Central Line: The AAHA Podcast Transcript

**Episode Title:** What Can We Learn from Pilots? Rethinking Veterinary Training and Risk Mitigation  
**Guest:** Ross Palmer, DVM, MS, DACVS

0:00:00.7 **Speaker 1:** Welcome to Central Line, the AAHA Podcast. This is the official Podcast of the American Animal Hospital Association, dedicated to simplifying the journey towards excellence in veterinary medicine for every member of the veterinary team. Here is your host Dr. Katie Berlin.

0:00:19.6 **Katie Berlin:** Hi, welcome back to Central Line. I'm your host, Dr. Katie Berlin and I'm here with a returning guest, Dr. Ross Palmer. Dr. Palmer, welcome back.

0:00:30.9 **Ross Palmer:** Thank you. It's a pleasure to be here today, Katie.

0:00:32.8 **KB:** It's great to have you on the show again. I always appreciate you taking the time to chat. For anybody who may have missed the first conversation that we had, I will link to that episode in our show notes today, but would you mind reminding everyone who you are and what it is you do?

0:01:02.3 **RP:** Yeah, I'm a veterinary orthopedic surgeon, and my career has been evenly split between academia and private practice, and now I am the Associate Director of Education at the Translational Medicine Institute at Colorado State University.

0:01:07.8 **KB:** I really like the phrase "Translational medicine." It sounds kind of exotic and cool, what does translational medicine mean exactly?

0:01:15.7 **RP:** It can mean a lot of different things, so it's translating veterinary to human, human to veterinary, it's translating basic benchside research to bedside application, it's seeing ideas eventually get to the marketplace, and most importantly to the patient itself.

0:01:31.8 **KB:** Translational medicine is one of the most important aspects of medicine that we probably, at least in practice, don't think about all that much, so it's really cool. Before we go on, because we are going to be talking about a topic today that actually you interact with a lot in your role as the Associate Director of Education, I wanted to ask... you and I have had a couple of conversations now, but I want to know what's a fun fact that many people wouldn't guess about you?

0:02:00.3 **RP:** Yeah, yeah some of it... Some we're not going to go there. [laughter] Let's...

0:02:05.1 **KB:** We'll just keep them not guessing. [laughter]

0:02:06.8 **RP:** Yeah, exactly. Some we’ll just keep guessing. Yeah, I think one of the fun ones, that sounds exotic, is that my brothers and I own an island.

0:02:16.8 **KB:** Really?
Yeah, it sounds exotic doesn't it?

It does, yeah.

It's a large pile of rocks covered with pine needles, it does have a cabin on it, but it's in remote Northwest Ontario. It's roughly one acre. It depends upon the level of the water in the lake. Last year it was a low water year, so it was a larger island, and I think next summer it looks like it will be a high water year, so it will be a smaller island.

As long as the cabin is still not under water.

The cabin should be good. Yeah, it's a large vertical rock, so the cabin is up at the top.

So you're not going to be having any major music festivals on this island then?

I don't think there's going to be room for that.

Okay, well, that is a pretty fun fact, and it does sound very impressive when you say it.

Yeah, it sounds...

You own an island.

Exactly. What most people imagine is different than the reality.

It's probably not that, yeah. Well, thank you for sharing that. And now people don't have to guess whether or not you own an island.

There you go.

So we're here today because actually, when I contacted you to talk about another topic, which we talked about in our last conversation, you had a really good idea for a topic for us to chat about, which really was interesting to me because it's not something that I hear people bring up that often. You called it “gaps in the continuum of post-graduate life-long learning.” which I mean, that phrase kind of sums it up, but can you elaborate a little bit on that and what it was that you mean by that?

Yeah, I'm not totally sure I can. I sounded like I was very philosophical and learned that day.

It's a good phrase.

Yeah, yeah. First of all, I think there's an emerging importance of the role of post-graduate education in our profession. And I think when we look at the history of continuing education and how it has come to be, I'm not sure it's always been as strategic as it could have been, it's maybe been a little bit haphazard. I think at times, we offer continuing education courses
because a given specialist really enjoys teaching that and thought it would be fun to teach that, right? And maybe we'll teach this topic because I really enjoy that. I think sometimes because we're not strategic we skip levels. So increasingly, there is this focus upon what does a day-one practice-ready graduate veterinarian need in their skill set, in their quiver? What do they need to be able to do?

