PIONEERING DIAGNOSTICS

LEARNING LOUNGE EXCLUSIVE:

AMR Awareness and Strategies Viewpoints Q&A Part 1

Viewpoints Series – bioMérieux Featured Experts:

Brian Raux, Pharm.D. BCPS, BCIDP
Medical Science Liaison, bioMérieux

Patrick McDaneld, Pharm.D., BCIDP
Medical Science Liaison, bioMérieux

Viewpoint 1 of a 2-part Discussion

In this Part 1 Learning Lounge exclusive Viewpoints interview, medical science liaisons, Brian R. Raux, Pharm.D., BCPS, BCIDP, and Patrick McDaneld, Pharm.D., BCIDP address the results of the *Antimicrobial Resistance Awareness and Strategies Among ID Physicians & Pharmacists Report*, released by The Sepsis Alliance.[1] More than 150 infectious disease (ID) pharmacists and physicians in the United States were surveyed in October of 2022 to explore how much of a problem antimicrobial and antibiotic resistance is to healthcare professionals. Ninety-five percent of the participating healthcare facilities surveyed reported having an antimicrobial stewardship program (ASP), however, acceptance of their guidance and education was inconsistent, even among those in compliance with the Centers for Disease Control and Prevention (CDC) Core Elements. The results of this survey reveal the common barriers to effective implementation of ASP while presenting steps that can be taken toward addressing it.

bioMérieux Q1: The survey results indicated a shared recognition (90%) that antimicrobial resistance (AMR) is a major problem, however, there was variability in directing or accepting accountability depending on who was asked. What steps do you believe could be taken in healthcare to improve the sense of shared responsibility to combat AMR? Do you feel healthcare professionals have the opportunity to demonstrate leadership in addressing AMR within the One Health framework?

Brian Raux: The national surveillance programs that are becoming more prevalent are providing some opportunities to do this. The number of sites that will be reporting to NHSN antimicrobial use and resistance module, because it is becoming a requirement, is going to go up in 2024. Having some of those opportunities for benchmarking could potentially increase everyone's shared responsibility of being called out for good or bad utilization. Additionally, using consistent nomenclature for AMR helps to make everyone recognize that we are talking about the same issue here. From a One Health framework perspective, a lot of folks that work in human healthcare medicine are not taught to think in a *one health* way. We are taught to be interdisciplinary, to collaborate with pharmacists, doctors, nurses, physical therapists, but it is stuck at the human level. So, increasing cross pollination, interconnectivity, the interdisciplinary work between humans, animals, and the environment is important to help people even understand what *one health* is. A lot of people have heard of that term, but do not really understand the impact that it has on AMR.

Patrick McDaneld: I think healthcare professionals should be demonstrating leadership in this. We as healthcare providers are the owners of this and really are the ones who have the expertise to help others understand it, from the lay public to politicians to other healthcare providers. I think in terms of direct actions, one thing that helps people relate to the data is seeing very local data or even data that is centric to just their own prescribing practices. Sometimes when you look at aggregate data, it is so disconnected from the day-to-day reality, that it can be hard to make the connection to what is being done personally in a practice that is making a difference one way or the other. Ensuring that people have access to that level of information is helpful. Being able to see how your facility is doing well versus another facility can at least point you in the right direction for where you are having success and where you need to take a deeper look.

bioMérieux Q2: The survey also indicated that while more than 90% of infectious disease (ID) physicians and pharmacists are trained in antimicrobial resistance/antimicrobial stewardship (AMR/AMS) practices, they believe their facilities underutilize this expertise in patient antibiotic care, and even fewer physicians/pharmacists are directly involved in efforts to improve hospital-acquired sepsis. What steps could be taken to help healthcare administrators better understand this value-add to increase integration and utilization of these advanced disciplines?

Patrick McDaneld: An important thing that can be helpful is ensuring that you have a relationship with your healthcare administrators, and an ongoing dialogue about what is going on with the stewardship program, and what concerns they see. With an out-of-sight

out-of-mind philosophy, if you are not regularly interacting, people may not think to involve the ID clinicians or the stewardship team in these kinds of things. It is on the ID and stewardship team to demonstrate how as a team you can help improve the metrics that the administrators care about and how you can help them fine tune the metrics to the things that are meaningful for the patients at your institution.

Brian Raux: One of the things we had discussed was this concept of having a standing meeting — a standing relationship — with the administration team so that it's not them calling you when there's a fire to be put out. You're having a discussion before you ever need a fire extinguisher, and they know you're already ready.

