

No diagnostics, no stopping antibiotic misuse

Christine Ginocchio, PhD, MT, vice president of global medical affairs for BioMérieux and BioFire Diagnostics, has been appointed to the Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria. As the first voting member from the IVD industry, she will be one of 15 council members who make recommendations to the secretary of the Department of Health and Human Services. Before joining BioMérieux, Dr. Ginocchio was senior medical director and chief, Division of Infectious Disease Diagnostics, North Shore-Long Island Jewish Health System Laboratories (now Northwell Health).

“While the development of new antibiotic drugs is vital,” she tells CAP TODAY, “we too often overlook the essential role diagnostics will play, and in fact are playing, to curtail antibiotic misuse.” Here is more of what she told us last month about antibiotic stewardship in hospitals and her advice to hospital administrators regarding the resistance problem. “The urgency is unmistakable,” she said.

February 2017—In a context where the lack of drugs against resistant bacterial pathogens will continue and antimicrobial prescriptions are highly complex, effective antibiotic stewardship programs are strongly needed. In the U.S., the CDC and Centers for Medicare and Medicaid Services highly recommend, while the Joint Commission requires, that all hospitals and nursing care centers have antimicrobial stewardship programs, effective January 2017.



Dr. Ginocchio

Many U.S. hospitals have implemented mandatory antimicrobial stewardship programs to reduce the misuse and overuse of these drugs, which is the only proven way to mitigate the development and spread of resistant organisms. However, many hospitals still struggle in implementing stewardship programs. It's vital that government and industry do everything possible to expedite this process so that all U.S. hospitals implement best-practice stewardship.

The typical roadblocks include expertise, time, and funding, but when done correctly, antibiotic stewardship programs can not only reduce morbidity and mortality but also save hospitals a tremendous amount of time and resources, particularly in the pharmacy. An effective program reduces the inappropriateness of antibiotic use and makes possible a drastic reduction in overall antibiotic use. By identifying the most appropriate antibiotic therapies, stewardship programs are essential to improving patient outcomes and patient safety, preserving the efficacy of existing antibiotics, and reducing resistance and health care costs. One of the cornerstones of high-performing stewardship programs is the proper use of rapid diagnostic platforms.

It is vital that hospital administrators realign their perception of the microbiology lab as simply a cost center and begin to see it for what it really is: the cornerstone of effective stewardship. We must rapidly advance our antimicrobial stewardship programs nationwide. To do this, hospital administrators should consider in vitro diagnostics as a fundamental tool in the fight against antimicrobial resistance and key to stewardship program efforts, support the transformation of the microbiology lab role in the programs into a vital component, and develop educational programs around the importance of diagnostics in combating resistance and their pivotal role within stewardship efforts.

I frequently remind hospital managers and administrators that diagnostics provide essential information used in about 70 percent of clinicians' decisions. Currently, however, the microbiology laboratory does not stand among hospital stakeholders as having the biggest influence in antibiotic usage. In this context, antimicrobial stewardship

program efforts have to be designed by health authorities and medical societies to include and to update guidelines about the use of diagnostics so that:

- Antibiotics are prescribed when it has been proved through diagnostic test results that they are required.
- Broad-spectrum antibiotics are not prescribed to patients who do not need them.
- The narrowest spectrum antibiotic that is effective becomes the treatment of choice.
- Personalized antibiotic treatment can be based on diagnostic test results.
- Novel antibiotics are used properly and sparingly.
- Diagnostics are used to better select the patients in novel anti-infective clinical trials.

We need the support of hospital management to prioritize therapeutic decision-making that is informed by state-of-the-art diagnostic tools. Ultimately, antimicrobial stewardship initiatives should be extended to other care settings, sustained by proper regulation and targeted incentive measures.

The moment has come to recognize that the effectiveness of antimicrobial prescribing in general and of stewardship programs in particular is highly dependent on the quality, availability, timeliness, and accuracy of diagnostic microbiology results. As of today, current diagnostic capabilities include a combination of established methods and a broad range of new diagnostics.

Economist Jim O'Neill said in a 2016 report: "Diagnostics are the single biggest potential game changer in the fight against AMR."