My observation is that oftentimes, if we have an arbitrary level 1 to level 10 continuum, lots of RCE maybe starts at level 3, or it starts at level 4, and then maybe it goes from that level 3, level 4 to level 7, and then there's another gap and it jumps to level 9 or 10. But there doesn't always seem to be a great strategic continuum of post-graduate education that allows an individual or a practice to say, strategically, for me or for this practice, we are growing in this arena, show me the path. And so I think that's an area that we're beginning to focus on at CSU VetCE, is developing that continuum, and it starts by asking the questions of: where are the needs?

Yeah, that's a really good point. As you were talking, I was thinking back to my own experience and remembering conferences I've gone to at various stages in my career, and I think you're so right. As a new graduate, I think I went to what was then NAVC, and it's now VMX, and I remember having a great time because I got to see my classmates that I hadn't seen in a year, but I don't remember learning that much, and I think it's because I was going to lectures on things that I had just learned in school. They were advanced. They were things that you need to know to pass boards, or work on clinics and sound smart to your professors when you're rounding, but they weren't things that I was seeing every day in practice.

There's a big gap there, and a lot of times the new graduates come out fully prepared to write up a complicated surgical discharge form, but not necessarily prepared to treat a dog with atopy... Or spay a big dog, because all the dogs they got to spay before, if they've gotten to spay any, were small. I felt that gap very keenly myself, I just don't know that I had a name for it at the time. So that is a really good point. Do you feel like you're seeing that gap grow now?

I don't know if it's growing, but it's certainly growing in importance, right? I should back up and point out, I certainly do not have all of the answers. We are, as a profession, we're facing some challenges, and so... But I think it's time to ask some of the important questions, and as a profession to begin to have a conversation where we propose the imperfect solutions, so accepting that... They're all imperfect, if there were easy solutions, there wouldn't be the problem. So let's accept imperfect solutions and begin to start moving in a direction.

And I just... I do, I think that the importance of the gap is growing because if you look at when you went to veterinary school, and certainly when I went to veterinary school, the explosion of knowledge and technology that has occurred since that time, you still have the same four years. The target used to be, "I want to make you be a jack-of-all-trades as a veterinarian." And I just don't think we can achieve that, and I think of some years ago, five years ago maybe, trying to conquer this question of: what does the day-one graduate need to be competent, in the field of small animal orthopedics which is my world.

We asked a variety of different questions; I asked them to rate them in terms of importance. And what was revealed is, yeah, there's a lot of consensus around some things, but not around others. And the reality is that if I'm working in practice ABC in location one, what is needed of me is different than if I take a position at practice XYZ in location two. It's not uniform, and that's a
challenge. And so we have to face that, and I think post-graduate education can begin to fill that gap.

0:10:01.2 KB: That's a really good point too that I hadn't really thought of, even just in practices I've worked in I needed different skills, but my experience would be very different from somebody who's working in rural Canada where there are no emergency clinics. Their experience needs to be very different from mine, where we have four within 45 minutes of here.

I hear quite a few seasoned veterinarians saying that new graduates are afraid – that they're afraid to try new procedures. "In my day, I just jumped in and did it because we didn't have a choice, and new grads are so afraid now that they don't want to try new things, or that they don't graduate with enough practical knowledge to prepare them for real life." What do you have to say about that opinion?

0:10:46.9 RP: Yeah, well, there's truth, right? It's not a universal truth. Different graduates have different levels of comfort with challenge. And I've seen some new graduates that I was kind of amazed, "Wow, aren't you the bold one?"

0:11:10.8 KB: For better or for worse, right?

0:11:12.2 RP: Right, so that happens too. So I think there's some variation there, but I think we just have to... Again, this is part of this stepping back and having the conversation of what is needed day one for the practicing veterinarian and accepting the fact that it is different in this practice versus that practice. And then I think... Again, I talk about where I think post-graduate education fits into the puzzle, trying to be very strategic about employing that continuing education. So you talked about going to a conference, you had a great time, but you're not sure what you learned, just so you know, I'm not down on having a great time, I think that's part of it...

0:12:06.3 KB: Yeah, it's important too, yeah.

