

## Just Improving Sexual Assault Kit Testing Workflows

**Intro** [00:00:01] RTI International's Justice Practice Area presents Justice Science.

**Intro** [00:00:13] Welcome to Just Science, a podcast for justice professionals and anyone interested in learning more about forensic science, innovative technology, current research, and actionable strategies to improve the criminal justice system. In episode one of our Sexual Assault Awareness Month season, Just Science sat down with Jody West, the forensic science manager for the forensic biology section at the North Carolina State Crime Laboratory, and Dr. Patricia Melton, a senior research Forensic Social Scientist at RTI International. Discuss resources aimed to help Forensic Science Service Providers increase the efficiency and cost-effectiveness of sexual assault kit testing. Among Forensics Science Service providers, there's a variability in how they approach testing sexual assault kits. Some conduct serology testing of samples before moving to DNA testing, while others forego initial serology for direct-to-DNA approach. Because each processing workflow has distinct costs and benefits, The National Institute of Justice's Forensic Technology Center of Excellence has developed a no-cost tool that helps forensic science service providers decide on and advocate for an approach that is efficient and feasible considering their available resources and needs. Listen along as Jody and Dr. Melton describe the varied approaches to processing workflows in the field, the challenges that forensic science service providers face when transitioning from one workflow to another, and how the FTCOE's cost-benefit analysis tool for labor expenditure associated with sexual assault kit processing workflows can foster important conversations about improving sexual assault kit testing workflows. This episode is funded by the National Institute of Justice's Forensic Technology Center of Excellence. Some content in this podcast may be considered sensitive and may evoke emotional responses or may not be appropriate for younger audiences. Here's your host, Mikalaa Martin.

**Mikalaa Martin** [00:01:58] Hello, and welcome to Just Science. I'm your host, Mikalaa Martin, with the Forensic Technology Center of Excellence, a program of the National Institute of Justice. April is Sexual Assault Awareness Month, and we'll be covering emerging topics in the realm of sexual assault response reform. On today's episode, we will discuss a cost-benefit analysis tool for improving sexual assault kit testing workflows. To guide us in today's conversation, I'm joined by our guest, Jody West, the Forensic Science Manager for the Forensic Biology section at the North Carolina State Crime Laboratory, and Dr. Patricia Melton, a Senior Research Forensics Social Scientist at RTI International. Welcome to Just Science, Jodi and Patti. We appreciate you taking out the time to be with us today.

**Dr. Patricia Melton** [00:02:45] Thank you for having me.

**Jody West** [00:02:46] Thank you for having me.

**Mikalaa Martin** [00:02:47] So to kick off today's episode, I'd love for you both to share a bit about yourselves and your professional journey to where you are today. Jodi, would you mind getting us started?

**Jody West** [00:02:56] My first exposure to forensics was an internship that I had there my college years at the crime lab here in North Carolina. That was in 2002. So there my internship, I got some general exposure to the field of forensics. It wasn't something that was really on my career radar. But once I got exposed to it and saw some of the ins and outs of what happens in the crime laboratory, it definitely piqued my interest. So toward the

end of my internship program, I was offered a contract position as a technician within the forensic biology section, essentially. So I began that portion of my career in 2003. Fast forward a few years. I then transitioned into a supervisor within the forensic biology section where I supervise a team of analysts who also perform casework. 2014 I then took another transition. I transitioned into the section manager and my primary role and responsibilities for as the section manager were to oversee the day-to-day operations of the forensic biologist section. I spent that role for about 10 and a half years and just recently as of a couple weeks ago transitioned into a new role within the laboratory system as a laboratory grants manager.

**Mikalaa Martin** [00:03:52] Thank you for sharing, Jodi, and congratulations on your new tour and decision. And Patti, can you share a little bit about your journey as well to where you are today?

