

Take10 Podcast Transcript

The Many, Many Ways to Die: A conversation about finding answers and what the dead can tell the living through the forensic pathology process

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GK

Welcome back to RGA's Take10 podcast series.

Around 20% of all deaths will meet criteria which characterizes them as unnatural, and this means that they're considered either sudden, unexpected, or violent, and the law in most regions requires that these cases be referred for investigation.

Always searching for clues, one of the key medical specialists involved in any such investigation is the Forensic Pathologist.

I'm Gayle Kanchanapume, and today I'm joined by Professor Ryan Blumenthal, who's kindly agreed to discuss his work as a forensic pathologist and share some guidance with us claims assessors as we contend with issues such as substantiating cause of death and understanding contributing factors.

Professor Blumenthal, welcome to Take10.

RB

An honor to be here. Thank you for having me.

GK

Now we're going to be talking today about how claims assessors can best approach some of these tricky death claims situations. However, before we jump into that, I know that our listeners will be really fascinated to learn about the world of forensic pathology. Perhaps you'd like to start by telling us what drew you to your profession, and also what exactly does a forensic pathologist do?

RB

Right, so, my name is Ryan Blumenthal. I'm a forensic pathologist based in Pretoria, South Africa. I've been a forensic pathologist for about 20 years, and in layman's language, we're essentially detectives in white coats. From our autopsy table we can tell a lot about what is happening in the world without even venturing outside the mortuary. We can tell you if a new gang has moved into the neighborhood, we can tell you if there's a new or emergent drug or disease. We can even tell you the health of the nation, all this without even leaving the mortuary because the body speaketh with miraculous tongue.

So yeah, we don't get out much. We're based in the mortuary and the human body is our death scene.

GK

So, thanks for that. It really does sound like you're not only a doctor, but a scientist and an investigator all rolled into one. Now, we're all very aware of what's going on with the global opioid crisis, and it's not surprising that opioid related deaths have increased as a result. Personally, I think one of the most challenging death claims types to adjudicate is, is a drug overdose death. These often involve young people, family are understandably highly sensitive and emotive, and claims assessors really want to be able to make a fair and accurate assessment within a short amount of time. So, despite already knowing the cause of death, what they often don't know, however, is any evidence that the drug overdose was either the result of a suicide or an accident. This detail is often crucial to their assessment.

Professor Blumenthal, can you talk to us about your approach to drug death investigations and how your work can help provide clarity around questions such as these?

RB

Right, well, there's several perspectives here. Firstly, I need to first acknowledge claim investigators. I think you folks do incredible work, sometimes over and beyond detective and police services. I mean, I think you get an insight that is very different and actually at times claim assessors have been the ones that have actually solved the case. There's definitely a certain detective mindset to the claim assessor. So anyway, I respect my audience here and I know exactly who I'm talking to and so I have to actually watch my words very carefully.

So, getting to your question about opioids, I think we just need to know a definition here before we carry on, because the listeners are from all over the world and there's different medico-legal systems, but the philosophy remains the same wherever we are on earth.

You know, we still want to catch bad guys and we want to find out, you know, who's to blame or is there a claim. So, I just want to keep it very, very simple here today. So, what we are discussing now in this opioid question is the manner of death. So, you're asking is it suicide, or is it accidental? Is it homicide, is it misadventure, is it unascertained? You know, different countries have different definitions and eventually you want to call it at the end of the day. So, the question is, is it our job to call it for any industry, you know, whether it's civil aviation or the rail line industries or the mining companies, there's always an internal investigation as well as a formal investigation which will take place through the country involved, whether that's a criminal investigation or civil or through some health professions council. So, there may be concurrent investigations going on at the same time and it's very important to be aware of the other investigations taking place concurrently. You know because there are different tests involved. And this is the point that I want to make. You know, if you're being investigated on a criminal basis, it's beyond reasonable doubt. But if you're being examined in a civil matter, it's on a balance of probabilities. And if you're being examined by your health professional council, then it's, is there negligence involved or, or liability? So, there's different tests involved here, and it depends which organization is doing the testing. So, if something happens, there's literally several hurdles that the person has to go through before verdicts are done.

