

Discover Policing Podcast

Title: The CSI Effect: Inside Criminal Justice Forensic Investigations

Interviewee

- Janet M. Girten, Deputy Director of Forensic Services, Colorado Bureau of Investigation; Member of the IACP Forensics Committee

About

Deputy Director Girten discusses promising practices in modern forensics investigations and how they fit into policing and the larger criminal justice system. The podcast also highlights processes and protocols for effective evidence management and how forensic investigators can better coordinate with law enforcement in solving crimes.

Audio Transcript

00:00 Quauhtli Olivieri: From the International Association of Chiefs of Police, welcome to the Discover Policing podcast. I am Quauhtli Olivieri.

[music]

00:11 Janet Girten: I believe that we are all partners. I believe, if you think about a triangle, that we are locked in together at the hip in solving crime.

00:21 QO: This episode is funded by the U.S. Department of Justice's COPS Office. And the department's full disclaimer notice is available at the end of the podcast, and in the episode's show notes. The views, information, or opinions expressed during this podcast are solely those of the individuals involved, and do not necessarily represent those of the IACP or the COPS Office.

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00:51 QO: On this episode of the podcast, I discuss forensics with Janet Girten, Deputy Director of Forensic Services at the Colorado Bureau of Investigation. And now, my interview conversation and discussion about forensics with Deputy Director Janet Girten. Welcome to the podcast, Jan. Thank you for being with us today. Would you mind, please, just telling us a little bit about your background and your... Obviously, your background in forensics.

01:20 JG: Sure. And thank you for having me on today, I'm really excited. My name is Jan Girten. I'm currently the Deputy Director for the Colorado Bureau of Investigation over our Forensic Services in our great Rocky Mountain State. I've been here 10 years, and prior to that, I spent about 23 years with the Illinois State Police in Chicago.

01:42 QO: Perfect. Given your background, you're the expert here. So, for our audience, can you tell us what is a forensic investigation, and how does it fit into wider policing and the criminal justice system?

02:00 JG: Sure. All of our forensic scientists work out of the laboratory, and they are analyzing the evidence that our crime scene investigators collect at a scene of a homicide, burglary, home invasion, carjacking. And the crime scene investigators and the evidence technicians from the local police departments, sheriff's office, they'll deliver the evidence to our crime laboratories around our state, or our nation. And they'll submit that for forensic analysis, so that we can help identify the perpetrator of those crimes, whether it would be with fingerprints or DNA. And so that's how our scientists really are based in the laboratory. They don't really go around, like NCIS. They're not really out in the field, or CSI, they're not interviewing the suspects. We are all experts in what we do. The scientists and the science is done in the laboratory, and the investigation in the field is done by the law enforcement experts, the detectives, agents, police officers. And then we analyze that evidence, and then we write a report on that, and then we testify when the prosecution's office or the criminal justice community needs us to go and testify to our scientific results.

03:24 QO: I'm glad that you brought up the CSI effect because it's something that I think, if you come from outside of policing or law enforcement, and I think working at the IACP, I think it's something that... It doesn't come up as often, but sometimes it's easy to fall into that trap. Can you

describe what the CSI effect is, and what has it... How does it impact your work, or the work of your investigators, or your people working in a forensics lab?

03:54 JG: Sure. It's a great question. The CSI effect really started for our industry about 15, 20 years ago with some of the TV shows that were coming out. On the good side, it really focused attention on to the forensic community and the forensic scientists. I often refer to our forensic scientists as the unsung heroes because they're always in the background. They're not the one busting down doors and making those arrests. And the CSI effect helped really create academia programs where we could have our scientists already trained in some of the basic forensic disciplines. So, that's been a good thing. We have got a great applicant pool, and the industry and academic programs have grown out of that success of those shows.