**Dr. Patricia Melton** [00:04:01] So, my PhD is in genetics. And at that time, back in the dark ages, when I started my career in forensic science, we didn't have the feedback accredited processes. It was interesting trying to get my foot in the door into the crime laboratory sector because I don't think people really knew what to do with it. So I actually landed first at the Armed Forces DNA Identification Laboratory, where I had just started and then September 11 happened. And so AFDIL was one of the primary laboratories to work the Pentagon and the Somerset cases from that incident. So I spent several years at AFDIL in human identification work and then transitioned over to the crime laboratory sector up in Maryland as a Baltimore County PD in lab there for several years performing sexual assault cases, homicides, property crimes, you know, those types of things and testifying to those results. But I left the crime laboratory sector, believe it or not, about a decade ago now and landed here at RTI International. And here in this particular role, I spend my time primarily trying to bridge the gap between what happens in research and to practitioners. So the bulk of my work is associated with creating best practices and helping to implement those best practices. So that could involve training, technical assistance, workshop construction, educational platforms. But basically, having come from the crime laboratory sector, I know what it's like. The folks are inundated with casework. It is the font that never turns off. In fact, if anything, it only increases. As the technology gets better, so do the demands. And so what I find rewarding about the work that I do here at RTI International is really bringing in together, recognizing that we know, as practitioners, You don't have the time to figure out some of these things, but we can. And so we can really help bridge that gap and help you take the most advantage of technology that's out there, creates sustainable processes, and hopefully more efficient processes as

**Mikalaa Martin** [00:05:53] Thank you, Patty, and we're lucky to have you and your experiences here at RTI. So to provide some context for our listeners, Jodi, can you provide an overview of the North Carolina State Crime Laboratory, including the services that you provide and then the general structure of the laboratory as well?

**Jody West** [00:06:10] North Carolina State Crime Laboratory, we are a multi laboratory state system. So we have three laboratories throughout our state. We have our central laboratory here in Raleigh, which is the state capital of North Carolina. Then we have two satellite laboratories, one of which is that we call it our Triad Laboratory, which in the Greensboro area, which about an hour and a half west of Raleigh. Then, we have our Western Laboratory, in a small town called Edneville, which is about three and a four hours west of our mountains. The three labs together are of our system. The Raleigh Laboratory is considered a full-service laboratory, so we have all the forensic disciplines to include firearms, digital evidence, latent evidence, forensic biology, trace evidence, drug

chemistry, and toxicology. And then our Tri Laboratory, which is one of our satellite labs, has latent evidence drug, chemistry, toxicology, and then our Western Laboratory has latent-evidence, forensic-biology, drug-chemistry, and-toxicology. So in total, the three laboratory system, we serve hundreds of all course agencies throughout our state across all 100 counties in our state. So we have, as Dr. Melton mentioned, we have plenty of work that comes into our laboratory on an annual basis.

**Mikalaa Martin** [00:07:12] Thank you, Jodi. And one other kind of follow-up question that I have is do you know off the top of your head how many staff members are employed for the forensic biology sections?

**Jody West** [00:07:22] In our western laboratory there are nine forensic biology positions and then in the Raleigh laboratory there about 25 total forensic biology positions.

**Mikalaa Martin** [00:07:31] Perfect, thank you. And I'd like to frame our discussion around the varied workflow approaches that laboratories may employ when processing evidence from sexual assault kits. Patti, can you provide some background on these varied processing workflows? So.

**Dr. Patricia Melton** [00:07:46] And in a nutshell, I would say that I would divide the workflows between those that conduct serology screening and those that don't. So let's start there. Let's kind of make two buckets. Those that are using serology, screening and those that are using what we call a direct to DNA approach. Laboratories might call it something a little bit different, but in the serology screening side of the house, this is where serology is done first as a first triage on samples. Now serology is not DNA testing. Many other people listening to this podcast probably know that, but for those who don't, serology is actually looking at biological fluids, presence or absence of biological fluids and using that information to then make a judgment or an assessment on what samples could go forward for DNA testing. So you're looking at something a little bit differently there. Often serology screening or the serology step is what we kind of call red light, green light, or could potentially be a hard stop. After the serology testing is done, when that evaluation is completed, some samples or samples in the sexual assault kit, for example, may not move forward for DNA testing at all. But if they do move forward, for DNA, testing, that's when the DNA extraction process takes place in this normal DNA analysis process takes. Now, within this bucket of doing serology first, before moving on to DNA testing, you can have a process where a certain number of samples that meet the serology screening criteria are moved forward for the DNA testing. Like perhaps is three. We're going to take the top three or we take the top five. A laboratory can use their discretion and their validation studies to determine how many they want to move forward. The other side of the coin to that is something called continuous sampling. And what we mean by that is that although you might take your first top three serology samples and move them forward for DNA, perhaps in that DNA testing process, the results aren't as great as you expected. Maybe there's some complications there, things like degradation and inhibition terms that make us DNA analysis cringe just a little bit, because we know that implies additional work and additional analysis. Not that we don't mind the work, but it's just more complicated. But in continuous sampling, if those initial DNA testing samples do not yield an informative DNA profile or a CODIS eligible profile, then we go back. We go back to that sexual assault kit. We say, okay, I have those serology samples, took our top three, what else was there? What else could we try? So this continuous sampling process means you keep going back until you either one, get a CODIS eligible profile, or two, exhaust the samples and evidence that's available to you. So that's kind of the first bucket. Second bucket is no serology is conducted. So we're going right to DNA. So we are taking those samples,