0:12:07.9 RP: Well, let's go back to the wellness thing, you have to take care of your whole person, and that's one of the things we talk about is you're more than a learner, you're a whole person, so stay a while, do the things that fill up and rejuvenate all of you. I think that's an important aspect. Yet, let's be very strategic about the skills and the knowledge that we're trying to gain.

And I think it's actually quite rare for an individual or for a practice, especially for a practice, to say at the beginning of a year or the beginning of a three-year period, "Where are areas that we as a practice want to grow? What is our strategy to grow that? Katie, you have an interest in atopy, so you're going to concentrate a lot of your training around dermatology. Okay? We have somebody else who's very interested in dentistry, so we're going to have them focus a lot of their training in dentistry, but let's be strategic about it. And then, what are our deficits? Or maybe our deficit's about where we are weaker than we would like to be now? Then where are our deficits relative to where we see ourselves in three years? And now let's be very strategic in how we pursue continuing education." See the difference?

0:13:39.1 KB: Yeah, absolutely.

0:13:41.1 RP: Yeah. And so I see a number of practice groups that are doing exactly that, they're
saying, "Hey, we're wanting to custom design CE for our associates around what we've identified as our needs." And while that is kind of the approach for some of the practice networks, I think the same basic idea can be utilized in an independent practice.

0:14:11.2 KB: Yeah, that's really interesting. I definitely have never thought about it that way, I'm like, "Oh, I'm going to go to this conference, just bang out all my CE for the year in a week or four days and I don't even have to worry about it." But there's never been a strategy involved other than when I went through my acupuncture training to say, "I want to bring this back to the practice so that we can all benefit from it, so that my colleagues can go study something else." I was at a big practice and we definitely could have done that, but I don't think that's how a lot of people think about continuing ed.

So, what about the CE providers? Conferences, local CE, local VMAs - is there a way they could make that easier for practices in their areas where some of those needs may be more aligned, or maybe that area doesn't need as much of a certain type of CE?

0:15:04.3 RP: Yeah. Now, that's another great question. I think we talk about maybe members of practices cooperating a bit to decide what is our strategy. As a provider of continuing education, I certainly recognize we're not going to fill every gap. We can't. No single provider of continuing education is going to fill every gap.

Could we as an industry, if we're that, could we be a bit more strategic of, this group is more in this arena, that group is more in that arena, perhaps? I can only speak for CSU VetCE, from a leadership standpoint, and that is one of the things we do love to hear from people is, "What are my needs? What are areas that we're not providing?" And then we can begin to look at those strategically and say, "Oh, okay, I can see areas where we can begin to provide that continuum, that pathway in that arena."

0:16:13.6 KB: Yeah, absolutely. I was also thinking, we have so many talented and smart and dedicated support staff working in the hospitals, that also need CE whether they're credentialed or not - CE helps everyone. But looking back on experiences where I've worked at practices that sent technicians to CE regularly, because credentialed techs need to get those credits, they're usually much more strategic with the technicians. And saying like, "I will pay for you to go to this CE because it will benefit our practice." They say, "This is what we need and this will help us in anesthesia or dentistry or preventive care or whatever."

So that's maybe something to think about, is that just because there seems to be more CE available for veterinarians doesn't necessarily mean that we should always say, "This is all open to me and I should just go do what I want this year." There are ways to be more strategic about it.

0:17:12.7 RP: Yeah, and you hit on a really neat point. One of the things that we have seen... Take something like endoscopy, it applies to orthopedic surgery, applies to dentistry, etcetera. Well, for now, let's talk about endoscopy, is that's a big area to get into within a practice, and I think we've all been that veterinarian who you've gone off, you've trained in some new skill set and you're excited about it, right? And you bring it back to the practice and...

0:17:47.2 KB: Yep… the crickets.
[laughter] Yeah nobody has the enthusiasm you have, and in reality, it probably isn't gonna happen…

Yeah.

...because of that. So one of the things that we've done is we've offered courses that are open both to the veterinarian and to the technician. And in some instances, there's kind of a common track where the technician is training with the veterinarian, and then there's sort of a breakout track where it's just technicians and just veterinarians, but the end result is now two people return to the practice. You've got now a doctor and a veterinarian who are both excited, about the prospect of applying a new technology to their practice, they're both comfortable with it. And so the road blocks begin to come down. And as we've used that model more and more, we see more and more veterinarians when they come back for a course, they're like, "I didn't bring my technician the first time. I'm not going to make that mistake again."

