The Doctor of Clinical Laboratory Science in Practice: A Survey of Workforce Roles, Responsibilities, and Integration

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Guest: Dr. Melody Nelson is a Clinical Assistant Professor at the University of Kansas Medical Center and serves as the Assistant Director for the Core Laboratory and Section Director of Point of Care Services.

Randye Kaye: Hello, and welcome to this edition of *JALM* Talk from *The Journal of Applied Laboratory Medicine*, a publication of the Association for Diagnostics & Laboratory Medicine. I'm your host, Randye Kaye. In 2014, the Doctor of Clinical Laboratory Science (DCLS) degree was established to create a termina,l advanced-practice doctorate for medical laboratory scientists who wanted to further their careers in laboratory medicine to function as diagnosticians and clinical consultants in frontline clinical teams. DCLS practitioners are qualified to serve as high-complexity laboratory directors after obtaining board certification by one of the 10 Human and Health Services (HHS) approved boards. Enrollment in DCLS programs is increasing and currently four institutions offer the DCLS degree: Rutgers University, the University of Texas Medical Branch, the University of Kansas, and the University of Cincinnati.

As the DCLS is still a relatively new pathway for medical laboratory scientists to advance their careers, the ADLM DCLS Task Force conducted a survey of graduates of three DCLS training programs to better understand their professional experiences and trajectories. The November 2026 issue of *JALM* features a special report that presents the findings of this survey. Today, we're joined by the special report's corresponding author, Dr. Melody Nelson. Dr. Nelson, DCLS, CC, NRCC, MS, MLS, is a Clinical Assistant Professor at the University of Kansas Medical Center. She serves as the Assistant Director for the Core Laboratory and Section Director of Point of Care Services. Welcome, Dr. Nelson. Why was it so important to capture what DCLS graduates are actually doing in practice now?

Melody Nelson: I think there's a really big sometimes misunderstanding of where DCLS could fit in a hospital or there's trouble for the graduates -- the recent graduates -- to articulate what they can bring to the organization and do. And so, as the steering committee, we thought it was very important to highlight the diversity of experience that comes with the current DCLSs in practice and what they're bringing to their institutions to help new and emerging graduates learn kind of where they can draft a utility statement for their institutions and/or their

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institutions can read this and say, "Oh, this is an application I didn't think of."

Randye Kaye: Okay, that makes perfect sense. So, in the survey, nearly one-third of the respondents selected "other" when describing their professional role. So, does that suggest the profession might be evolving faster than our traditional job titles can describe it?

Melody Nelson: Absolutely. And I do think that there's -- you know, outdated job descriptions. So, you have job descriptions that have qualifications that a DCLS could meet, but a DCLS isn't included as an acceptable degree. And so, just highlighting that there's a variation out there, there are gaps that we can fill as DCLSs and trying to bring those two things together in a way that can make more of a clearer picture of how we need to improve role writing and job descriptions to be more inclusive to DCLS was a really big emphasis of this project.

Randye Kaye: Well, the original vision for the DCLS, it emphasized integrative practice and bringing laboratory expertise closer to the clinical care team. So, did the findings suggest that vision is translating into practice?

Melody Nelson: I would say so. I think it looks different at every type of facility you're at. So, what does laboratory integration mean? Well, you could be in an environment that's very dynamic that already has laboratory consulting workflows outside of the four walls and you just plug and play in there and you expand and grow that reach, or you could be at a community hospital or an academic center that's never done that before. They've never really gotten outside of the lab, or people don't really know who their contacts are in the lab and you're functioning as a bridge and that's a lot of what I do.