In the case of sepsis management, it is incredibly complicated. On a day-to-day, for most patients with sepsis, one of the core reasons why ID and antimicrobial stewardship pharmacists and physicians aren't included is because most of the care of sepsis patients does not directly involve an ID or antimicrobial stewardship pharmacist. Those patients are cared for by other teams — maybe it's pulmonology and critical care or general medicine. So, someone really must step in and make sure that ID gets called into these sorts of discussions. Additionally, recognizing that adding ID is not the final solution either. There are lots of other pieces, like how infectious diseases work nicely with the information technology side of things. This may be another avenue for integration as well.

bioMérieux Q3A: Something a bit surprising in the data was that while most of the facilities represented in the survey had an antimicrobial stewardship program, only 68% accepted their recommendations most of the time. In your experience, is there a general skepticism of the information or recommendations provided by antimicrobial stewardship teams?

Patrick McDaneld: I would say generally in my experience, no. If you are in the position of starting a new program, there can be skepticism until people understand who you are, what are you there to help them do, and really understand you as a provider yourself. You are there to help them do the right thing for their patients, whether that is giving more antibiotics, fewer antibiotics, or different antibiotics They need to know that you're a partner for them. Once you get that relationship and people know who you are, those people are much more likely to accept your recommendations because they know where you are coming from. They have an ongoing dynamic with you.

Brian Raux: So much of stewardship is about behavioral changes. You need to drive behavioral change, which is a really hard thing to do particularly in medicine where it is not this black and white science. They say there's art in medicine for a reason. One stewardship recommendation that has a negative outcome is what people will remember. So, you have to work really hard to have a strong, established, trusting relationship.

Patrick McDaneld: There are instances where there may be clinicians that are very opposed to what your stewardship program is trying to do. When you encounter that you should really take a step back and find out the root cause of why they are pushing back on you. There may be some surprising underlying reasons that are going on that you should be addressing that you did not understand in terms of the intricacies of their situation, and

you need to make tweaks to your intervention. Understanding what their concern is and what you can do to address that concern is ultimately where you need to be going in that kind of situation.

Brian Raux: There really has to be this two-way street of engagement. You can get in your own way, thinking you already know what is best. Some of that speaks to some of the disruptive technology that is coming up and about understanding how these things get incorporated into practice. We are changing the way microbiology is done. We have been changing the way we have done things for one hundred years and we are going to get in our own way for sure in some instances.

bioMérieux Q3B: What could spur better collaboration between the stewardship team and frontline care givers?

Brian Raux: In addition to establishing these relationships and working with other peer-to-peer relationships, is recognizing that you cannot be everywhere all at once, making active recommendations, and so finding ways to passively influence the frontline folks as well. From the diagnostics perspective, how can you work with your micro lab to change the way that results are reported to influence decisions? Are there nudges that you could incorporate to change treatments, cascade your results, or other more passive influences? Working with your micro lab, who are then empowered to talk to the frontline clinicians when you just do not have enough time to call every single person.

Patrick McDaneld: A great way to help find those passive ways and even what active interventions are going to be beneficial is to involve frontline care providers in your stewardship committee. They provide an external perspective on what's meaningful to them, and what issues they are facing that ID and stewardship might not know about. Their perception is totally different in many ways from what infectious diseases and stewardship see. Infectious diseases and stewardship teams can have a myopic view, as they're only consulted in a fraction of cases on any given day. I think seeing this full picture is really valuable.

You must understand people's motivations, what is important to them, and what are their drivers of success. At the end of the day, healthcare providers are in healthcare for a reason. They want to make people better. If you can meet at that one point together, you can usually get past most issues. If everybody understands that is the root goal here, people are willing to change to make things better for the patient.

bioMérieux Q3C: Along the same lines, respondents noted that only 58% of physicians/pharmacists are engaging in ongoing antimicrobial stewardship education most of the time. What do you believe is creating the reluctance to advance stewardship as a daily practice?

Patrick McDaneld: I think it’s time. There are so many competing priorities that you have to pick and choose what you have bandwidth for. Education often falls by the wayside

because there's good data that suggests that education is one of the least effective pieces of a stewardship intervention, especially education by itself. The change is typically very fleeting, and people revert to their prior practice. So, if you have to cut something, that is often one of the things on the table, to do this kind of ongoing rolling education. The impact of isolated educational efforts may not be persistent in the way you hope, whereas if you spend more time doing perspective audits and feedback or updating a guideline, you may have a more ultimate impact at the end of the day.

Brian Raux: At so many sites across the country and across the world, there are not strictly dedicated stewardship resources. The one stewardship pharmacist or physician at that site might also have six other jobs. They are also coagulation pharmacists and must discharge patients and do 16 other things. To add in this education component is a very tight balancing act. One potential solution to how this gets advanced is recognizing that there are resources that exist today that could be utilized offered by third parties. Things like SIDP, MAD ID, and other organizations, where people could be referred to for further education.

bioMérieux Q4: How do you feel bioMérieux has uniquely risen to the challenge of AMR to provide real-time solutions that support antimicrobial stewardship initiatives to improve global public health?