Yeah. Yeah, we can't do anything without them. So they should learn along with us. [laughter] Basically the way you look at that. Yeah, I definitely have been in more than one situation where technicians have taught me something they learned at CE about anesthesia or... I'm thinking, especially in anesthesia, because that was an area that we had several technicians who are really passionate about it, and they taught me so much - and it's worth investing in that time and those resources to make sure that the support staff is also comfortable and educated and growing.

Yeah. Without a doubt, right?

Yeah.

We're nothing without our team. And technicians are a huge part of that team.

Yeah, I wanted to talk a little bit about hands-on CE. You in your message back to me about this topic, had compared the hands-on training that our graduates get with the training that commercial pilots receive, and I'm willing to bet that they're pretty different. So how do they go from brand new flight school graduates to confident pilots that can be in charge of hundreds of people... What can we learn from that?

Yeah, so full disclosure, I think that we talked about this in our previous webinar or podcast, but... I'm the child of a military pilot who then was a commercial pilot, and then I'm also the child... My mother was an operating room nurse, so it's a very unique mix that creates this that is me.

There's nerves of steel in there.

Well, I don't know what there is, but there's something. And what I see as a difference of veterinary training to training commercial pilots is - it's not just veterinary school, it's also postgraduate education. I remember as a kid, I would go watch my dad work in these simulators where different scenarios were created and they tended to fall into a couple of categories, as near as I could tell.

One was that the situations that happened frequently, they're relatively low consequence, but they
happen so frequently, you gotta have your jam, right? You gotta know how you're gonna handle that.

The other thing that they did was they had scenarios where, where God forbid this ever happens, but because the consequences are so high, you have to operate out of habit, muscle memory, you can't look things up at this point.

And so I think there's a huge opportunity there for the use of simulations and simulated scenarios, and I've seen instances where that has been applied in emergency medicine, and a person will... They have to make real-time decisions, and then they debrief afterwards, and sometimes the person may be reduced to tears of, "I blew it, I blew it, I can't believe I blew it, the consequences were high," but then you get to back off and say, "That's exactly why we're doing what we're doing because now is the time to blow it, this was the safe space. Now, let's do it again, and let's do it again, let's do it again. And when it comes time, you're never gonna blow that one in real time." Right?

0:22:25.9 KB: Yeah.

0:22:27.2 RP: And so I think there's a huge opportunity there, but the other thing is, I look at how... Maybe backing up to my dad as a pilot, he had several sayings. He had one which was, "There are old pilots and there are bold pilots, but there's very few old, bold pilots." Kind of think about that one.

Yeah, another one was, "It's better to be on the ground, wishing you were in the air, than in the air, wishing you were on the ground." Again, I can equate that to being in the operating room wishing I was anywhere but the operating room. How did that happen? What were the circumstances?

And germane to that was a third saying of his, which was, "It's the third error that will kill you." We frequently commit hidden or occult errors, and they may not be personal errors, they're systematic errors that allow the human error to have consequence and give that third error the opportunity to kill you or have dire circumstances.

So there's this whole field of risk mitigation in industries, whether it's commercial aviation, human health care, energy, any of a number of things, but they're all based around this recognition that people are fallible, people are error-prone. And we need to find ways to put what, in their terminology they call systematic defensive layers in place, but basically systems that allow us to protect the fallible human from committing an error. So I'm going to go back to this comparison of veterinary medicine and commercial aviation. Commercial pilot doesn't show up for work and walk out to the airplane and kick the tires and put his finger in the air or say, "Let's do this thing."

0:24:41.9 KB: I hope not.

0:24:44.5 RP: Yeah, right. There's an entire system that begins, multiple individuals are part of creating that flight plan. But in veterinary medicine - and again, I'm going to go to surgery because it's high consequence, it's also it's my area. But how often do we put the relatively inexperienced [one] who is particularly error prone - but any individual, no matter your level of experience, you're error-prone. You are human. I mean, surgeons don't always want to admit that, but we're all error-prone, and we send them out to kick the tires, put their finger in the air and say, "Let's do this
thing," and should we be rethinking that?

