiotics. There we go. I think we recognise this, antimicrobial resistance is a global health concern for everyone, both public health and animal health. And so this is an area I think quite important to us, I think to everyone else as well. So I really wanted to share this with you today. And this sort of came about really when we were doing a clinical audit on perioperative neutering procedures. And we noticed that we had a few practices that were routinely using antibiotics for every procedure. So we thought, okay, well let's look into this a bit further.

And we decided to partner up with SAVSNET, hopefully you're all familiar with SAVSNET, they're here today, down in the exhibitors room. So if you haven't met them before, they're lovely people and they can surely help you out there. But it's a small animal health surveillance network connected with University of Liverpool. So, now, we decided to partner up for a few reasons. The aim of this study was twofold really, to be able to create a framework for practices to then reflect on their prescribing of these critically important antibiotics, but then also what works in practice to be able to figure it out. Okay, how do people prescribe these antibiotics appropriately and how do we support them in that endeavour? And so we undertook this study and it wasn't to replace anybody's clinical freedom or decision making. I'm a vet myself. Nobody wants that. Okay. But just to consider current guidelines and also using our clinical experience because sometimes it is appropriate to prescribe a fluoroquinolone or a third generation cephalosporin, especially when we've used culture and sensitivity. But let's reflect and see, are there areas where we can do better.

So we took 60 practices and we randomised them and grouped them into three groups. The first group was the high intervention practices. So they received all of the resources that you see here on the board. And what was quite critical here was that we thought this is what they needed. Okay. In order to prescribe responsibly. And it was really, how to access your SAVSNET portal, so for benchmarking data. CVS has an AMR policy that gives sort of guidelines on how to prescribe. Also some advice on infection control but also some clinical support as well. And these are senior vets that really went out to support practices in this study. We've got one here today [laughs]. Also we provided clinical records to practices too, so that they could sit down with their teams and review cases and so that they can reflect on their prescribing habits and if things could have been done better. But we also supplied the contributory factors checklist and this was adapted for this study to identify the challenges that practices face to responsible prescribing. And how can we possibly overcome them, but more importantly, how can they be supported to overcome them.

So here's our checklist again. And when we went through the checklist with everyone, here's what we found, as far as challenges. People weren't familiar that we even had an AMR policy, they didn't know what it was or they didn't know how to find it. And so we thought that that was important, that they know what the guidance is first of all. But also if there was locums in that practice, there was no induction for them. They had no idea there was a policy in existence. Of course, a big part of the issue was cefovecin use, especially for compliance issues. Okay. Oftentimes when you can't pill a cat, they get

a jab of Convenia don't they? So, there was a big use cefovecin here, but a lot of people didn't know that this was a critically important antibiotic as well. So there was some education there. Owner factors were, people expected an antibiotic when they walked in the door and they put a lot of pressure on vets to prescribe an antibiotic and they also knew about this depo injection that lasted two weeks and it was so much easier than just having to pill their cat every day. So they requested it.

Staff shortages as well. Limited people's time to be able to work up cases appropriately. They didn't have time to have the conversation or to do cytology that might direct them differently. So they just didn't have time. Also the drugs on the shelves were a bit of a limiting factor. We found out, there was no trimethoprim sulfa product on the shelves anymore. There is no veterinary product. So people were reaching for a fluoroquinolone, or some other sort, instead of reaching for this first-line antibiotic that no longer existed to them. What really surprised us here was that access to a microscope, quite a few practices didn't have one. And this would of course really limit their ability to perform cytology. And if they did have one, it was either broken or people didn't know how to use it or they kept it in a cupboard so it never came out of the cupboard.

So our advice was, take it of the cupboard, put it in a central location so people can actually use it. But we actually, I think ordered almost a hundred microscopes to put microscopes into practices so people can use them. But also people needed to know how to use them. They weren't sure how to use them. They weren't sure how to do cytology, so there was a training need there. But I think what's, most importantly, they didn't have time to do these things. So we needed to make sure that they had time to reflect and time to do what they were trained to do and do what they wanted to do. And lastly, clinical note recording, sometimes there weren't any clinical notes. Sometimes they were very brief. And so there were some issues on being able to decipher treatment plans or follow treatment plans when animals were being seen again.

So here's what we put in place, training on cytology, how to use the microscope, how to stain slides, how to obtain a diagnostic sample, basic lab essential skills. We have improved access to microscopes, whether that's just ordering one in or fixing what they had or putting it in a more central location. We use RoboVet for a PMS and you can develop a template for clinical notes to make it really sort of faster and efficient to record your clinical notes when you only have a minute to do it in practice. We sourced a human TMPS product so we can get it back on the shelves. A lot of practices develop their own client education on AMR and they involve the client in that discussion. So if they ask for an antibiotic or asked for the cefovecin injection, they said, hang on, I don't think maybe an antibiotic is appropriate here, or let's think about a different product because of this, this, and this reason. Because antibiotic resistance is a concern for everybody.

