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**Guest:** Dr. Charles Eby is an Emeritus Professor in the Division of Laboratory and Genomic Medicine of the Departments of Pathology and Immunology and Medicine at Washington University School of Medicine in St. Louis.

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.

For several decades, healthcare experts have called for better utilization of clinical laboratory tests to reduce healthcare costs and enhance patient outcomes. Despite this, laboratory test utilization management, also referred to as laboratory stewardship, has not gained as much traction as stewardship in other clinical areas, such as for antimicrobials and blood products. The COVID-19 pandemic emphasized the importance of clinical laboratories in patient care, the risks of misusing laboratory resources, and the need for strong leadership and teamwork to manage these resources effectively.

Guidance is increasingly available to aid laboratories and health systems in launching effective laboratory stewardship programs, such as guidelines from the Clinical & Laboratory Standards Institute, known as CLSI, and from the Patient-centered Laboratory Utilization Guidance Services, known as PLUGS. The January 2025 Special Issue of *JALM*, titled “Diagnostic Stewardship in Action: Advancing Healthcare Value,” features an article describing a national survey of pathology leaders that was conducted to gain insights into laboratory stewardship efforts at academic medical centers. The survey results are intended to provide guidance for laboratory and clinical leaders who are engaged in, or are seeking to start, laboratory stewardship initiatives.

Today, we’re joined by the article’s corresponding author, Dr. Charles Eby. Dr. Eby is an Emeritus Professor in the Division of Laboratory and Genomic Medicine of the Departments of Pathology and Immunology and Medicine at Washington University School of Medicine in St. Louis. He specialized in clinical hematology, transfusion medicine, and laboratory hemostasis, and served as a division leader and Barnes-Jewish Hospital CLIA Laboratory Director from 2011 to 2021. Welcome, Dr. Eby. First, why did you and your colleagues decide to conduct a survey of laboratory stewardship activities at academic medical centers?

Charles Eby

Well, Randye, this grew out of an effort to initiate a laboratory stewardship committee at Barnes-Jewish Hospital in St. Louis. I stepped down from being Division Chief of Laboratory Medicine at the end of 2021 and my successor, Ann Gronowski, and I had wanted for many years to establish a hospital committee on laboratory stewardship, but previous efforts had not gotten off the ground. So, we put our heads together and found a great collaborator in one of our hospitalist leaders named Robert Mahoney, and over the next six months, we started reading literature and reaching out to some of our other academic laboratory medicine peers to learn a little bit about their experience.

It was those outreaches to a handful of other leaders that spurred Ann and me to come up with the idea of doing a survey of academic pathology departments, to both help us in our initiative and we thought it could also have value to other laboratory medicine leaders. So, we continued to work on our own laboratory stewardship initiative and launched the survey, wrote the survey, and launched it in May of 2023, closed the survey in January 2024, and then analyzed the results, leading to their submission to ADLM this past summer. I will say that getting results from the survey also helped us better prepare for launching a lab stewardship committee, which I think I can address when I talk about some of the findings.

Randye Kaye:

Can you summarize the major findings of the survey and were there any findings that surprised you?

Charles Eby

We sent out the survey to 94 academic pathology department leaders. Our response rate was, always would like it to be better, but we had a 40% response rate. One of the most interesting findings was that of those, while 68% had a laboratory stewardship committee, 32% did not, and the fact that we didn't have a lab stewardship committee yet meant that we were really at the caboose at the end of the train. But it became clear to us that a sizable minority of academic medical centers had yet to establish one.

We also learned from that subset that several had made efforts to establish a committee unsuccessfully or had started a laboratory stewardship committee that had not been sustainable. Then we turned our attention back to those who did have a committee, and I think one of the important findings were that in general, committees were based on a co-leadership by both a pathologist and a clinician, that the committees were multidisciplinary, bringing in expertise from not only medicine and medical subspecialties but others departments, and that there was a clear reporting pathway. Almost all of the laboratory stewardship committees reported

to their hospital medical executive committee, either directly or through another committee.

So, that helped us in guidance on how to form a committee. And then I think from those that have a lab stewardship committee, I think we learned that overall, they felt that they had acceptable support from hospital leadership from clinical leaders, from department leaders, but there was a widespread of that level of support. They all highlighted the critical role for IT support and administrative support to have a successful laboratory stewardship committee. I think other important takeaways were when we asked respondents "what areas were your laboratory stewardship committee responsible for?" There was a lot of common agreement and the top ones were requests for new tests, send out testing, genetic testing, including send out genetic testing, and repetition of testing or repeated testing intervals.

Then when we asked respondents to evaluate their levels of success, I think their highest level of success was in evaluating new test requests. And I think is probably because that's an area where evidence-based approach toward a decision can be less controversial and where a consensus is often easier to reach, while it is more difficult to change behavior patterns when it comes to send out testing or frequency of repeat testing.

Again, one of the findings from the group of respondents who do not have a laboratory stewardship committee but either had attempted to unsuccessfully or did have a committee that was not sustained was that there was a lack of vision for the committee. We took this to heart and really made an effort to create a laboratory stewardship charter, which we then vetted with our medical leadership, and that charter provides us with a vision statement, which is to that laboratory stewardship will improve patient care, with a mission statement that we will promote evidence-based laboratory testing, we will support scholarship and utilization of laboratory testing, that we will oversee appropriate use of laboratory tests, and we will ensure efficient and cost-effective laboratory utilization.

I think this is really an important message for pathology leaders, that one has to make it clear what the goals are and what the mission is of the stewardship committee in order to have a beginning for a successful process.

