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Engaging Laboratory Staff in Stewardship: Barriers Experienced by Medical Laboratory Technologists in Canada

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Guest: Amanda VanSpronsen is an associate professor in the Division of Medical Laboratory Science at the University of Alberta.

Randye Kaye:

Hello, and welcome to this edition of JALM Talk. This is from the *Journal of Applied Laboratory Medicine*, a publication of the American Association for Clinical Chemistry, and I'm your host, Randye Kaye.

Laboratory stewardship is a term often used to describe initiatives to improve the utilization of clinical laboratory testing and resources. A common component of laboratory stewardship is the reduction of unnecessary or inappropriate testing. Successful laboratory stewardship initiatives typically include participation and buy-in from a range of different healthcare professionals, both inside and outside of the clinical laboratory. However, while medical laboratory technologists are highly skilled professionals who are well-positioned to play a supportive role in stewardship, they may be overlooked in these efforts.

An original article in the March 22 issue of JALM describes a survey of medical laboratory technologists in Canada designed to measure their knowledge, attitudes, and barriers related to laboratory stewardship initiatives.

On today's podcast, we're joined by the first author of this article, Amanda VanSpronsen. Ms. VanSpronsen is an associate professor in the Division of Medical Laboratory Science at the University of Alberta. She has research interests in the evolving roles of medical laboratory professionals. Welcome, Ms. VanSpronsen. There are many types of clinical laboratory professionals and they can have different names in different countries. Can you first define for us what exactly is a medical laboratory technologist or MLT in Canada and what do they do?

Amanda VanSpronsen:

Certainly, I think that every country refers to this type of professional slightly differently. An MLT (or medical laboratory technologist) in Canada is roughly the equivalent of a clinical laboratory scientist in the United States. So, an MLT must graduate from an accredited educational institution and write a national certification exam in order to practice. It's all quite rigorous. They are highly skilled.

On the job, they conduct various laboratory tests often with complex instrumentation. They spent a good portion of their time verifying the validity of the results by assessing quality metrics and running quality assurance programs. So, they manage the integrity of the information that's coming from the laboratory instruments, and then they communicate the results to whoever ordered them.

Randye Kaye: Okay. Sounds very important actually. So, what led your group to administer this survey to MLTs about laboratory stewardship, and what were your goals there?

Amanda VanSpronsen: Well, as mentioned in your introduction, we have this widespread issue of inappropriate laboratory testing. It's something caused by a whole host of factors. There is no one individual professional group to blame. But the thing is, it's been happening for a really long time, like decades. So, the approaches tried in the past haven't really solved the problem completely, so it's time to do things differently. And stewardship has arisen from these types of ideas.

Stewardship itself was really pioneered by efforts to reduce antimicrobial resistance or the superbug problem. These types of programs are called antimicrobial stewardship programs and one of the things that has been clear as a result of that work is that it takes a whole team working collaboratively for things to improve, so multiple types of healthcare professionals like doctors, nurses, pharmacists, microbiologists, all bringing their expertise to the table. Now with laboratory stewardship gaining momentum, there have been calls to make sure that all relevant professionals, including MLTs, become involved. However, outside of laboratory medicine, not very many people have even heard of MLTs and even within healthcare, their work is a mystery, so it's a black box. They're called the hidden profession. There's a lot of reasons for that, but I don't think I have time to get into. But some of the ramifications though is that they feel disconnected with the rest of the healthcare team. Sometimes they feel as though their expertise is disregarded. They're not often top of mind when it comes to bringing people into discussions about these broader issues in healthcare.

So, we hypothesized that these sorts of factors might make it hard for them to participate in stewardship. The goal of our study was to understand what they know about laboratory stewardship and the problem of inappropriate laboratory utilization, and what barriers they might face if they wanted to become more involved. And that by learning these things, we can start to better shape a campaign to promote their involvement and help them feel confident participating.

Randye Kaye: Okay, that makes a lot of sense. So, let's talk about the design of the survey. Can you briefly summarize what you did?

Amanda VanSpronsen: Sure it was really quite straightforward. MLTs are an under-researched group, so we were pretty exploratory and open in our mindset, but we still had a theoretical framework that guided survey development and helped us with our analysis. One of our research partners is the Canadian Society for Medical Laboratory Science, and the survey was sent out to their membership list. And about half of the 20,000 or so MLTs in Canada are CSMLS members, so this is a good way for us to have a decent reach. And the survey itself had a variety of questions including a few open-ended ones that allowed us to get some detail and some depth.