Patrick McDaneld: What stands out about bioMérieux is the sheer gamut of infectious disease diagnostics that the company is offering and is focused on developing. bioMérieux makes everything from ultra rapid molecular technologies for that high acuity inpatient setting, to traditional microbiology products, to tropical disease products. The company has hands in every aspect of infectious disease diagnostics where a lot of companies are only focused solely on human health or just animal health or one little niche. bioMérieux has a broad-based approach across all the potential needs.

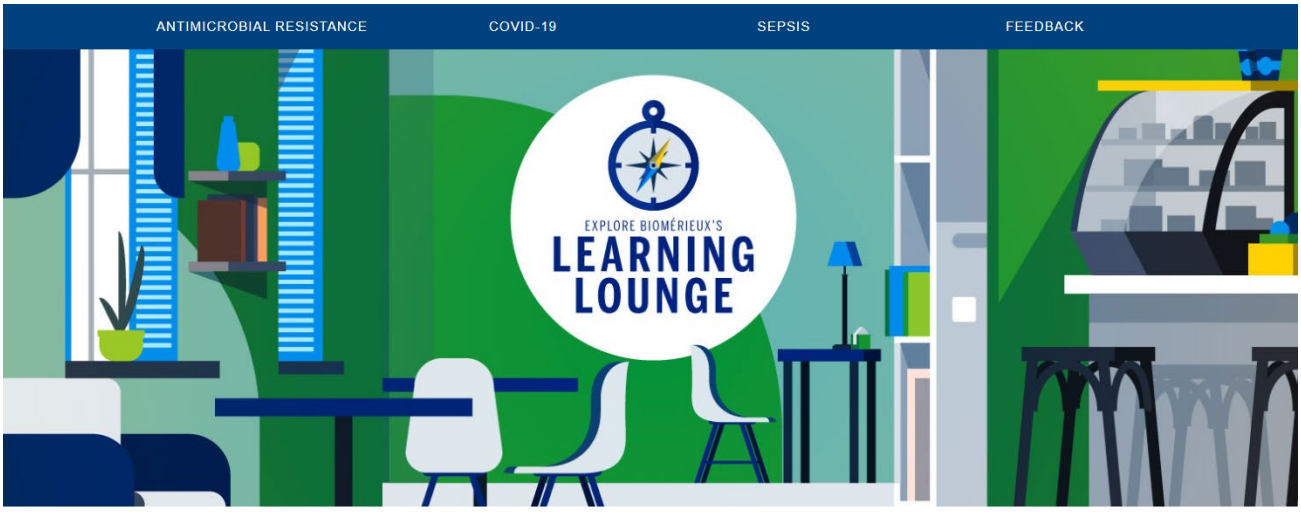
Brian Raux: That speaks to the solution-based approach of the company. Outside of that, there is the work that is done with supporting organizations like the Fleming Fund globally and the different endowment fund organizations. One of the big things about bioMérieux is that it's not just talking about the diagnostics, there are also all these other components of the organization that are influencing public health worldwide. It's so multifaceted. It’s certainly the product line, but it's also the support to use those devices that are being developed.

Brian R. Raux, Pharm.D., BCPS, BCIDP is a medical science liaison at bioMérieux focused on clinical infectious diseases. Before joining bioMérieux, Brian worked as a clinical pharmacist and antimicrobial steward at the Medical University of South Carolina. He has a Doctor of Pharmacy (PharmD) from Northeastern University and is passionate about medical education, patient care, and advancing antimicrobial stewardship practices through clinical research.

Patrick McDaneld, Pharm.D., BCIDP is a medical science liaison at bioMérieux, focused on clinical infectious diseases. Prior to joining bioMérieux, Dr. McDaneld was an infectious diseases clinical pharmacy specialist at the University of Texas MD Anderson Cancer Center Houston, TX. In addition to participating in direct patient, he served as the antibiotic stewardship team pharmacy lead and the infectious diseases residency program coordinator. Dr. McDaneld's areas of research interests include antimicrobial therapy and stewardship in immunocompromised patients, with several publications in these areas.

Reference:

1. Sepsis Alliance. Antimicrobial Resistance Awareness & Strategies Among ID Physicians & Pharmacists. Available at: https://cdn.sepsis.org/wp-content/uploads/2022/11/SA_Final_22-05042-Sepsis-Alliance_AMR-Awareness-Report-11.1.22.pdf. Published November 1, 2022. Accessed November 27, 2023.



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100 Rodolphe Street, Durham, NC 27712 USA • Phone (800) 682-2666 • www.biomerieux-usa.com