So, they could have a criminal matter, civil matter, and a health professions council matter on their hands if it's a doctor. So, you know, there are a lot of legal hurdles to go through. So, keeping this in mind, one has to be cognizant of what is happening in other investigative processes. It is really good not to be interfered with by the other processes, but one should somehow find out what the ultimate judge or magistrate decision is in the criminal case, what the health professionals council's findings were, and then obviously you're going to have your own internal investigation, which is what we are discussing here. But the basic philosophy is you cannot make a decision without sufficient data. You need sufficient data to make an opinion. As the late professor Joe Davis from the USA said, that if someone ever challenges your opinion, you may say that that opinion was based on that data. If you get new data, you get a new opinion. So, you can only make the best opinion you can make based on the available data that you have. So, the most difficult cases I think you will have in your industry, there's, several scenarios. For example, an epileptic, you know, someone who has a background history of epilepsy now you find them dead in several scenarios. You know, they could be found dead in their bed, they could be found drowned in their bath, they could be found on the floor, but with bruises all over their body. Now, I mean, you don't know if this is an assault or if this is from the epilepsy. Or it could be a SUDEP, which is a sudden unexpected death in epilepsy.

So now how do you approach such a death? You know, is this due to the epilepsy that they're dying? Or you know, is this now drowning? Is this an asphyxia death? Is this an assault death? So, these cases can be very, very difficult. You know, you want to take each individual case on merit, that's why I want to discuss this philosophically here.

Another example. Let's about something controversial, if I may. Let's discuss vaccination deaths. So, if someone has a vaccination and dies, you can almost say that there's a connection, a nexus, a temporal causality between the vaccination and the death. If they die two hours after the vaccinations, so two, three hours later, four hours later, six hours later, 12 hours later. Now what happens if they die 21 days later? Six months later, one year later, you know, where do you draw the line between causality and nexus temporality? How do you go about thinking about this? So, if someone has a vaccine and dies a week later, you've got to look at what happens in different systems around the world.

So, you've got to look at like what the Americans are doing, what the Israelis are doing, what the Germans are doing, like, you know, how long after a vaccination do they do an autopsy and make a good decision. As I said, one needs data. Only once we have data can we see patterns. So, if, for example, we see that after vaccination, people are dying on 21 days later from clotting or stroke or heart related things, you can see that there's, there's a pattern developing here.

I think this is very important in the mindset of the investigator. It's pattern recognition and finding out what the literature says and speaking to your colleagues, you know, these decisions are never made in isolation. So, getting back to your question, sorry, it's a long-winded discussion here, but I mean, so now you've got an opioid death. Okay. These are very complicated. We know there's been a lot of deaths due to the opioid crisis and a lot of them die in in different scenarios. Can I just say a few words, because I published an article, it's actually in the literature called Trans-Fentanyl Death Pact. I actually had a couple save Fentanyl patches and then have a death pact. In reading in the literature, if you've got an addict of Fentanyl, they'll use all devious methods to try and get their Fentanyl. We've seen them chew Fentanyl patches. We've seen them soak them like teabags. We've seen them smoke it. You cannot believe how crafty and innovative the ways are to get Fentanyl out there for an addict. So, you want to look once again for pattern recognition. I mean, is this person a known user or not? We know with opioids you can have an idiosyncratic death, they literally die on the needle, we don't fully understand it. Maybe it's like an anaphylactic type of reaction. So, you want to try and get as much history as you can from the person. Is this a first-time user or a long-term user? Is this accidental? Is this suicidal? Is this misadventure? You know, here's a question for your viewers. Russian roulette. Is that suicide? Is it accident or is it misadventure? How would you classify the manner of death with Russian roulette? Look, as far as I'm concerned, Russian roulette is suicide. That's my opinion. As soon as you start playing that game, I think it's suicide. But it could be misadventure, some could classify it as misadventure, others as accidental. And I think one should have the same mindset, you know, when using drugs such as Fentanyl. So, this can be very, very difficult, it will depend on your system you're involved with and in and the arguments, but the pattern, this is my big message for the claims assessors, you have to identify the pattern of the individual. This is very, very critical.