So, from my perspective, I feel like that's a lens that I've been able to bring to my institution of, "Hey, like, do you need to know someone in pediatrics? I know someone in pediatrics. Do you need to know someone in cardiology? I know someone in cardiology." You know, I'm just making connections and letting them know, like, we're here to serve you in the laboratory and we want to work with you and collaborate with you on your projects and we care about your patients in the same way that you do. I think that was highlighted by the data in the paper. I think we saw that a lot of people are working in collaborative roles--but it looks different based on what their facility needs and what their facility necessarily wants their laboratory to do and the kind of projects they want to take in. It's going to be varied across institution, I think. I don't think we can get away from that piece of it.

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Randye Kaye: Right. It sounds like really essential information at, like, both ends of the spectrum, those who might hire and those who are looking for work and where this degree fits in. So, the study essentially gives us a baseline snapshot of DCLS practice. What are the outcomes we need to measure next? Patient outcomes, diagnostic stewardship, utilization, cost avoidance, quality, workforce impacts? That's a lot, or something else?

Melody Nelson: I think all of the -- all of the above and then some. I think there needs to be an emphasis on what does an integrative projects look like. And so. as we look toward value-based medicine, and that's really an area that laboratory medicine and pathology hasn't been on the forefront of. For a lot of reasons, people think that we're a service, right? Or we're just like an add-on to like what they're doing, and maybe we're not necessarily important to the outcome. That could be the general consensus thought, but we know that we are. We know that we're important to the -- we know that that's not just a data point. It's a -- it's a decision point, and we help with that and there's a lot of work in science that goes into that being an accurate and precise data point and result decision.

And so, we have to do a better job of articulating that, and I think what's unique about the DCLS, this is Melody's perspective, my perspective on this, is that we're able to be a bridge, and in those moments, we can take on projects and be part of projects where we can help demonstrate where the laboratory impact actually is in practice for whatever that downstream decision is. And I'm going to use an example from my own work, which is I work with the Alzheimer's Disease Research Center on campus and we worked together, research and clinlab, to bring in the biomarkers. And so, I know that they're making medication decisions, right? And triaging patients differently based on those p-Tau217/Aβ42 ratio results and I was a big part of getting that on-ramped alongside my colleagues, Dr. Burns and Dr. Morris.

And so, they know now know me and I know them and I also can help be part of the data on the back end of this project and say, like, "Oh, well, look how many people have gotten in quicker", right? Because this lab was available to them on-site. So, we're really a very roundabout way but also an interesting lens to take and say, like, this is where we provide value and because we're working in these projects we can demonstrate that.

Randye Kaye: Right. There's nothing like a story or an example to drive the point home. For a laboratory leader or a pathologist or a health system executive reading this special report or listening to this podcast episode, who's never worked with a

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DCLS, what would you want them to understand about what these professionals can contribute?

Melody Nelson: I'd want them to understand and it's in the paper. You can see that there is a lot of bench experience that these individuals have. They know their science. They've worked in the bench. They know the laboratory, but what they've learned in their doctoral program is where the intersection of all of that science meets the patient care lens and meets the provider needs and care models and existing frameworks that we support as a laboratory community. That is a very valuable asset to have because there's so much work being done today.

In laboratories that most of us don't have time to pick our heads up from the bench, but now you would have a person on your team dedicated to do that, dedicated to networking and coordinating and bringing their expertise and guidance. There -- some of them are taking board exams, right? They can lead sections of your laboratory in accreditation environments that support that, and it's really just another advocate, really, for your laboratory team. But an advocate who's knowledgeable in what you do and knowledgeable on the things that are happening outside of your space, and I think that's a very, very valuable asset to have as healthcare continues to change.

Randye Kaye: That's wonderful. Well, Dr. Nelson, thank you so much for joining us today.

Melody Nelson: Thank you for having me. I've really appreciated it. This is great.

Randye Kaye: That was Dr. Melody Nelson discussing the *JALM* special report, "The Doctor of Clinical Laboratory Science in Practice: A Survey of Workforce Roles, Responsibilities, and Integration." Thanks for tuning in to this episode of *JALM* Talk. See you next time and don't forget to submit something for us to talk about.

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