04:47 JG: On the other side, on the flip side, it has caused lots of jurors to really want to know more in the courtroom. And that has only enhanced the time that our scientists would spend in that courtroom, and to help make better explanations of what they were doing with the certain pieces of evidence. Explaining how DNA works, how do we use DNA to connect the victims to a crime scene, how do we use fingerprints, how do fingerprints apply to a piece of evidence. In some states like Colorado, which is a little different from Illinois, Colorado jurors get to ask our witnesses questions right from the jury box. All of that has really enhanced... In our industry, we feel it has enhanced the quality of the prosecution, the quality of our testimony by our scientists, because there is a lot more curiosity going on. And the jurors want to know really how things work in the laboratory, and how authentic, and the integrity of the science that we use in the laboratory to really identify those perpetrators.

06:02 QO: So, you would say that the effect has been mostly positive, because it has raised awareness about these agencies, like the one that you run, but also in the courtroom, maybe it leads to a more informed... Or the desire for more information from the jury so that they can make the right decision.

06:21 JG: Absolutely. The more informed and educated they are, the more that they are comfortable in those decisions of guilt or not guilty. And for us, our science is... We only testify to the results of our science, and we let the science dictate those results. And so whether or not we help exonerate the individual suspect or we help convict, it is based on our science. And when we are able to explain the science to the juror, it gives them a comfort level so that they don't feel like they're unsure when they make those decisions in their jury rooms.

07:05 QO: You mentioned that the CSI effect began maybe 15, 20 years ago with the rise of these crime scene investigation shows, that there's new ones every six months. But how has the role of the forensic investigations changed, even in that same period of time, over the last 15 years? Have you noticed any new trends or maybe a certain new type of demand for the field that you're a part of?

07:36 JG: Well, unfortunately, as crime rates rise and populations grow in our communities, population really drives crime rates and so the Eastern Seaboard states, the Midwestern states that are more highly populated, those crime rates are larger than maybe the rural America out here in the western part. And so, high crime rates and volumes drive efficiency in our industry. The Eastern Seaboard states and Midwestern states have paved the way, if you will, for the rest of the country, in Western America, with automation, and robotics, and technology. We need our manufacturers to help our laboratory equipment be more efficient, have bigger trays that we can put a lot more

samples on an instrument to run overnight. So, the CSI effect has also gained that interest, and our manufacturers are there to assist us with better instrumentation, faster, more lean workflows and processes so that our industry can keep up with the demand based on our location. Big cities, rural, whatever demographic we are in in the country, those kinds of things really do have an effect, and we can work together, and collaborate, and help our processes in the lab become more streamlined and faster.

09:10 QO: You touch on how industry has... There's a demand and then the industry steps up to support, at the end of the day, the crime scene investigator and the people doing the day-to-day work. Can you expand on the role of the crime scene investigator, for those in the audience that may still be like, "Well, what exactly does this... These individuals do on day-to-day?"

09:31 JG: Yes, absolutely. The crime scene investigators are invaluable to the solving of a crime. When he or she walks into a homicide scene, and we are looking at a residence or a hotel room, and trying to decide what evidence to pick up, we have one opportunity to collect everything that may be pertinent to that crime in that home, hotel, outdoor event. So, our crime scene investigators really have to look at the whole scene, they photograph, they videotape it, they put on footies on their shoes, so that if they identify footprints, shoe-prints, they can collect those immediately. They can help look at the blood, take photos of some of the blood spatter that may be on the walls. Is it a gunshot? Is it a bludgeoning? Take a look at that scene, and based on their experience, and knowledge, and their skills, they're really going to start to focus in where did the crime occur Outside, in the basement, right in the front hallway of the home. And really look at what evidence is available, and start to methodically look at that scene, and collect all that evidence, and start to tag it, photograph it, exactly where was it found, collect it, seal the evidence up, do not have any cross-contamination between items.

11:08 JG: And they are really documenting that scene so that the investigators or detectives, along with the scientists, can go back to those photos, look at the items collected, and determine if that was, for instance, a homeowner's... If they had asthma, a homeowner's inhaler, and does that really have any bearing on the case? And we don't have to analyze that item. Or is the item definitely, the bloody knife, a bloody baseball bat? And we want to collect that and look for fingerprints, and again, everything goes back to identifying that suspect or that perpetrator of that crime. So, the crime scene analyst, they have one shot at that. Often they are there overnight, and often they are there before... The family members maybe want to come back to the home and clean, and we cannot release that scene till we are confident, 100% confident, that we have collected, photographed, and identified where that scene is. Is it just the hallway? Is there another scene up the... Were they trying to rob jewelry chests? And there might be fingerprints up in the bedroom, looking for the jewelry.