we're gonna go ahead and just extract the DNA based on what we see in the sexual assault kit, move it forward, see what we get. And again, the prime laboratory may decide that the best thing to do is I'm gonna look through the sexual salt kit, I'm evaluating the evidence that's in here, and I'm gonna take the top three. This is my top three, and we move it forward for DNA. If they get a CODIS eligible profile, great. If they don't, again, they can either stop, depending on their policy, or go to something that we call continuous sampling. So yet again, we go back to the sexual assault, can we say, okay, my top 3 didn't yield anything probative, I didn't get a CoDIS-eligible profile, I don't have enough information to move this case forward. Let me see, what other samples did I have? Could there be something more I could do? This continuous sampling process is, in my opinion, ideal, but also time consuming and complicated for the laboratory to implement. Now, just to throw a little monkey wrench into everything there, because it sounded so nice and neat, right? Two buckets, serology, then DNA, or no serology right to DNA. Some laboratories who are moving right to DNA who skip that serology step, do keep serology testing online in the event that a prosecutor's office comes back and says, well, this is great. You got me a DNA profile. That's wonderful. But what biological fluid did it come from? I need that for my case. They can always go back and do the serology at that point. And it's very effective to do that and helps kind of keep everybody in your multidisciplinary team happy with what you can provide to them to best support their case.

**Mikalaa Martin** [00:11:48] And Jodi, so to tie this back to North Carolina State Crime Laboratory, you guys have been using direct to DNA approach for processing sexual assault kits since 2018. Can you tell us a little bit about the former processing workflow that was utilized, what prompted the transition to direct to dna, and then the general experience of transitioning that processing approach?

**Jody West** [00:12:11] Yes. So like Dr. Melton mentioned, we had a previous workflow prior to direct to DNA, which was, I guess, your more traditional workflow in the laboratory where we would do the serology screen upfront. That would guide us what samples would move forward to DNA. So like Dr Melton said, we'd do it on the front end. So we would typically do your typical serology testing first, whether it be the AP tests or acid phosphatase test is this main screen tool for semen testing. And then we'd follow it up with microscopic examination for confirmation needed in those samples that would confirm and say the presence semen on would then move forward most of the time to DNA testing. So that was our traditional workflow. We were very much segmented where we had a group of analysts who were just serology tests, did the serology testing, then we would pass it on to the group of analysts who would do the DNA testing, so that was our historical workflow. Then we decided to move forward with some different testing or direct to DNA approach. I would liken it back to our DNA testing at that point in time. Historically, a lot of our DNA extractions were done manually without the use of robotics, which was definitely a time-consuming process, but we did, in 2014, implement some robotics into our extraction process, which definitely made our process more efficient. Well, at the same time, our differential extractions, even after the robotics introduction, our differential extractions where that separation was still by manual process. So, we introduced some technology and made it more efficient, but, we still had a manual differential process in place. So in 2018, we did implement a direct-to-DNA approach and testing sexual assaults in our laboratory. We had heard about the concepts of directed DNA in professional conferences and in literature and presentations we've seen over the years prior. So we wanted to begin to explore that as an option in our laboratory. And many times along the lines with directed DNA approach, you have laboratories that have some sort of Y screening process or YSTR screening process in place. And we looked at different vendor options and we didn't really like the options that were available to us at the time. We're looking for something