Randye Kaye: Thank you. Next, how could the survey findings help pathology and laboratory medicine leaders with their laboratory stewardship efforts?

Charles Eby Well, Randye, I'll highlight again the importance of -- if a pathology department does not have or a hospital doesn't

have a laboratory stewardship committee at the present time, I think getting it off the ground requires a lot of preparation. In fact, it took us about 20 months. One has to get the buy in from leadership and hospital leadership, departmental leadership, both in pathology but also in all the major clinical departments. We did that by one-on-one meetings with those leaders. As I just was describing in detail, one needs a charter to make it clear what the vision, mission, and responsibilities will be of this committee, and that charter needs to be approved at the highest level within the hospital administration.

And then one has to put together a committee when again, I think the best structure is a co-leadership with a pathology laboratory medicine leader and a clinical leader invested in laboratory stewardship, and then committee members should be multidisciplinary. There may be a little bit of a bias toward medicine subspecialties but there are important contributions to come from surgery, OB-GYN, anesthesiology, definitely neurology, and then once a committee is created, it must have sufficient IT and administrative support.

And I think the IT part came through very clearly in our survey that was the most important contributor to success, but it was also the one that was most in need from those who both have a committee and those who have -- who don't but who have tried in the past. And there's competition for IT resources. That competition can be fierce, but without good information about the utilization of laboratory testing presently and how that changes based on actions taken by a laboratory stewardship committee, there will be no way to show that the committee is achieving its mission through the goals and objectives that it has developed. So, I think it's a pretty big basket of needs to be successful but I think that's what I took away from our survey.

Randye Kaye: Is there any additional information that you would have liked to collect in the survey?

Charles Eby: Oh, yes. This is my first experience with writing a survey and one learns an awful lot. People have a certain tolerance for how much time and effort they can devote to an exercise like an online survey.

So, I think there are other areas where surveys could still be beneficial in lab stewardship and I think it'd be great if they could be administered through perhaps organizations that might be able to be more persuasive in obtaining participation, but information we did not collect was--we didn't try to separate outpatient laboratory testing from inpatient laboratory testing in terms of stewardship because those are two very different, not only clinical environments

but economic environments. That would be another interesting area.

We did not specifically reach out to pediatric academic laboratory leaders and I think that would be another area that could be further expanded. And we did not ask for details on committee governance and policies. For instance, I'm very confident that most laboratory stewardship committees have some type of charter. It would be very interesting to review those and see what they have in common, where they are different, what we can learn from those.

And finally, it would be wonderful to have more detailed information about both successful and unsuccessful initiatives to improve lab utilization, both in the area of repeat testing and definitely in the area of send out testing, whether it's genomic or non-genomic testing.

Randye Kaye: Finally, you became co-chair of the inaugural Barnes-Jewish Hospital Laboratory Stewardship Committee in 2023. What have you learned from that experience?

Charles Eby: Again, planning and starting a committee is one thing, co-leading it is another. So, we did start--our first committee meeting was in August 2023.

I think one of the first things I learned was that we needed to educate our committee members about the laboratory stewardship efforts that had been ongoing for decades and overseen by laboratory medicine faculty, really behind the scenes. And so, we spent much of our first year going through all of our laboratory test algorithms and some of our send out rules and regulations, and getting feedback from our clinicians, which almost always was supportive but in several cases, our clinicians pointed out where some of our existing rules or algorithms really were not up to date. And so, we made modifications.

At the end of the first year, we were able to then actually codify that we had a laboratory test formulary approved by the Laboratory Stewardship Committee and then also approved by the Counsel on Quality and Patient Safety at the Medical Executive Committee level. And so, now we have really a foundation that we can use to work forward.

So, I think that was one of the most important things was to educate our clinicians about our existing management of testing, obtain their input and their approval, and then we began working on some specific areas and I'll just mention one, and that is the use of thromboelastography testing to assess patients' hemostasis status in the areas of acute trauma, as well as in the emergency room or in the intensive

care units. This has been very interesting because it truly is multidisciplinary.

It involves input from anesthesiology, critical care, pulmonary critical care, emergency room physicians, as well as subspecialists like hepatology, and we are beginning to make progress on establishing guidelines for what is the appropriate use of this emerging but expensive technology.

I'll add one other finding from the first year and that is communication. How critical it is going to be to communicate the accomplishments of the stewardship committee to the broader clinical staff, and to also have the IT support to measure and quantitate the outcomes of interventions from the committee in areas like utilization of thromboelastography, and also in the areas of repeated testing. We started by looking at repeat testing for phosphorus and calcium and will continue to expand.

One final thing I learned in the first year, which I think will apply to other academic pathology departments. We're part of a hospital system, 13 hospitals with one academic campus that includes an adult and a pediatric hospital. Concurrent with our launching a hospital laboratory stewardship committee, the system started its own laboratory stewardship counsel. This is going to be interesting because policies and procedures that are made at the system level will impact on the academic hospital and vice versa.

And so, now we have this overlap of two stewardship governance structures, and this actually came out in our survey as well, because of those academic centers that have an existing laboratory stewardship hospital committee, about 75% of them also have a system level stewardship process. And so, going forward, how do academic hospital stewardship initiatives and system wide stewardship initiatives collaborate or sometimes have conflicts to resolve? I think that will be very interesting.

Randy Kaye:

That was Dr. Charles Eby from the Washington University School of Medicine in St. Louis discussing the *JALM* article, "Survey of Laboratory Stewardship Governance at U.S. Academic Medical Centers." This article is from the January 2025 special issue of *JALM*, titled "Diagnostic Stewardship in Action: Advancing Healthcare Value." 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.