Robbing a house, grabbing the TV, the VCR. Was it just a burglary? So, the crime scene investigator is invaluable. He or she starts that investigation for both the detective and for the scientist.

12:36 QO: You mentioned how the evidence you're collecting and maybe the priority to each type of evidence, it varies maybe depending from crime scene to crime scene, and maybe even the type of crime. How do you go about developing those processes? Because at the end of the day, from what I maybe understand, processes drive the training that a crime scene investigator would go through. Given your experience in the field, how do you develop processing and protocols for collecting and analyzing evidence from crime scene to crime scene?

13:11 JG: Q, that's a great question. When the crime scene investigator is finished collecting any

evidence, he or she will come to our laboratory and drop that off. And oftentimes we like to meet with that crime scene investigator and sort out the evidence. There are certain items that are better for fingerprint analysis. There are certain items that are better for DNA analysis. There are many items that have both processes conducted on that item of evidence. For instance, a baseball bat. Obviously somebody handled that bat, so it's a good opportunity to look for fingerprints. And then they used that bat in a bludgeoning. And so now we might have the victim's blood on that bat. If there was a fight, there may have been blood drawn from the suspect with the victim, and so we may have two different blood types that we may be looking for. All of those processes are developed in the laboratory to get the best results. So, we would look at that baseball bat and we would send it to our forensic biologists, who might swab the blood off of that bat, being very careful to wear gloves and not to ruin whatever fingerprints might be on that bat.

14:33 JG: The first step is that bat goes to biology. They swab the blood, and then they'll send that bat back to our latent fingerprint developers, where they're going to super glue that bat. They're going to use dyes and stains to help create an image of the fingerprint that was left by an individual. And then, if they do visualize fingerprints, they'll photograph them, they'll collect them, and use them in comparison processes to find the suspect. Usually biology comes first, fingerprints may come second, and then at the end, if it's a firearm, and firearms is usually the last of the disciplines to get that item of evidence. I know a lot of people want us to be faster, and they always say the crime lab is delayed. Right? And so understanding the fact that one piece of evidence could go through three or four disciplines, and each discipline has to have spent time in doing their work on that item, and then being careful to handle it so they don't ruin any other evidence that might have been on that bat or firearm. And so that is oftentimes the reason why things take us so long, is that different scientists who are experts in blood, a scientist that is expert in fingerprints, and then we have scientists who are expert in firearms, so it all has to go through each individual section or unit of the crime laboratory before we're done with that bat, for instance.

16:12 QO: I know that as part of the audience, and even as someone that I consider myself, I think, more informed on law enforcement, given I work at the IACP, but even then, I feel like even the CSI effect has that negative effect on me, where, "Look, in one episode they analyzed all the evidence."

[chuckle]

16:31 JG: Yes, they sure do.

16:33 QO: So, maybe one negative side of the CSI effect is the expectation that all these processes are super streamlined, and very quickly, and yet, because they are processes and there's so much variety from evidence to evidence, and lab process to lab process, like you just said, it's a very thorough but not always quick process.

17:03 JG: You couldn't have hit that nail on the head any harder. That is the single most downside piece of the CSI effect. And I hate to say this out loud like this, but there are times where even our lawyers, our prosecutors, our defense attorneys, and even detectives will bring up a CSI show and say, "How come they do it in a few minutes on the show?" And we laugh and we say, "Well, come on, let's take a tour of the lab and let's really help educate our law enforcement partners, and our prosecutors, and our public defenders." Because there is sort of that misconception about how fast it is done in the laboratory versus on the TV show. And boy, we would be miracle makers, if we could

do it as fast as TV shows, but the reality is that, in order to really do the very best job on every item of evidence, it does take us time to do that scientific analysis.