that we can help streamline our workflow where we could essentially go one way, a direct one way flow of the evidence in our laboratory versus having to circle back to the original evidence multiple times. So we ultimately decided not to implement a Y screening process initially in our directed DNA approach. So we did ultimately decide to implement the directed DNA approach and eliminate the serology testing or serology screening on the front end. When we were processing our sexual assault kits, we felt like this was a much more effective and efficient process and literally leveraging the DNA technology, which is far more sensitive than the serology technology as the main screening tool versus the serological testing. So when we did implement the direct-to-denial process, we at the same time brought online additional automation that helped with the differential process. So we essentially automated that manual differential process at the time, which definitely added some increased efficiencies in our processing. So that was the technology we implemented. So we also looked at and reached out to other laboratories who already had a direct-denial process in place. We kind of get their ideas of how they designed their workflow in the laboratory, how they categorized certain case types over the others. So we ultimately found some models that we liked and we implemented our categorized sexual assault cases into two different categories depending upon the number of contributors that were potentially involved in the case. So that helped us kind of triage how to treat certain cases over the other. It kind of helped us make some more informed decisions about how many samples we would take forward after the quantitation step. We implemented a model and we put it in place and we just went with it. It was definitely transition period for us. It definitely had its challenges at times. Some of the challenges are coming from internally. We have analysts in the laboratory with many years of experience, including myself being one of them. Their career was started in the serology field and just they did serology for years and taking the serology away from them kind of felt like they're losing part of themselves along with it. That definitely had some internal challenges we faced, but it's kind of helping everybody see the bigger picture where we could process more sexual assaults and doing it in a much more efficient manner by using the DNA technology versus the traditional methods. At the same time, we also have some challenges communicating to our external stakeholders because we do work in the laboratory, implement technologies in the laboratories, but then we also had to worry about the end product or end users. So that's going to be our law enforcement agencies as well as our district attorneys. We're the ones ultimately in charge with prosecuting and taking these cases forward to court. We did provide some training opportunities to our district attorney's ahead of time to kind of let them know, hey, this is coming. We're implementing these changes. These are the reasons why. And for us, we had the NIJ had published a publication that kind of laid this out as a preferred method or the best method to move forward testing sexual assaults. And we also had in the DNA community, we have our SWGNAM guidelines that were implemented or put out there as well that had a similar theme where direct DNA is a preferred and much more effective in processing and processing sexual assault kits. So we use this information and put it out there to our stakeholders to try and get some buy-in to it. And overall, I think it was a very effective change and very great benefits for our laboratory as well as our criminal justice system to have this process in place so that we can get these kids tested in a much more efficient manner. So also kind of piggyback on what Dr. Melton said, while we took the serology portion testing out of our workflow, we do still have the ability to do serology testing in our laboratory. So if I say a handful of cases a year, we'll get a request from the district attorney's office to go back and do some additional serology, testing as needed on some cases as they're preparing for trial, where we have a profile that may have been uploaded to CODIS or may have had a profile, that matched a person of interest in a case, but they wanted some additional information to kind of tie things together for the jury. Where did that DNA come from? So

what source or what body fluid did it come from? We do have the ability in our lab and do it on occasion to go back and do the serology testing as needed after the DNA testing

**Mikalaa Martin** [00:17:39] Thank you, Jodi. I appreciate all that information, and I really like your theme of really relying on the community of practice and leaning on early adopters, other laboratory systems. I know that you mentioned you looked around at the models and essentially you landed on a model that was implemented in 2018. I am curious, were there any modifications that have been made since the initial implementation of that model in 2018?

**Jody West** [00:18:02] And yes, we have made some modifications to our process. Well, we implemented a direct DNA process in 2018. We all realize it wasn't the end product. It wasn't where exactly we wanted it to be. And we knew that there were some efficiencies and different changes we can make down the road with the hopes of a wide screening process becoming available that we like to fit our workflow. So in 2022, we did indeed establish a wide screening process that allowed us to essentially direct AMP from the actual lysate from the original samples and to help us skip the DNA extraction process in a large number of our sexual assault kit samples. So that is something that we've implemented, like I said, in 2022. And over time, we've also made some tweaks here and there to our process. So we're always looking for areas of improvement, areas in which we can improve our process and make things more efficient. As new technologies come about or as in practice, we learn more about our cases and learn more how they function in our laboratory, we make more informed decisions as we go along the way in the process. So yes, we have made some modifications to our

**Mikalaa Martin** [00:18:58] And Jodi, would you be able to talk a little bit more about some of the information and the key considerations that really drove the laboratory to consider transitioning their processing workflow?