GK

Yeah, and that really gets into what other investigations they can conduct and what other information can they reveal about that person's lifestyle through their other claim requirements.

I wanted to touch on toxicology analysis because I know that this is something that claims assesses will often call for, and you know, particularly in a situation where there's a drug overdose involved. For example, if they're seeking to understand whether the event leading to the death was contributed to or caused by the consumption of drugs or alcohol, such as in the case of a motor vehicle accident where there's a drug and alcohol policy exclusion or again, where the assessment requires that the assessor evidence whether the death was accidental versus, you know, by a suicide, if it's an accident only policy. Could you talk to us about the various types of toxicology that are commonly carried out? How are these normally performed? And specifically, what information can these provide us to help us in our claims assessment process?

RB

Right. Once again, I'm going to discuss this philosophically. Look, we're getting to a stage in the world now where decisions are more team based than individual based. And as I said in the beginning, you need data. You cannot make a good decision without good data. And the question is, how much data do you need to make a good decision that that is a critical point that I have to drive home with your listeners and your viewers here.

I mean, most of life crises stem from lack of data. I mean, you know, you can have a case, and I'm just going to give you another example here. We had one the other day where a male, strangled a female, she survived for three days. He was arrested. Then she died three days later, and we did the autopsy and she had a dissecting aortic aneurysm. Now the question is, is this guy to blame for murder? You know, is this a random aortic aneurysm that she would've had anyway, or was he to blame for setting in motion a series of events that led to her death? And how does one think about such a case? You know, these cases can be really complicated. Meanwhile, he's sitting in prison. It could have been a random event, the aortic aneurysm, or he could be to blame. You know, this can get really advanced and it requires inputs from multiple disciplines and multiple specialities, and also this woman could have had a toxicological substance on board.

So once again, the philosophy is what I want to drive home here. So, in your scenario where there's exclusions, for example, with alcohol and it's a motor vehicle accident case, you have to speak to the forensic pathologist involved. You have to speak to the toxicologist involved. You know, we've studied many years. We need to understand, you know, was the drug having an effect at the time of the accident? So, we have to do back calculations. We have to try and determine, you know, if there were other mitigating factors or exacerbating factors that that could have played a role. You know, we got different definitions - the predisposing cause of death is, and we've got to try and get into that moment and try and recreate the version of events to see what happened at that moment. And you know, sometimes the facts are so related, they speak for themselves, you know, *prima facie*. It's on the face of it. The facts just speak with miraculous tongue, as I said in the beginning.

So, look, we have to take each individual case on merit. Remember, there's concurrent investigations happening the whole time. There's a criminal matter, civil matter, there could be a health professional council matter. You've got an internal matter and there's so many different structures in societies, you know, whether it's civil aviation or if it's railways or it's mining, whatever. Each person's running their own internal investigation but the key message for all of them is, get your data. You need data to make an informed decision and consult your experts. Speak to your friendly forensic pathologist, your friendly toxicologist.

GK

That an interesting point you made there. I know a lot of claims assessors might be, you know, slightly nervous about reaching out to the forensic pathologist or the toxicologist, of the opinion that they're too busy and important managing critical issues. So you are indicating that in the norm, people such as yourself, forensic pathologists would be happy to have a conversation or receive a request from an insurer. Would that be your opinion?

RB

Look, in my opinion, we are servants, forensic pathologists. We are here to serve, to soothe and to solve. And if any forensic pathologist gets high and mighty or elitist with you, then they should be really grounded and approachable. And I mean, we are here to help. That's what we are here for.

GK

Another fairly common conundrum, and I know that this is something that you're interested in, claims assessors come across when managing claims under accidental death policies is where other non-accidental causes may have caused or contributed to the death. It's important for claims assessors to thoroughly investigate this because generally accidental death policies require that the death be accidental and be independent of any other cause.

Now I know that these scenarios present this recognized causality dilemma of which came first, but I wanted to ask you, what information does forensic science offer us in a situation where we suspect that, say for example, a heart attack might have caused a motor vehicle accident or a fall from a height was caused by an epileptic seizure. How do we gain a clearer picture of that important sequence of events and try to understand what happened first, the medical event or the accident?