18:05 QO: So, given processes and all the skills that are required to work in forensics, can you go into the trainings that the forensic experts or agencies receive? For example, if someone in our audience was interested in this field, what would be a standard type of training regimen for agencies such as the ones that you run?

18:32 JG: Sure, a great question. The crime laboratory practitioners and leaders, we really look for our new applicants to have Bachelor of Science degrees in, like, a chemistry or a biology. There is so much going on inside the laboratory that is actually taught in the college chemistry classes and biology. Simple principles of how to mix reagents, for instance, how to make sure that we don't mix the wrong acids and bases in the wrong order, those are things that are taught in college chemistry courses. And, yes, we do cover them here, in the laboratory, when we hire and we train, but we do want them to have those basic scientific principles because the more that they know from the college courses, the more they are able to explain to the jury. They understand acid-bases, they understand color reactions. For instance, in latent prints, when we hit with those dyes and stains and we use a laser light, we excite the molecules, and we see color at different levels of energy. And those are principles that if a scientist really understands them at the college level, then they become better witnesses in that courtroom. So, we like the four-year degree, the Bachelor of Science in chemistry, biology. Bachelor of Arts, they have the lab work in those degrees also. We do really love that basic foundation.

20:09 JG: And then, because of the CSI effect, we have more and more college students interested in our field, and so there's more and more really competitiveness because they can go on for their master's and get those master's in forensics, and those master's programs are really awesome across the country. They really give a big taste of what each discipline is about. The downside is that sometimes we get a scientist who really wants to do fingerprints, but we may not be hiring in fingerprints. We may be hiring in DNA, and they get their hearts set on a certain discipline before they even really join us at the laboratory, and really understand what kind of job opportunities there are within the laboratory. Once we hire somebody out of college, we want to, I say, "put the golden handcuffs on them." We invest in a lot of training here on site, on-the-job training, in the laboratory systems, and we put the golden handcuffs on them because we're investing all that time, and energy, and resources, and we want them to have really fulfilling 20, 25-year careers in our laboratories.

21:20 JG: We don't like them to get pigeonholed in an idea, but we do want to show them all kinds of the other exciting pieces of the laboratories, different disciplines. But definitely that Bachelor in Science, we recommend, we work with the academic universities around the country, all of my partners around the country, and their laboratories work with the universities about helping to create curriculums that are best for forensics. But that industry has really increased the number of students who go on to get their master's, and are not able to... And are able to really get a good taste of what the forensic laboratory is like.

22:06 QO: So given, obviously, there's all that technical and hard science background and training that goes into forensics work, but you also mentioned, with the growing demand, from a more informed population and jury, for expert testimony in court, and maybe juries asking direct questions to subject matter experts, such as yourself, or the people that work in forensics, how has that impacted the training in developing new and even veteran employees in forensics agencies?

22:45 JG: The academic universities, they are the foundation of a lot of the research that goes on to developing new technologies. And so, when we get scientists... Applicants who want to be scientists, oftentimes they have been a part of dynamic research that's going on in developing new instruments and new ways to help us here in the laboratory. And that becomes valuable to someone like me, a hiring authority, who says, "Wow, this candidate really has a solid background in forensics." And then they, he or she, is quick to get online, and quick to get trained, and becomes valuable to us for them to start doing casework, and start looking at the items of evidence that come in from the crime scenes. That kind of background is invaluable to crime lab directors in looking for solid scientists.

23:46 QO: Now, all this talk about labs makes me think of, and even you mentioned it, DNA work and DNA evidence. Can you expand on what is a DNA profile, and how does DNA evidence work when analyzing a crime scene?

