



LEARNING LOUNGE EXCLUSIVE : A NURSE'S VIEWPOINT ON AMR

Viewpoints Series: Donna Bonanni, RN, MSN

On the heels of Nurses Appreciation Week in May, bioMérieux connected with our friend and colleague Donna Bonanni, RN, MSN, to learn more about how nurses add immense value to antimicrobial stewardship programs as their work takes them to the front lines of the fight against antimicrobial resistance (AMR). Bonanni is the Senior Director for the Medical Education Liaison team for US Clinical Operations at bioMérieux.

bioMérieux: In your experience, do healthcare organizations clearly define how nurses contribute and add value to antimicrobial stewardship programs?

Bonanni: Thank you for asking that question and thank you for this interview concerning the role of the nurse in antimicrobial stewardship efforts. Let me begin by saying that with approximately 3.5 million nurses in the United States, this workforce is, and can be, a powerful influence on antimicrobial stewardship initiatives that have been mandated in the US for over five years now.

Unfortunately, many healthcare organizations in the US have not clearly defined, or more importantly, recognized the essential role the nurse plays in stewardship. While the CDC and The Joint Commission highlight the need to include nurses in antimicrobial stewardship initiatives, efforts to engage these nurses have often been limited and many interventions focus on just the prescribers and pharmacists.

bioMérieux: What are some of the day-to-day antimicrobial stewardship activities that nurses perform within healthcare facilities that might be less obvious to the staff of other departments?

Bonanni: There are various degree levels in nursing, and therefore, different roles and responsibilities depending on the level of degree. Nurses in a hospital setting can hold anything between a baccalaureate to a doctoral degree in nursing, and their roles and responsibilities can range from bedside nursing, midline prescribing, teaching, and working as hospital administrators, just to name a few.

So, for example, the bedside nurse represents several components of antimicrobial stewardship principles in daily care today. That bedside nurse is the primary patient advocate and the monitor for healthcare-associated infections and antimicrobial adverse events. Many of the safety and quality initiatives, including reduction in central line-associated bacteremia, catheter-associated urinary tract



infections, *C. diff* infection surveillance and control, and other bundle measures are, in large measure, operationalized and are being tracked by nursing staff today.

Also, nurses assure that bacterial cultures are performed before starting antibiotics. Nurses review medications as part of their routine duties, and they can prompt discussions of antibiotic treatment, indication, and how long the patient should be on the therapy. During patient admission time, they triage and maintain appropriate isolation precautions for patients with infectious diseases. They obtain accurate allergy histories, obtain culture specimens, monitor results, and send those reports to the prescribers.

On a 24-hour basis, clinical progress assessments of their patients include fulfilling orders for antibiotic dosing and de-escalation, which would include IV to PO routes. They assess for adverse events and any changes in that patient's condition while on antibiotic therapy. At discharge, the patient's instructions always include medication education. Because mid-level prescribers are nurse practitioners, they function similarly to physicians in that they assess, diagnose, and prescribe treatment pathways for patients with infectious diseases.

bioMérieux: In a 2017 white paper, the American Nursing Association, in conjunction with the CDC, examined the role of nurses in hospitals' antibiotic stewardship programs. Why do you think that white paper was necessary, and could you briefly describe a few of the key topics it addressed?

Bonnani: Both the CDC and The Joint Commission specifically highlight the need to engage nurses as part of the multidisciplinary effort. Despite all their responsibilities and other recommendations to include bedside nurses and stewardship development, efforts to engage these nurses in antibiotic stewardship have been limited.

The white paper you're referring to is titled, "Redefining the Antibiotic Stewardship Team: Recommendations for the ANA and CDC Work Group on Roles of Nurses in Hospital ASP Practices." This paper was written by a selection of nurses that were identified by the ANA and the CDC as having expertise or a real interest in stewardship. A work group was developed, and the purpose of the work group was to explore how the nurses can become more engaged and take leadership roles to enhance our nation's efforts around stewardship.

I would say a few important, key takeaways from this paper are that both the CDC and The Joint Commission specifically highlighted the need to engage these nurses, and the paper recognizes the need to put the theory into practice. In other words, it's great to say that the nurses need to be involved in the process, but we really need to provide more intervention-type studies with clear, well-defined and validated process and outcome measures for outcomes to be put into actual practice.

Again, nurses are already involved in stewardship activities and this paper brings it out and that they should expand their knowledge. Including them as an integral part of this team would mean providing the education around microbiology and pharmacology and other areas that would enhance their team membership.

bioMérieux: Four years later, where do you see opportunities to meet more of those CDC goals?

Bonnani: Opportunities I see toward meeting more of these goals are to provide continuous ID clinical education, again, including micro, pharmacology, along with those well-defined processes and outcome measures. Some of those outcome measures could be percentage of cultures obtained prior to the first dose of antibiotics, percentage of antibiotics administered in a timely manner, identifying contaminated



blood specimens, percentage of bedside rounds that include antibiotic time-outs, and having a percentage of nurses able to verbalize the indication for patients being on antibiotics.

bioMérieux: Because nurses navigate the flow of communication between patients and groups like clinicians, pharmacists, and the lab, what special role do nurses have in educating the patient about antimicrobial stewardship?

Bonnani: Nurses are antibiotic first responders. They're central communicators because they monitor a patient's status 24/7. Nurses can be a powerful resource during patient-family education to talk to them about appropriate antibiotic use, potential side effects, and just general infection prevention measures. The fact that the nurses spend most of their day with patients is very powerful.

bioMérieux: Finally, what one thing do you feel could maximize the impact nurses have on Antimicrobial Stewardship Programs?

Bonnani: I would say that nursing continuing education related to all the elements of stewardship, along with the science of antibiotic therapy, would provide a significant impact. Obtaining certifications and building awareness through publications, including the role of the nurse in stewardship outcomes, would be invaluable to showcase the nurse's role in antibiotic stewardship efforts.

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