RB

Okay, now this is my topic. Thank you for this question. This is such an important topic and the way I like to explain it is as follows. There is a phenomenon called the *post hoc ergo propter hoc* fallacy. So, this is a fallacy of reasoning. It means therefore this because of that.

So as an example, if I have a candle with a flame and I put my hand into the flame, I'll get burnt. So, I think to myself, wait a minute, fire causes pain. The fire burns me and then I get a causality, I get a nexus. There's a temporal association here, and I worked out the flame burns and it's dangerous. Now there's a fallacy of reasoning, which I've just described. So, say for example, you go home from this podcast and you develop a rash, is this rash what you had for breakfast? Maybe, you know, it's something you ate. Could this be an allergic reaction to breakfast? Or could this be something you did two weeks ago with an incubation period of like you know, 14 to 21 days. And we see this very often with malaria. You know, here in Africa someone comes home, they get a headache, they don't remember, they were in the Kruger National Park two weeks ago, and they think that their headache is something they had for lunch. Meanwhile 21 days ago they were bitten by an Anopheles mosquito with Plasmodium Falciparum inside. So, cause and effect is the most critical element of medicine. We got no idea about cause and effect. And that is why I agreed to this podcast because if I can, and I know it sounds a bit preachy from my side over here, but humans are totally oblivious to cause and effect. They don't know the effects of what they do, and the aftermath and consequences of what they do. You know, and it's still a basic Locards principle, every contact leaves a trace. So certain contact leaves certain blatant traces, but other contacts leave subtle traces, and your contact depends on the time, duration and intensity of contact. So how hard, how long, and what type of contact you had will determine the effect of, or the aftermath. So, and you've got to keep these basics in mind when addressing a scenario like you've just explained, and you've got to think about it scientifically, lucidly and logically. You've got to play it backwards, in slow motion, and three

dimensions to try and actually work out, you know, what was the original domino in the rally that led to this death? And as I said, you know, there's interplay here between natural disease and trauma. So, you know, for example, someone can have minor trauma and die because of this eggshell skull theory. For example, you know someone's got a thin skull and then you slap them on the back of their head and they get a subdural hematoma. You know, now they're down for murder. So, some of these cases can get really, for lack of a better word, hectic, and you've literally got to scientifically slow it down. Think in terms of Locards cards exchange principle. Think in terms of contact. Think in terms of intensity, duration, and nature of contact. Think in terms of the fatality of that situation.

Then you've got to like take each individual case on merit individually and try and work out what the cause was. And I mean, over my 20-year history, I've had some unbelievable cases. You know, I had one last week, if I may discuss one. So, I had a young child playing on a rubbish dump and there was an exposed electrical wire and he sustained burns. This was my case last week, but this actually happened a year ago. What happened is one month after the event, this child started developing chronic diarrhea, abdominal pains, etc and now they want to link the gastrointestinal problems to the electrocution event. And I was consulted as an electrothermal expert. Could the abdominal symptoms have been connected to the electrothermal event? So also, once again, they're looking for nexus or causality, but in, in my opinion, just to show you how I closed that case - in the literature, I could find no association between electrothermal injuries and abdominal symptoms and I suggested that a gastroenterologist be consulted first to exclude organic pathology.

GK

So that's all really interesting and, really helpful for us to kind of understand the thought process and how you would approach establishing the causality.

In a situation where, back to an example that I provided where the policy might only pay out in the event of an accident, so a bodily injury, sustaining a bodily injury that causes death, and that there is some suspicion that the insured person had a medical event, which then caused the accident. From a forensic pathologist perspective, is there often, or is too difficult to or is it unlikely to be able to establish, which caused which. I mean when we approach a forensic pathologist for details about the post-mortem and investigations that you've done, is there hope for us to be able to establish that link? Or is it quite difficult?