24:03 JG: Sure. In DNA, like fingerprints, we are always really looking at comparing an unknown to a known. So, the first thing we would try to do is develop DNA off the items of evidence. And that DNA is usually in the form of a body fluid. It could be saliva, it could be blood, or in the case of a sex assault, it could be semen for the male or vaginal fluid from the female. So, our DNA scientists, they go into the laboratory with a Q-tip, that may have been a swab from a crime scene evidence, like a blood, and they'll go in to a DNA laboratory, and they'll start to look at that blood and extract the nuclear DNA. And nuclear comes from the nucleus of the cells, and DNA is usually found in white blood cells, and not red blood cells, which is a misnomer. Everybody thinks we see this large pool of red, that we should have plenty of DNA, but the question really is, is how much white blood cells are mixed into that red blood. So, what we do in the laboratory, we use a little solution. The first step is to really, what we call extraction. We are extracting the nucleus, the nuclear DNA from that cotton swab and from the surrounding fluid. We want to break open that nucleus, get the nuclear DNA out, and that would be the first step of extraction.

25:35 JG: The second step is what we call quantification, and we're trying to understand how much DNA did we really get out of that bloody cotton swab that was submitted from the crime scene. How much DNA is in there? Because if we know how much DNA there is, then we know how much of the reagents that we need to add in order to replicate that DNA that came out of that nucleus. Right now, we can't visualize, we cannot see the nuclear DNA. It is invisible to the human eye. So, we want to replicate it so that we can have more volume of that nuclear DNA, so that our instruments could actually visualize, and be able to quantify and analyze that DNA profile. So, step one we extract. Step two, we quantify. Step three, we are replicating. Many people may have seen what we call the double helix ladder. And that ladder is made up of the sides and the rungs of the ladder.

26:41 JG: And so when we replicate, we're going to break apart that ladder, the reagents that we know now how much volume we need will be added to either side of the ladder, and so we go from one ladder to two. We go from two ladders to four, four ladders to 16, and onward, and we call that replication. And we are doing that probably 32 cycles. We use a thermal cycler to do that process, and it involves heat. Heat breaks the ladder, then it cools down, we add the reagents, and now we have more ladders. We went from one ladder to two, two to four, four to 16, in a thermal cycle. And that cycle, each cycle does that breaking of the ladder, and then rebuilding the... Doubling the number of ladders. So, step one is extraction, step two is quantitation, step three is replication.

27:40 JG: And then step four is our analyzation item. And it's an instrument that, after we have replicated, that reagent now, that volume of liquid goes into our genetic analyzers. And we have hooked on some fluorescent dyes, and that genetic analyzer then goes through and really analyzes the DNA that's coming through, and can actually give us some valuable information about that DNA. We get DNA from mom and dad, so we are looking at what we call locations of the DNA from the chromosomes, and then we are looking at how many chromosomes and how many partial pieces of that chromosome is going through our genetic analyzer. And that genetic analyzer will give us the number of short tandem repeats, and that's how STRs is defined. What we're looking at, the number of times we have replicated the ladders and how many times those short tandem repeats are going through our instrument. And so that, when we develop a profile, we're looking at a profile that is... The result is numbers, might be 10 or 11, and that means that 10 times we saw a short tandem repeat.

29:05 JG: If you think about a train, and if you think about a number of cars on a train, so we might see three oil tankers and a caboose. That caboose is our fluorescent identifier. But now we've seen three oil tankers attached, and in a length of 100 cars, we want to know how many times have we seen three oil tankers together, And do we see it four times? Do we see it five times? And the number of times that we see that repeat of three oil tankers is how our genetic analyzer is looking at the different locations of our DNA. In this case, we might have seen, five times we saw three sets of oil tankers, five times go through our genetic analyzer, and that would be what we call an allele call of five.

30:00 JG: Most of DNA analysis is all instrument-driven. We use our scientists at the front end, they are going to find that body fluid, they're going to look for the blood, or the saliva, or the semen from a sexual assault kit, and then they're going to go through those four steps. Our scientist is looking for the body fluid, then it goes through the instrumentation steps that I just summarized. And then in their third step is that they're going to start to analyze that DNA. So, they have a profile, we believe it might be the perpetrator, but we want to make sure that it is not the victim's profile. That's where the buccal swabs of our victims come into play. We do the same steps of the buccal swab of a homeowner, the actual victim, maybe other residents of the homeowner, spouses, children, and we're going to eliminate those homeowners from this pool of blood as being the contributor of the blood. Where did that blood come from? Is it victim blood? Or is it the suspect blood?

