



QI Boxset: Root cause analysis and action

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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:

In this short webinar, we're going to look at root cause analysis and action. My name is Pam Mosedale and I'm Quality Improvement Clinical Lead at RCVS Knowledge. RCVS Knowledge is a charity. We are the charity partner of RCVS, and our mission is to advance the quality of veterinary care for the benefit of animals, the public, and society. We do this by championing the use of evidence-based medicine and also by inspiring a culture of continuous quality improvement. We have lots of resources which are there and available to the profession.

So thinking about when things go wrong in practice, what should happen? Well, what shouldn't happen is someone gets the blame, someone gets told off, gets told to do it better next time. Errors are very rarely just one human error. The human error, if there is one, is usually just the last piece of the Swiss cheese diagram.

There should be layers of defence to prevent errors happening and these layers of defence consist of systems in the practice. When there aren't any systems or the systems aren't working, it is much easier to set up team members to fail, and for human errors to occur. If we use systems thinking to look at errors, then we don't just focus on the person who may have made a mistake, but we look at the organisational level. We don't just think about the behaviour of the person who made the mistake and telling them not to do it that way again. We look at modifying the whole system. It's not just about eliminating human errors, it's about trying to make sure that our systems are resilient and do work. And so it's not about failures of people, it's about system design flaws, and it's not bad people, it's bad systems.

So what can we use then as a tool to help us to look at systems when something has gone wrong? Well, we can use a Significant Event Audit, and a significant event is anything thought by anyone in the team to be significant in the care of patients or the conduct of the practice. And this comes from human medicine, from human general practice. It is a form of audit, but it's a qualitative rather than quantitative form. So no numbers are involved. But it still needs a structure and a framework. And I hope you all have already had or will have a look if you haven't, at the Significant Event Audit course as part of this QI Boxset. The course will explain to you exactly how to run a significant event, looking at systems, things like protocols, guidelines, systems in the practice. We have a Significant Event Audit course, but we also have walkthroughs on how to run a significant event.

Templates you can use to fill in for your Significant Event Audit meetings. We have lots and lots of case examples of practices that have done significant events and submitted them to us to share with everybody. And then we have some root cause analysis tools, which we're going to talk about. Any kind of error that happen in the practice, anything, as it says, that affects the running of the practice or the care of the patients can be discussed as significant events.

Whether they be serious things like serious medication dispensing errors, things like animals escaping, whether they be more moderate things, whether they be client complaints, they can all be discussed and so can near misses. Near misses are a really valuable resource. And discussing near misses as a significant event is really helpful to make sure that it doesn't happen again and the next time it's not a near miss, it actually becomes an error.

So that's really important. The other thing that's really important is to involve the whole team in these discussions. It's much better if you have the whole team or if you can't get the whole team, at least representatives of all areas in the practice. Better to have vets, nurses, trainee nurses, student nurses, receptionists, nursing assistants, and practice managers. You get a much more holistic view of what's happened, and everybody will have slightly different viewpoints, which can be really helpful in looking for the root causes. So to start looking for the root causes, we need to have this meeting of the team, which it has to be emphasised to all the team members is about looking at systems and procedures and is not about blaming individuals. And this meeting needs to be fair and open and not to become a blame fest. It's about encouraging, looking at what happened, reflection and improvement, not about blaming people, but at this meeting, it's really important to consider all the facts of whatever happened.

Look at all the accounts of the people involved, look at any bits of paperwork like hospital sheets or anaesthetic charts or any other kind of paperwork and anything else that's all part of it. So it can get a really good rounded picture of exactly what happened. Basically, using the information that's all been collected together at the meeting, the team all together should think about what happened, why they think it happened, the main reasons and any underlying reasons. And then go on to look at what's been learned. But this, looking at why it happened is looking for root causes and we will look at that in a bit more detail now. But as I said before, I'd encourage you to look at the whole significant event audit structure in more detail in our resources in the Boxset, in the significant event audit course. Looking at the root causes, then, using root cause analysis, root cause analysis followed by action, which we'll talk about in a minute.

Root cause analysis is a systematic approach to look for the causes of adverse events and also the causes of near misses, which as I said before are very valuable to discuss, for the purpose of identifying preventive measures. So we're not looking for the causes to blame other people. We are looking for them in order to look at what we could do to try and make it less likely that this will happen again. And it looks beyond human errors to identify systems issues. So we want to know what happened, why it happened, and what can be done to prevent it from happening again. So we don't want to go on that conventional approach like in the diagram where we just go straight from the problem to the answer, 'right answer thinking, limited solution, one answer, somebody forgot'. We want to go to a cause mapping method where we look at all the different factors that are involved in the root cause and luckily there are some tools to help us, which we'll talk about now.

One of the simplest forms of root cause analysis is just asking why - the five why's, asking why repeatedly. So for instance, you might say, 'Why has this dog not had its medication at 9:00 PM last night?' Because the nurse didn't know that it needed it. 'Why didn't she know?' Because it wasn't recorded on the hospital sheet. 'Why wasn't it on the hospital sheet?' Because the nurse writing it forward didn't see the previous hospital sheet where it was recorded. 'Why didn't she see that?' Because the previous hospital sheet had been thrown away. 'Why did that happen?' Because they were tidying up the kennels. You can go down this process. It's a very linear process and although it's good in its own way, it doesn't tend to look for lots of causes. It tends to follow one cause right through, but is a simple way of analysing something by just asking why, why, why?