And so one company, that has gotten my brain focused upon this, is a company based in New Zealand, but they basically, they looked at a particular orthopedic procedure - TTAAs - and they said, "Where do most people make their mistakes with this procedure, and are there ways we can engineer, are there ways we can apply this risk mitigation so we get rid of that tendency?"

And without going into all of the details of how they've done it... What I'm intrigued by as an educator is the approach that says, "We're not just going to keep doing it the way we have been doing it, we're not going to put all of the onus on the person or the individual. And when it goes wrong, we're not going to all point fingers at that individual." Once again as a profession, should we be thinking differently and should we be creating systematic approaches to reducing or preventing the likelihood... I shouldn't say prevent, reduce the likelihood of a hazard becoming an adverse event? Because hazards are all around us, anesthesia, surgery, anything that we do, there are hazards there, but we leave the individual exposed, and I think there are ways that we can change that.

0:27:08.7 KB: Yeah, that speaks to me for sure, having been in positions where I felt solely responsible for a mistake that happened that probably started days earlier or maybe years earlier in just the system that was allowed to develop that led to that issue. And thankfully, nothing was catastrophic in my case, but I thought about that consequence, or that potential consequence, all the time. And that was one reason why surgery wasn't for me, because I spent too much time thinking about how exposed I felt and how solely responsible I felt.

And as veterinarians, I think we're just sort of brought up to think that way, that we have to be able to do it all, and that if an emergency comes in, it's our fault if we don't know how to handle it, and it's our fault if it goes south, and it's our fault if the pet dies, even if the client didn't allow us to do something. We take on so much of that responsibility just by nature. Do you feel like that's something that we can change or is that something that's ingrained in us, and that's why we want to be doctors?

0:28:20.4 RP: No, I do. I think that it's huge... It has huge impact, it's very contemporary really in its application, because we're talking so much about well-being and the stressors that veterinarians feel. That's not by chance or surprise. The way people see their pets has changed tremendously in my career, it used to be, "I just want a dog," right?

0:28:51.3 KB: Yep.

0:28:51.9 RP: "Does it have to be this dog? No, not necessarily, I’d like to have a dog." But now it's this dog, this dog is now part of the family, and with that comes a lot more pressure. Have we done anything to change our systematic approach so that it's so easy to point the fingers at the adverse event? That's what everybody sees. That's error number three that my dad talked about, but what about error number one that was systematic, error number two that was systematic? It's so much easier to focus on error number three and not back up and begin to look at the system.

So I'll go back to the flight plan - that multiple people contribute to the flight plan. So this company that I was alluding to in the orthopedic industry, essentially, they do that. They say, "Okay, you, Katie Berlin, you're going to do a TTA," and you're like, "No, I am not." And they're like, "No we
got you. We got you.” So you send... You do trainings obviously...

0:29:56.7 KB: I'm having flashbacks now.

0:29:58.1 RP: Yeah, yeah, yeah. But you send your radiographs to this company, and the first thing the company does is they have a board-certified surgeon who looks at your radiographs, and they ask the question, "Should Katie do a TTA in this dog? Should Katie take this airplane into the air?" And the answer might be, "Nope, nobody should take this dog into the OR to do a TTA, this is a horrible case for a TTA." In which case that is the report that you get, it says, "Don't do it, Katie."

Or the report might come back, and it might say, "Yep, a TTA is a feasible approach, but because you and I've been working together, Katie, I know this is your first TTA, and this one has some hazards on it, there's a few storms moving around that you need to be aware of, this one might not be your best TTA, Katie." But then if it's like, "Nope, this one... This is actually a great TTA for you to do." Then what it has is it has a written surgical report that is essentially a cut-by numbers, they have this adjustable cutting guide, and they say, "Okay, you're going to adjust knob number one on the cutting guide to the letter L, and you're going to adjust knob number two to the letter G. And when you place this on the front of the tibia, that's going to put the cut right where you want it, Katie."

Okay, so it's the flight plan, we've created the flight plan. “Follow the flight plan.” And so it's remarkable in the sense that it is saying, "Hey, we've got you, it's a team approach. We've trained you to be part of the team, the team has your back, and so execute this plan and the chances of something bad happening are much less likely." Can human error occur? Absolutely it can, but we've mitigated, through these defenses, the likelihood of that hazard becoming a true adverse event.