31:11 JG: So, we always need the elimination standards or swabs, or the buccal swabs from people who might have been at that scene, they lived there, so their DNA would be there automatically, and we would recognize that. We want to do those same steps in repeating that for the homeowners or the victims. And then we're going to get the same kind of electronic results with numbers, and our scientists are going to analyze that electronic data, and decide if that initial blood swab that the crime scene investigator picked up was the victim's or the potential suspect.

31:51 QO: Half the steps you just mentioned, I would have never conceived coming from outside of forensics field. And yet, once again, going back to the CSI effect, they're all part of this process. When you mention going through one sample of DNA for one person, from the collection point to the final analysis point, can you estimate how long, if everything goes according to plan, how long does that take?

32:24 JG: Our instruments in DNA have allowed us to be faster and faster in time-wise. Ten years ago, it might have taken us a good five days to go through the process that I just spoke about. Okay? The instrumentation process. Today, it's taking us about a day and a half to really take one sample through as a rush. And a rush case, of course, is always those high profiles, terrible homicides, and that we are asked to, "Can we get a rush on this?" To, "We might have a stranger danger situation, where we have a unknown suspect running around the community." So, in order for our scientists to be really efficient... And we teach our prosecutors and our law enforcement partners this philosophy, so in order for our scientists to be most efficient, we use batching. On a batch, we want to put 80 samples on that batch, and that 80 samples could be really 20 different cases, if we have four samples per case. At the end of the month, when the scientist is analyzing all 80 samples, then they have been very efficient and productive, and they are getting out 20 cases that month.

33:51 JG: When we have a rush case situation, and we want to do one profile and get that analysis out and report it, that one profile could take us, sure, a day and a half to get through the instruments, but we are still trying to run the other samples of that case. Is it the elimination? The victim's sample? And trying to run those two or three samples, we can do that in a rush over the weekend, and get a report out. And yet then we're not very efficient, Q. We have a huge load, lots of crime going on in our nation, and so we teach our scientists to be very efficient and have really well-developed workflows so that we can maximize our instruments, maximize our staff, and get the most cases out on a regular monthly basis. Ten years ago, it would take us a long time to get four cases done in a month. That's where we were, averaging four cases a month, 10 years ago. Today, we're cranking at 18-22 cases can get out in a month, being really efficient.

35:00 JG: And so we've come a long way in that efficiency, but there are always those crimes that we have to stop the batching and handle an emergency situation over the weekend. A sexual predator might be in our cities, who are attacking women on bike paths or running paths, and so we want to definitely, all hands on deck, get that public safety case in our house, and help law enforcement catch that rapist before he attacks again. That is always, the lab works hand-in-hand with the local jurisdictions and the local police departments so that we can help solve these cases, and not have that offender assault another woman in the next 16 hours.

35:44 QO: Now, one of the common techniques that we're hearing about more often now in the news is the sexual assault kit. And you brought it up yourself a few moments ago. Can you tell us about these, and how they are used in court as evidence?

36:00 JG: The sexual assault movement has really been awesome to really bring attention to this terrible crime, and helping our victims come forward and not be afraid, and that law enforcement has a much better understanding of the type of mental distress that our victims go through. So, the sex assault movement across the nation has been really a great thing for our country, and getting all these sex assault kits into our laboratory, so that we can analyze them, has really been a great thing. The concern, of course, is that some of our jurisdictions in our laboratories cannot handle that load and that influx, and there's always a need for more scientists to look at these sex assault kits. But that kit is invaluable, especially when we have a... Two types of sex assaults. When we have a stranger sex assault, like I referred to earlier, a rapist who was out on attacking women on bike paths or grabbing them at grocery stores and kidnapping them. Those are the stranger ones, where we don't have any idea.