There were often infection control measures that were improved. But mainly leaders were empowered by the data that we gave them. They often didn't know that they were above average prescribers of these important antibiotics. It was really a surprise to many of them. They had no idea. And so it was, and to their… I'm really proud that they were all very on board. They said, yeah, this is important and we need to work on this. So it's really good news in that respect. But they could also really measure their progress because we sent them data every two months so that they can measure their progress and see how they were doing. And we gave them time to do this. Most importantly.

And so here's the outcome of the study. Now this is in cats and we had similar results in dogs as well. Okay. So you can see here, this is the timeline of the study and the study went on for six months, but the horizontal red line is when the study started. You can see the green line here is our benchmark. These are people who didn't take part in the study. They were I guess what you call average prescribers. And so the red line is the high intervention group, the high resource group. And you can see here at the start of the study, they were way up here, okay? At start of the study here, first month of the study decreased by 40%, which is really unheard of really. And that change was sustained for the rest of the study for six months' time. And we're still keeping an eye on things, see how things are going. But really I think it's a testament to taking a holistic approach to making improvements within your practice and involving people in making those solutions. And so we can see, just to mention the light intervention group and the control group, there was no significant change at all.

Everybody who took part in the study loved it. They were calling me on the phone. Angie, we want some more data, send us our data. So they were really keen and so here's a few comments from everybody that participated. It's really changed the way they prescribed in practice. It's increased our use of further diagnostics before we rely on antibiotics. And it's a massive opportunity to engage the team. So not only are we doing our best in microbial prescription, but also we're doing great things for our team members as well. And the good news is that anyone can do it. Anyone can have access to SAVSNET and benchmarking. You can appoint an AMR champion within your practice to lead this and get everyone on board. And excited about it. BSAVA PROTECT ME has great guidelines that that are already published on how to prescribe responsibly.

You can fill out a PROTECT ME poster, have it hanging in your practice as a reference. Bella Moss has great guidance on infection control. But I think what was really important to success in this study was giving people time to review the cases and to talk to each other and to learn from each other to see how improvements can be made. But also, using the checklist to identify the challenges and they will be different in every practice. So it's good to have that holistic view and ask those questions that we may not normally ask. So just to give you a heads up in, hopefully this summer, we'll be co-branding a toolkit with SAVSNET to be able to roll this audit out to the profession. So it'll be basically what we've talked about today. So you've had a sneak preview, but this study will be published hopefully this summer and the toolkit will come out at the same time.

So just in summary, how to design systems for safe practice, identify areas of weakness or perhaps maybe they are things you're doing well already. Keep doing them. How can we make them better? Use the significant event audit sort of framework to really bring to light all of the factors that we need to be considering. Use the checklist to help you have that big picture view. Be prepared for surprises and don't make assumptions. I think we all assumed that everybody knew how to do cytology. Everybody knew how to use a microscope. But that's not always the case. We figured everybody would just know that this was an issue in their practice. They don't know. So don't make assumptions. Be prepared for surprises. Try and make things as simple and practical as you possibly can. Involve the team is really important. Make sure everyone's on board and feels involved and then measure to ensure that the changes that you've made are appropriate ones.

RK: Everyone can do it. And as I say, we've all talked about that and the holistic view. I think always when you're looking at any incident, look at the bigger picture. Don't just go for 'simple', look at all the many things that contribute, which hopefully we've shown you examples. Obviously the wellbeing effects. I think we talked about that a lot and about my own personal self, that incident myself, with the cat's spay. One thing I'm really pleased about and we'll do a bit of publicity for them. I think this is fantastic piece of work from RCVS Knowledge, this is a real great start. If I had these checklists when I was doing that cat spay, I would not have done a Tomcat. and just starting off basically in surgeries. And we talk about culture and leadership. I think we talked about that a lot today and I think this is where we had a real difference in CVS.

Ryan's here, who's a CVS clinical dean type person. We've changed it I think. People, as you can see from the antibiotics, from the controlled drugs and all that. And we actually did put people in charge in practices in QI, and obviously Angie's role as director of QI, we've raised the profile a lot and people are really enjoying it. They want it and they're happy and there is a commercial figure of course, if people are happy they will stay. And being a corporate we didn't want people leaving. So finally, design systems, and again that we've talked about this all day, patients, clients and I think there should be team, yeah. And finally we'd like to thanks RCVS Knowledge actually for all their help at CVS, but also for their help generally and SAVNET as well. Okay. Thank you.

AR: Quick thing, I'm really keen to share what we've been doing with CVS. And in that box right there is our latest QI report. Feel free to grab one on your way out if you'd like to just have a gander. And I'm really interested in hearing what you all are doing in practice and how we can share ideas and learn from each other. Thank you.

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