**Jody West** [00:19:10] When we were planning or looking at different models of direct-to-DNA approaches, we're doing that in considering what the information we were seeing and hearing from throughout the forensic community as it relates to sexual assault kit testing and particularly backlogs that were being identified in states throughout the country, as well as legislation that was being adopted in some states mandating the testing of sexual assault kits. While at the time we did not have any kind of legislation in our state or nor did we really truly know what our backlog of untested kits were, we were trying take a proactive approach and try to get ahead of anything that could be coming our way and try to make our laboratory processes as efficient as possible in case we saw an increased submission of kits coming our in the future. In 2019, we did have legislation that was adopted in our state that mandated the testing of all sexual assault kits. And once that legislation passed, we didn't see a dramatic increase in sexual assault kit missions in our laboratory. So the fact that we were proactive and adopted a direct DNA approach prior to this passing, it did help to a point making our processes efficient and laboratory and being able to test more sexual assault kits than we had previously.

**Mikalaa Martin** [00:20:13] Thank you, Jody. And one other thing that had stood out to me in your former answer was the end user training when you were making that transition. Could you talk a little bit more about the training that was provided for your end users when you're bringing that process online?

**Jody West** [00:20:28] Yes, as a laboratory, we try to communicate to our stakeholders as frequently as possible. Like I said in my introduction, we serve 100 counties in our state,

and that includes hundreds of different law enforcement agencies and dozens of different district attorney's offices throughout our state. So communication to stakeholders is critical. So we try anytime there's any significant changes coming along to our technologies or to maybe what the end result will look like or end results look like, we tried to communicate those changes ahead of time so that people can be aware of what's coming. There were several instances in which we were able to meet with district attorneys at their annual conferences to provide them some information and literature about here's what's coming, here's some different references that are available that we model our technologies after. So the upfront communication is critical. Now, just because we have communicated that to our stakeholders upfront, doesn't mean that we haven't had to continue to update them along the way. Cause many times the case takes a couple of years, two, three years to actually make it to trial. So they might not remember what we necessarily said or provided them through two or three years prior as far as technology. So it's not a one-time thing. It's something that's a continual communication with our stakeholders and hey, here's our changes. And here's some challenges you may face in court or some questions that may pop up. But to keep that open lines of communication between the two entities is very important.

**Mikalaa Martin** [00:21:40] That's wonderful. Thank you, Jodi. So let's dive into discussing the Forensic Technology Center of Excellence's Cost-Benefit Analysis Tool for Labor Expenditure associated with Sexual Assault Kit processing workflows. Patti, as a core member of the Tools Development Team, could you provide an overview of this resource and its aims?

**Dr. Patricia Melton** [00:22:00] So this tool was originally developed because, you know, you can tell from listening to what Jody's been talking about from their experience in the crime lab. Whenever you're making these large changes in workflows, there's a lot of discussion to take place. Some of those discussions are based around financial restraints, quite honestly. And so how do we figure out a way to have those types of conversations? How much resources, whether that be fiscal resources or personnel in an already tightly conserved system be shifted to what's probably a front-end investment for hopefully a long-term return on investment? But when you're talking about finances in a constrained system, that's a hard conversation to have, right? So what this tool does is a freely available tool. It's on the Forensic Technology Center of Excellence website. So anyone can access it. And it does require you to put in some labor salary type inputs from your crime laboratory. It's not a huge lift. It should be information that a crime laboratory representative has relatively easy access to. So if you are a crime laboratory that is doing one of the serology workflows and you're looking to say, well, as Jodi mentioned, this is a national recommendation to move to a directed DNA approach. We see the value in it even, but what's it going to cost us to get us there? And how are we going to the cape for that type of funding. What's really involved? What are we really looking at here from that fiscal standpoint? So this tool allows you to put in some inputs depending on the type of workflow that you're already in and what workflow do you want to go to and basically number chugs for you. And it produces a report that you can use to have a conversation with other key stakeholders like state legislators, for example, to say, this is the best we can do for sexual assault victims in our community. We should move to this new workflow approach. But it is going to have an investment on the front end. We're going to need to do some changes and these changes are roughly going to cost X amount of dollars. But then coming on the other side, we expect a return on investment that looks like X, for example. So it really helps facilitate those conversations. It doesn't break down a lot of the deeper nuances like Jodi was referring to. Those are components that are going to come out as you make your shift, but it helps start that process so that when start to think about as a