RB

Well, I urge you, I think it's necessary for you to approach your forensic pathologist and push them, challenge them. They are not as high and mighty as you make them out to be. We're quite grounded individuals. For example, you should literally ask them, for example, in a motor vehicle accident case, what was the most fatal injury? You know, it's a cop-out if someone says multiple injuries, that's a no go. I want to know. We've actually had a case where a Mirage jet crashed and there were two people and we wanted to know who died first and second, you know, in that situation, because there were different wills which would go to different families, etc. So, it's critical for us to determine the level of lethality and the time of lethality and we need to work out, you know, what was the most fatal moment in that accident? You know, was this the head injury? Was it the neck injury? Was it the chest trauma? Ask them was there capacity to act. How long do you think they lived? You know, push them, challenge them. This is why they studied so long. This will raise the bar

throughout the system. This is how it goes, so keep us on our toes. So just to get back to your question with the heart attack and death at the wheel. These cases, we've had a couple over the years here, very important and the way we determine this is vital reaction. So, if they really had a heart attack at the wheel, you would expect minimal blood loss and minimal vital reaction on the body. Whereas if the car crash itself killed the person, you'll see a lot of vital reaction, swelling, bleeding, you know, so the body was still alive to, to react to the injuries. So we can tell the difference.

GK

Okay. Well, that's really important to know. Again, something, I think another example that I provided was an epileptic seizure that then led to an event. Is it possible from, I don't know, you can tell me if it's brain analysis, etc, to determine the sequence of events when the seizure happened in comparison to when the fall occurred.

RB

Okay, look, epilepsy, this is a super specialty. It's a question we ask our final candidates. It is a really difficult scenario. You know, there's a condition called SUDEP, which is sudden unexpected death in epilepsy, literally up to 3% of epileptics can die suddenly and unexpectedly with no signs on their body. The big question internationally, are they dying in a grand mal fit or are they dying, you know, during a single seizure. Or is this another event that caused this? Deaths in epileptics are difficult. I must say even for the most grizzled old pathologist. This is something that has to be sat down with, you need a multidisciplinary team to look at it. You want to see did they bite their tongue? You want to see, you know, if they died and there's mucus between their mouth and the pillow, did they suffocate? Did they drown? Were they operating machinery, were they driving? And you know, we actually had a case in the literature where an epileptic was driving and there was palisade fence, and it was during sunrise and the fence was between the sunrise and the car, which caused the flicker. And this person had photo-sensitive epilepsy, while driving due to the palisade fence, sunlight flicker, which induced photosensitive, epilepsy, and then had the car crash. This you'll find in Cole Sagan's book called Dragons of Eden. There's a whole story about this epileptic, if you want to go fact check me, but these are, this is the kind of depth and level of investigation that you need.

Always ask, why this, why now? Those are very powerful questions. Why this? why now, why did that person have their car crash at that time? When did they? What happened? Why did this happen? You know, you've got to have the mind of the detective and that is how you should approach it.

GK

I really like that, having the mind of the detective and always being inquisitive and the whys, why now are really good starting points for us when we're looking at claims information and examining the claim. Now, I know our conversation really has only scraped the surface of this quite fascinating topic, and I think we could easily invite you back to talk for another 30 minutes on this and hopefully you'll agree to that in the future. There's so much more we could explore and discuss; however you've been able to share some really interesting information and as well as some quite eye-opening stories, but also provide really helpful

insights and advice for claims assessors particularly around approaching your forensic pathologist, that that is expected, it's doable, it's something that you feel you and other forensic pathologists would be obliged to be involved in. So, I think that will be a comfort to claims assessors.

I'd just like to say thank you and thank you very much for joining us today and sharing your insights with us.

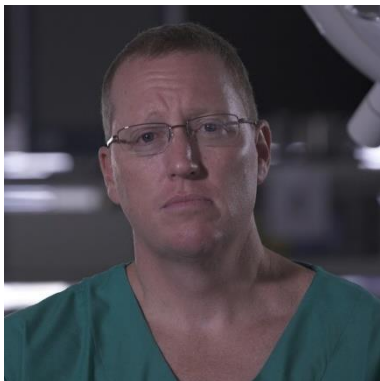
RB

Thank you for having me.

GK

Thank you also to our listeners for tuning into this episode of Take10. This is the final episode in this Take10 in this series of four on life claims, but if you missed any of the other podcasts in the series, you can find these on our Take10 site.

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