I always think it's a bit like channelling your inner toddler, if you go for two-year-old, you know, they constantly say why, why, why? And stamping your feet a bit. So that's one way of your cause analysis. But there are other, and in my opinion, better ways.

Another method of root cause analysis is the Ishikawa diagram or Fishbone diagram. This is a much more visual way of looking at the root causes, and it does consider lots and lots of different root causes. So the principle is that whatever it is you are looking at is the head of the fish. So in our example here, it's the client went home without their insulin. Then you look at all the...so that is the effect. And then we look at all the causes. So these are cause and effect diagram.

So the causes might be something to do with people, there might be something to do with processes and systems in the practice. There might be something to do with the environment and there might be something to do with equipment. So in this case, the equipment thing might be because the label wasn't printed off. The environment might be that it was really busy in, the reception and the hospital, and the team were trying to get the animals out quickly to make more room. They might be the vets were too busy to, to write up the insulin. It might be that there wasn't a protocol, or a process or protocols. There was nothing there so that the new member of the team didn't know they were supposed to write these things up before a certain time of day. And normally they go out with an RVN but they weren't on that occasion.

So, again, there with people factors to do with being busy, et cetera. And not knowing what's happening or not being trained. So this is a really good method if you like a visual method, so we have on the RCVS Knowledge website, blank Fishbone, Ishikawa diagrams, which you can use to try and analyse the root causes of anything that's happened in your practice. This root cause analysis method, Contributory Factors Checklist is my favourite, basically work through a checklist going through all sorts of factors that might have been involved in what happened. For each thing, there's a question. So was it anything to do with the team? Was it anything to do with the task? Was it anything to do with the, the patient or the owner? Was it anything to do with the workload on that day or anything to do with equipment or drugs or design of those things? Anything to do with training? Guidelines, protocols, policies, communication, all those things. And for each one there's a 'yes', 'no', 'maybe' and a place to put notes. So by the end working through that you should have a clear idea of all the different factors that were involved. And then all these factors can be considered when you start thinking about what needs to change.

Root cause analysis is no good without action following. So after looking at all the root courses, after the team together have looked at all the root courses, the team together needs to agree on what needs to change, if anything does, and how they're going to implement that change. It's really important this is the team altogether. This is not someone from above deciding this has happened and we're going to change this. This is the team themselves thinking about it because they know the way the work is really done on the ground, and they know that maybe there are protocols and guidelines but they can't be followed because they're unrealistic. So that might be one thing that might have to happen - is guidelines and protocols might need to be changed so they can actually be followed and are sensible and practical. Maybe there aren't any guidelines or protocols and maybe those need to be drawn up.

Quite often there'll be training around those new guidelines and protocols or around different training needs, maybe communication or whatever, maybe CPD around specific clinical type of areas. So you need to agree what these changes are and how they're going to be implemented and how they're going to be followed through a monitored. And it may be that they need to be monitored by some audit because obviously, the changes have to be changes that are useful for the practice. So you might want to audit how the changes are working. There might be other changes, other general changes that come out of this. But it's really important that the team together agree on what needs to change, how they're going to implement it and when are they going to look at it again. Once the changes suggested by the root cause analysis have been made, the practice needs to look at them, um, a little bit down the line to see how they're working and then decide whether to adopt those changes throughout the practice or whether to adapt the changes if they have worked but have maybe had some knock-on effects, which have caused some other issues.

In which case you might want to slightly change them again or abandon the changes if they're not helping. Once they've done that, it's really good to share the knowledge, share the learning, because we all make mistakes and it's really good to learn from each other and they can share the learning. It'd be good to share the learning within the practice so all practice team members know, good to share it within the group. Good to share it within larger corporate groups. Great to share it with us at RCVS Knowledge so we can have case examples. Good to submit the data to VDS Vetsafe, so that we can have big profession data on the frequency of various errors. At RCVS Knowledge we have some significant event audit and root cause analysis examples, and there are some there at 'QI Vets', which is a fictional practice.

It has lots of things happening, mostly all to do with medication errors but they're all there and these can be really good things to have a look at if you're getting started with significant event audit and root cause analysis. So you can use root cause analysis to look at anything, to look at why it happened. Doesn't just have to be for errors. It can also be for near misses. It's very, very useful to look at near misses and try and think what prevented it from actually going wrong that time. But it's also really good to look at things that go right too because most of the time things do go right and we tend to concentrate on the things that go wrong, but we shouldn't really be biased by outcomes. We should look at why things go right too, not just why they go wrong.

And that's really useful and that's what, in human healthcare, looking at things that go wrong is called Safety I and looking at things that go right is called Safety II. And it's very useful because it may be that the team are adapting to and work in a different way than management might think they're working because of protocols and guidelines, they might be working around those. So it's good to know what that is and be aware of how the system works, and to make sure it's working most of the time. So root cause analysis is a really useful tool. Like all QI, root cause analysis and significant event audit can help contribute to a better practice culture. If people are encouraged to report incidents in the practice, and if they're then discussed in a way that looks at systems and encourages learning from things. If individuals are listened to and not blamed for errors, then all that should help to improve practice culture.

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