crime laboratory, what are all the things I need to think about to make this transition, to make this change, if this tool helps you start that conversation and helps cue you into a more effective process for thinking about and deriving solutions to those other nuances. So it's intended to be a helpful get start, but certainly not the deeper dive, because those nuances that Joey talked about, for example, looks like a certain way in his laboratory, but those nuances could look very different in another type of laboratory. But again, it's to help assist with going to what is a national best practice of a direct to DNA approach.

**Mikalaa Martin** [00:24:48] And this tool has been out since 2022, but recently had a facelift that just went live last month. Patty, could you talk a little bit about the updates that have been made to the tool?

**Dr. Patricia Melton** [00:25:00] Primarily, the updates made to the tool, the facelift that you refer to, really enhances the user end experience, right? It makes it a little bit more intuitive to use, a little easier to use and it guides you through the inputs of the tool in a much more concise manner, which I really appreciate. I haven't been on the developing end. When you look at something a million times, it makes perfect sense to you. Then, of course, when you put it out there and someone looks at it for the first time, there's a lot of questions that come up. So those were addressed as best that they could. But this upgrade, this new facelift, really helps guide the user through and really improves the user experience. It makes the tool much easier to use. Also the report that it generates, in my opinion, is also easier to interpret.

**Mikalaa Martin** [00:25:37] And Jody, you and your colleagues were integral members in helping inform the development of this tool all the way back in 2022. Can you share any highlights from your involvement in building the ground up for this resource?

**Jody West** [00:25:51] So in 2022, we were asked to complete a questionnaire as it relates to sexual assault kit testing within our laboratory. The questionnaire contained several different metrics and inputs that we needed to provide that can kind of help guide the development of the cost benefit tool for this processing method. So our laboratory provided the metrics that were requested. Those metrics could include things about salary of different levels of analysts within our laboratories as well as the number of cases that we would typically receive in a year, as well a number of case that we typically would complete in a and then within that further dive into the metrics we were then asked to provide certain information as it relates to each step of the laboratory process and how long it takes to do certain tasks and how many samples would be moving along in different parts of the process. So we completed the questionnaire and then the questionnaire looking at the way the questionnaire was originally structured it looks very similar to where the calls tool is now that we see and that is available for use now.

**Mikalaa Martin** [00:26:43] Thank you, Jody. And as a follow up, do you see your laboratory using this resource in the future to assist with any additional workflow, budget, or internal cost benefit analysis considerations?

**Jody West** [00:26:55] I definitely do. This tool is something that's definitely can be very useful in helping budgeting and planning for the future. It's definitely when you can put numbers to things about how much things cost because there are financial constraints that you always have to be aware of. I mean, it's definitely a very useful tool and I can definitely see our laboratory benefiting from using it in the future



**Mikalaa Martin** [00:27:14] That's great to hear. And we are very thankful to have you involved in the development of the tool as well. And Patty, kind of same question on your end. Moving forward, how do you envision this resource impacting the field or assisting in sexual assault response reform? What do you think may be next on the horizon?

**Dr. Patricia Melton** [00:27:32] I think for this particular tool, what I do like about it is the original design, again, was for a crime laboratory to work their way through making that big change from a serology-based workflow to a direct-to-DNA-based workflow. But as Jodi mentioned, the tool can actually be used for other nuances as you evolve your workflow processes in the crime lab, which is important. Considering the new technologies that keep coming out, forensic DNA analysis is one of the most fastest moving technology fields out there. It can be, quite frankly, exhausting for a crime laboratory to keep up with it. And the demands are incredibly hot. So I think that this tool does help with planning for the future or looking freely available. Take it, generate your report for whatever nuance you're looking at. Saves time for the crime laboratory to make some of those assessments. And you can take that information up to your leadership or to your committee meetings so that you can more appropriately plan for what needs to happen in the future. As far as what's on the horizon, I think that I remain excited about sexual assault response reform in our nation. I think the strides that we have taken as a nation over the last couple of decades have been incredibly important. We continue to evolve, we continue to strive for best practices, national recommendations, and efficiencies that help support our communities by improving public safety, but also supporting our members of sexual violence. And the ripple effect of sexual violence is massive. We're not just talking about an individual sexual assault survivor, right? That crime against them impacts members of their family and members of the community. Again, the ripples are massive. So I do remain excited that we continue to have a national focus on addressing sexual violence. I think that it's important to public safety. And I really appreciate the emerging research that has come out with sexual violence, we understand so much more about these types of offenders and the types of other types of crimes they're committing. It's easier to say what we all knew, anecdotally, but now we have the evidence base to support the fact that if you apprehend early on sexual assault predators and offenders, you're preventing additional violent crimes. And I think that's an important message for public safety.