37:14 JG: The second category are what we call, for lack of a better term, our traveling suspects

who are white-collar, professional, well-behaved, well-mannered, and there's a blind date to whatever may occur, and the woman says "no," and it's a he said, she said. He says that she said "yes," and she says that she said "no." And a lot of times our prosecutors say, "Well, we know the identity of this individual. He's John Smith. We know that. So why do we need it to go to the crime laboratory?" And really the biggest concern is that, because John Smith is admitting that they had sexual relations, and John Smith says it was consensual, that oftentimes, that kit and that male profile doesn't get into our national database or into CODIS.

38:14 JG: And then when it does, when those kits do come in to us for analysis, even though we know the identity of that man, the question on the table, "Is he a serial perpetrator?" And more often than not, unfortunately, this individual, John Smith, has been in another state, another part of the state, across the country, and being this well-mannered professional individual, who is also a sexual predator. And then we can connect John Smith to all the other cases that he may have committed, these types of sexual assaults, across the nation. And that really has been the benefit of trying to really use the tools, like our national CODIS database, to really connect our perpetrators who are roaming state to state, and community to community.

39:12 QO: You mentioned one of the barriers being the sheer volume of these kits when they come to agencies. Are there other barriers in examining these kits, or is that the main barrier that someone at the leadership level, like yourself, is preoccupied with?

39:32 JG: Well, a lot of times, again, it starts at the ground level. The victim goes to the hospital and is hopefully looked at, and medical attention given by a trained sex assault nurse examiner. SANE nurses are invaluable to bringing some calm to that victim, explaining the process, why we want to do that sex assault kit. And the nurses there are awesome. A lot of attention has been done in trainings with our local police departments to understand that the mental and PTSD potentials that those victims are going through. So, we want to keep continuously educating our law enforcement partners that this is a crime, and we want to be able to have that physical evidence, that sex assault kit come to the laboratory. And a lot of times it just starts at that ground level, that first interview that the victim may have with a detective, whether it's male or female, that the empathy that needs to be exhibited to give her trust in letting go of the facts of what has happened to her, whether it was the night before or that afternoon. And being able to have that trust with our law enforcement professionals, to be able to get the facts of the case out and let that be the information that the forensic scientists would use, and assist in them analyzing these kits.

41:06 JG: So, there's many partners in this, in helping. And sometimes there are barriers. We're trying to knock down those barriers. There are rural communities around. Especially in Colorado, we have rural communities that do not have sex assault nurse examiners, and do not have the proper medical attention for the victims that may be in rural America. And so that has been a barrier in getting to those victims, and giving them proper... Not only just medical attention, but the proper understanding of how the crime of sex assault can affect them, and why we need the sex assault kits and the rape kit done.

41:50 QO: You mentioned small and rural agencies in having to deal with obviously limited resources, not just for all forms of law enforcement but also for forensics. And compared to, once again pulling in the CSI effect, where often we're shown large policing departments with more resources, that obviously have their own limitations and have their own finite resources, but that is often contrasted with the reality that a lot of law enforcement departments throughout the country

are smaller and rural. What are some common ways in which those agencies maximize or optimize the resources that they have for forensics?

42:37 JG: True. I think, Q, there's two parts to that answer. And the first experience is at the hospitals. Our hospital administrators, we want them to recognize that if they could partner with a sister hospital that is larger, and be able to help when they do have a sex assault victim, that they can contact a bigger hospital that may be an hour away, but they could have those SANE nurses that might be in the bigger hospitals, could partner with them, and help them, and call them, and for them to travel to the victim, they might be in a... These smaller clinics, these smaller emergency rooms that are popping up around the nation, and not all of those little clinics have a trained nurse. So, if hospitals would partner, and a lot of communities do have these partnerships set up, would partner with a bigger... The closest big city, where a SANE nurse might be on call, and would travel that hour at 2:00 AM to help with the victims. A lot of trained SANE nurses and forensic nurses associations, they are committed to and dedicated to helping these victims. And they do in Colorado, they travel, they're on call, they have these hospital partnerships with those nurses.