0:32:11.0 KB: I'm just thinking about what that would feel like to have somebody in surgery, as a brand new surgeon or somebody attempting the procedure for the first time, and having somebody with you saying, "I've got you". I've been lucky enough to have people I've worked for who have been willing to come in with me on procedures like that, otherwise I never would have done them because I was not brave. I was not bold. I was not old or bold, I was just... [laughter] I was scared.

But how amazing would it be to have that kind of support for soft tissue procedures for even a spay of a fat dog, which is one of the scariest situations that I can imagine right now, thinking about that. And I really wish that I'd had a simulator. To spay a fat dog like 600 times before I actually had to go and do it, or a cat in heat and the uterus just shreds under your clamp. "Whoops shouldn't have used a clamp there." I really could have used that, and I know so many recent grads are in that same boat where they just feel not ready and expected to be 100% ready. And I probably had days like that almost as often later, just because as you grow, you want to do new things and learn new things, but that doesn't make them any less scary.

0:33:29.6 RP: Right, yeah, and I don't think... Like this example that I gave, I mean that's a great example of how things can be improved. But there still are places for human error, and there are so many other applications for how can we create those systematic defensive layers in other procedures and other arenas; a lot of them don't exist yet. But just the awareness of that mindset, I think is important - of how can we switch our thinking? It isn't just always more training or better training. Sometimes it's different training, a different mindset maybe of how we go about doing it.
Just food for thought.

0:34:20.5 KB: Yeah, that is great food for thought, and like you said, we're not going to solve a problem like this or a question like this in one 30-minute conversation. But I think we've planted a lot of really good seeds for people to start thinking about: what could they do differently to mentor, to provide mentoring or learning opportunities for their recent grads or even experienced doctors and technicians who are trying to learn and grow as we all should be able to do. I think that's a really, really interesting question to think about, so thank you, Dr. Palmer. It's really neat to think about this stuff with somebody who's actively working in continuing education and seeing sort of those trends unfold and being able to pinpoint those issues like you can.

0:35:08.6 RP: Yeah, yeah.

0:35:10.8 KB: So I have one last question for you. You have a lot of really good sayings... Like I'm going to remember those sayings from your dad. But if you could put a billboard or a tweet, if you're so inclined, in front of the entire profession every day, so that they would see it on their way to work, what would it say?

0:35:39.8 RP: You know I can recall a movie some years ago, I don't remember the name of the movie, but I remember the line was something like, "Hey Bates, we get to play baseball today." And my line on this billboard would be something like, "You get to love on animals and people today. Have a great day. Make it a fun day." So much of the stressors that we face, which are real and exist and they're true as we've discussed, they're compounded by our vantage point. And so I think sometimes just reframing, "Hey, Bates, today we get to play baseball." "Hey... Hey, Berlin, today we get to love on animals and love on people. Have fun." It really is a remarkable thing.

I think the other would be, it's a place where my head is right now, but focus on your why, why are you doing any of it as a practice as an individual? What's your why? Why do you get up in the morning? What's your cause, what's your purpose? What are you doing? And if we individually and as practices, if we can begin to focus on our why, then we can begin to come together as a team around that. And I think that can be a place of unity, and that's always a great place to start for a team.

0:37:12.8 KB: I love that. Here I thought you were going to put one of your dad's sayings on there. But those are even better, because they speak directly to us and they remind us that this is a profession full of joy too and great moments and positivity and stories, and stories that we can relate to so strongly. And we're very lucky to have that, even in spite of all the stressors.

0:37:39.3 RP: Yeah, and we've talked about this before, but I just commend you for getting the stories out there, the stories are so important, and that's what we connect with, we connect to, we can see ourselves in other people's stories. And so I think that's just an important part of your podcast and just what we do together is sharing those stories.

0:38:07.9 KB: Dr. Palmer, thank you so much for your time. We really love having you here and I will take a lot of this back with me because you really got the gears turning, and I know that you will for a lot of people listening too so, thanks so much for coming back. Thanks to all of you for listening. We'll catch you next time on Central Line.
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