**Mikalaa Martin** [00:29:44] Thank you, Patty. And I think you brought it full circle. I know, Jody, you said your laboratory relied on looking at some of the national best practices. So it's kind of this ecosystem of the more we learn, the more can put out to help laboratories grow and evolve their processes. Jody do you have any lessons learned or insights that you'd like to share with other laboratory systems that may be interested in transitioning their sexual assault kit evidence processing workflow to one that involves a direct-to-DNA approach.

**Jody West** [00:30:15] Yeah, because like I said previously, be sure to communicate the needs for change or the factors that are driving the need for change with your stakeholders and listen to what the community is saying, what other people are doing in the community, because we're not in this alone. Every lab has the same challenges as far as workload and trying to keep up with the demand. But I don't think you can communicate the need change or information with your stakeholders enough. I think it's something that you constantly have to do, constantly work on communicating those needs and the reasons for the change with their stakeholders. From a laboratory's perspective, when making work changes or workflow changes, understand that the initial change or modification you made to a procedure isn't necessarily going to be the perfect end state. There's always going to be ways you can change or improve along the way and that's okay. Small changes along

the way are something that's maybe necessary and needed. Don't try to develop the perfect process initially because time can go by and you can waste time and may never find that perfect state to begin with. Just get started on something and then make changes as you go as you learn more information or learn more things, get more experience in the process, make those changes as necessary along the way, and that's okay.

**Mikalaa Martin** [00:31:14] Wonderful, and as we near the end of our time together, do you guys have any final thoughts you'd like to share with our listeners before we wrap up today's episode? And Patty, I'll pass it over to you for any final thought, final takeaways.

**Dr. Patricia Melton** [00:31:28] I really want to thank everyone in the community, you know, Jody and his team at the crime laboratory, all the crime laboratories and investigators, advocates, and district attorneys, prosecutors who worked. So diligently to address sexual violence in our communities. As Sexual Assault Awareness Month for April, I just wanna say thank you. And I appreciate all of the efforts and I appreciate the continuous process of trying to fine tune and improve and always looking onto that next horizon as to what could be our best approach, what could make us better. So thank you for all that you're doing.

**Mikalaa Martin** [00:32:00] And Jodi, any final thoughts or takeaways to share with our listeners today?

**Jody West** [00:32:05] I would like to give a thank you to our crime laboratory staff here in our laboratory that have worked diligently over the years to play a small part in the sexual assault kit process and the testing initiatives that are out there. I would just join other crime laboratories out there and say thank you too organizations like RTI who are out helping push the information out there, providing the resources to the crime laboratories like us who, Dr. Melton said previously, we're limited in our time and resources. Having tools that are developed for us to use is something that's a great benefit to our laboratories and we appreciate it.

**Mikalaa Martin** [00:32:33] Well, it has been a pleasure talking with you both today, Jodi and Patti. I truly appreciate your time for sharing your expertise with us. Thank you for having me.

**Jody West** [00:32:43] Thank you for having me as well.

**Mikalaa Martin** [00:32:44] If you enjoyed today's episode, be sure to like and follow JustScience on your platform of choice. For more information on today's topic and resources in the Forensic Science field, visit [Forensicoe.org](https://forensicoe.org). I'm Mikayla Martin, and this has been another episode of JustScienc.

**Outro** [00:33:03] Next week, Just Science sits down with Regina Wells and Whitney Collins of the Kentucky State Police Central Forensic Laboratory to discuss a pilot study that evaluated the use of rapid DNA for sexual assault kit testing. Opinions or points of views expressed in this podcast represent a consensus of the authors and do not necessarily represent the official position or policies of its funding.