44:00 JG: The same is with the law enforcement communities. Coming from Chicago and out to Colorado, you recognize that there are smaller departments that have maybe two or three law enforcement professionals in that police department. And so they, too, here in Colorado, have great partnerships with larger agencies, they can call the state, our state agency, our detectives would come out, and our agents would come out and assist. And so they, too, have to partner with larger agencies and to help really look at what is going on, in this case, at the hospital, and be able to help get a seasoned sex assault investigator to help interview that victim, along with the SANE nurses, and to really create that trust between the law enforcement professional and that sex assault victim. But it's all about collaboration and partnerships, and the local law enforcement is really pretty good at creating all those partnerships.

45:05 QO: Given your experience at the Colorado Bureau of Investigation, can you highlight some programs or initiatives that you are most proud of?

45:15 JG: Oh, we have... Our agency is very dynamic with some of these things, and we have great victim advocate programs between the Colorado Bureau of Investigation and our parent company, the Department of Public Safety, we have a great advocate program where our victims will go out on some of these really terrible crimes that have occurred. And our advocates will go out and spend time with these victims, and help them through the process. And that is truly a program that we have started here that's been very, very successful. In Colorado, we had some model legislation about sex assault back in 2013, about not only analyzing the un-submitted cases in law enforcement vaults that never came to the lab, but ensuring that those backlogs and un-submitted cases never piled up again, by having mandatory submission of all sex assault kits to our laboratories across the state. And that legislation has been modeled in many other states across the country since 2013. So, we're very proud of that, in being a part of that movement. And in our General Assembly at the time, it was passed 200-and-something to zero, and it was very, very successful here in Colorado, and we're very appreciative of that legislation in 2013. So, that legislation, our Victim Advocate Program has been really awesome for the CBI.

46:52 QO: I guess, looking back at everything that we've talked about, our audience may be either experts on this, just like you, or they may be closer to me, where a lot of this is something that makes sense, but it's not something that... The details are not something that, even after this

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conversation, there's still a lot, obviously a lot of stuff that I don't know. If you wanted to give our audience one big takeaway when it comes to forensics work, and its relationship with law enforcement and criminal justice, what would be that takeaway?

47:28 JG: Well, I believe that we are all partners. I believe, if you think about a triangle, that we are locked in together at the hip in solving crime. Our law enforcement professionals are our first responders, our rapid response to crime occurring, and 911 calls, they collect that evidence, and then the other... The second prong of the triangle is our forensic industry. And then the third prong, of course, is the criminal justice, the entity of the trial and the courtroom activities. I really think that we really are a triangle, and a triad partner in solving our crime in our local communities and in our nation, and that we all are in this together. It's a true collaboration, and we work together, and our prosecutors and even public defenders will come to the lab, will help educate them on how our instruments work and how our science works so that it is a better courtroom experience for all involved. But it is true, a true partnership between the three of us, in helping to solve crime in our communities.

48:42 QO: Jan, I want to thank so much for being part of the podcast, and for taking the time to walk through this very interesting but definitely complex subject with us.

48:53 JG: Q, I can't thank you enough for the invite. I certainly... People who know me know I can talk forensics forever, and it's been a pleasure sharing the knowledge on this podcast with you, and it's been an honor. Thank you so much.

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49:11 QO: Again, I want to thank my guest, Deputy Director Janet Girten, for taking the time to share with us her experience and her expertise in the field of forensics. And I wanna thank you for tuning in for this episode. Also, thank you to the U.S. Department of Justice's COPS Office for their support in this episode. Please see the show notes to learn more about the COPS Office, and follow their work. We will also provide you links to any relevant IACP resources on forensics. Feel free to email us with any comments or suggestions at discoverpolicing@theiacp.org.

49:48 QO: For this episode, I had a research and production help from Elynn Lee. This project was supported, in whole or in part, by Cooperative Agreement Number 2017CKWXXK004, awarded by the U.S. Department of Justice, Office of Community Oriented Policing Services. And as always, the opinions contained herein are those of the speakers, and do not represent the official position or policies of the U.S. Department of Justice. References to specific individuals, agencies, companies, products, or services should not be considered an endorsement by the speakers, the IACP, or the U.S. Department of Justice. Rather, the references are illustrations to supplement discussion of the issues. Thank you.

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