Randye Kaye: What about the results? What did it tell you about how MLTs view themselves? You've already told me a little bit, but obviously learning more their sense of accountability for making sure that laboratory resources are used appropriately.

Amanda VanSpronsen: Well, a big takeaway for us is that they really care. They're not just there to punch the clock. They want their efforts to have a positive impact on patient care, so they strongly agreed with statements about the importance of addressing inappropriate laboratory testing and that we should be devoting time and energy to tackling this problem. When it comes to their sense of stewardship, well, more than half of them feel accountable for proper resource use and about half of them believe that it's part of their professional responsibility to improve laboratory utilization. It's not as though the rest of them thought the opposite. There is also quite a lot of uncertainty, a lot of unsure or neutral responses. So they aren't sure about how they fit. They aren't sure about what the rules should or could be. They were also concerned that they don't have enough power, enough influence, or enough opportunity to impact change. And this was something that really came out in the open-ended responses.

Randye Kaye: Well, let's talk about one of the most common barriers for MLT participation in stewardship. You talked about it in your article. You said it was lack of time, and you also mentioned that many labs happened to be short-staffed. It seems that there are barely enough hours in a day from any of these labs to get the existing clinical work done. So, how can we expect MLTs to get involved in stewardship?

Amanda VanSpronsen: Well, I mean lack of time is huge. There is absolutely no discounting that this is a major barrier. And

unfortunately, there are signs that it could get worse before it gets better. Human resource shortages are practically at crisis levels in some areas. It's a problem around the world. One reason is that not enough people are attracted to the field. A lot of them haven't even heard of it. But another is that people don't tend to stay in the profession for very long. They're feeling overworked and run off their feet, but they're also not feeling recognized and they aren't feeling integrated. So, we have these issues with recruitment and retention. We have issues with burnout and job dissatisfaction.

So, I think this supports the idea that we do need to be doing things differently. One of the things about laboratory stewardship is that because it is multidisciplinary and team-based, it does promise potential new roles and new ways to integrate with the healthcare team. And this can enrich the work of med-lab technologists by highlighting their expertise. And frankly with the staff shortages and retention problems, I'm not sure how we can't try to participate more in this movement that's going to highlight the value of our profession, allow us to use the full scope of our expertise, and integrate us as important partners of the care team. More and more organizations are seeing the attractiveness of a stewardship approach because it helps fulfill those very important goals of healthcare which are to improve outcomes for patients while also using resources wisely. And this organizational level support is going to be vital in order for MLTs to become more involved in stewardship because of these big issues like lack of time that don't have easy solutions. Absolutely.

Randye Kaye: Absolutely. And we all know, as you said, the worldwide problem of staffing, and also people leave jobs when they don't feel recognized or appreciated. So I think your work is really important. Now where do we go from here? Do you have plans or ideas for continuing this work?

Amanda VanSpronsen: Well, our survey certainly highlighted some knowledge gaps that can be filled by further research. But I'm going to tell you about one of the ways that we've been able to apply our findings to the campaign, and it comes from the way that we analyze our survey. We used a specific type of framework that then allowed us to use something called the Behavior Change Wheel which was a tool developed about 10 years ago by Michie, Van Stralen, and West. This tool helps us take what we heard from MLTs and translate that into interventions that are tailored to their needs.

One of the things that this has led to is a campaign called Lab Wisely. It's run by the Canadian Society for Medical Laboratory Science. We're calling it our one-stop shop for medical laboratory professionals to learn more about laboratory stewardship and access resources to help them

build their skills and knowledge. And one of the things that I have personally been able to contribute is a series of success stories from across Canada where I write about MLTs who have been directly involved in stewardship in their workplaces. One of the things that we learned in our research is that many med-lab technologists have a hard time envisioning how they can become involved because, again, we're often hidden and overlooked. But in gathering these stories, I hear from them directly how this has had a positive impact on their career. So, I truly believe that being part of stewardship is something that needs to be normalized as part of the med-lab technologist's role in healthcare.

Randye Kaye: Thank you so much. Very interesting. And I certainly hope the work gets transferred to other countries as well. I think everyone can benefit. Thank you so much for joining us today.

Amanda VanSpronsen: It was great to talk to you. Thank you.

Randye Kaye: That was Amanda VanSpronsen from the University of Alberta discussing the JALM original article entitled "Engaging Laboratory Staff in Stewardship: Barriers Experienced by Medical Laboratory Technologists in Canada". 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.