

## Antibiotic Resistance and the White House Forum on Antibiotic Stewardship

Antibiotics have transformed the practice of medicine, making once-lethal infections readily treatable and facilitating other medical advances, like cancer chemotherapy and organ transplantation. Today, however, with the rise in antibiotic resistance, treatments for bacterial infections are increasingly limited, and in some patients, effective treatment options are nonexistent.<sup>1</sup> The Centers for Disease Control and Prevention (CDC) estimates that annually at least two million illnesses and 23,000 deaths are caused by antibiotic-resistant bacteria in the United States alone.<sup>1</sup>

Antibiotic resistance is one of the top infectious disease issues facing the world today, encompassing human and animal health, agriculture, and the economy. For the first time, a presidential administration has taken on this public health problem. In September 2014 the White House published the *National Strategy for Combating Antibiotic-Resistant Bacteria*<sup>2</sup> and President Obama signed an Executive Order directing the enactment of the strategy. The President's Council of Advisors on Science and Technology later issued a related report with specific recommendations to address antibiotic-resistance. In March 2015, the Administration released the *National Action Plan for Combating Antibiotic-Resistant Bacteria*.<sup>1</sup> The Plan outlines U.S. Government activities over the next five years to enhance domestic and international capacity to prevent and contain outbreaks of antibiotic-resistant infections; maintain the efficacy of current and new antibiotics; and develop and deploy next-generation diagnostics, antibiotics, vaccines, and other therapeutics. The Plan can also guide action by public health, healthcare, and veterinary partners in a common effort to

address urgent and serious drug-resistant threats that affect people in the U.S. and around the world.<sup>1</sup> The National Action Plan is a must-read for every health care professional and student interested in public and population health.

### Antibiotic Stewardship

Antibiotic stewardship, or the combined, coordinated effort to detect, prevent, and control antibiotic resistance, has been shown to limit the emergence and spread of antibiotic-resistant bacteria in hospitals.<sup>3</sup> Expanded stewardship depends on the active engagement of all stakeholders including: public and private sector leaders, healthcare providers, governments, academia, veterinarians, policymakers, the general public, the agricultural community, and international partners. Stewardship efforts carried out as part of the *National Action Plan* are intended to improve antibiotic stewardship in healthcare settings, prevent the spread of drug-resistant threats, eliminate the use of medically-important antibiotics for growth promotion in food animals, and expand surveillance for drug-resistant bacteria in humans and animals.

### The White House Forum on Antibiotic Stewardship

The White House Forum on Antibiotic Stewardship marked a major milestone in the fight against the threat of antibiotic resistance. More than 150 private and public key stakeholders including, hospitals and health systems, clinical and professional organizations, food producers and retailers, pharmaceutical companies, and other leaders in human and animal health convened in this invitation-only

event held on June 2, 2015 in Washington, DC.<sup>4</sup> The goal was for participants to exchange ideas on ways all stakeholders can collaborate to improve responsible antibiotic use and to discuss opportunities for further improvement. I was deeply honored to attend and represent the Association for Professionals in Infection Control and Epidemiology ([APIC](#)) to provide information and offer examples of how infection preventionists (IPs) and registered nurses can facilitate antibiotic stewardship efforts as they work across the continuum of patient care to identify and report trends and outbreaks from antibiotic-resistant infections; support efforts to improve antibiotic prescribing and stewardship; and implement interventions to guide the delivery of evidence-based practices to prevent infections.

The Forum opened with remarks from Obama Administration officials, followed by a panel discussion moderated by the CDC Director Dr. Tom Frieden. The distinguished panel included leaders from the Hospital Corporation of America, Genesis Healthcare, Walmart, Elanco Animal Health, and Tyson Foods. The hospital healthcare leaders stressed that good antibiotic stewardship begins with good infection prevention, and good infection prevention begins with effective hand hygiene. As a clinician dedicated to infection prevention this was music to my ears, and provided a solid foundation for the ensuing human health discussions throughout the day. When the panel concluded, participants then moved to assigned human health or animal health breakout sessions. I participated in the four human health sessions on the following topics: improving inpatient, outpatient and long-term care prescribing, and developing

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new tools for stewardship (better therapies, better diagnostics). Each session lasted about 90 minutes, began with a moderated brief panel presentation, and was followed by robust participant discussion. Common themes throughout the human health breakout sessions included: the need for standardized antibiotic use and antibiotic resistance data; the need to establish partnerships, provide education and culture change; the role of patients, families and consumers in stewardship activities; the use of a holistic approach across the spectrum of patient care, and the importance of federal funding.

Many stewardship commitments were made throughout the Forum. Here are a few examples:<sup>5</sup>

- CDC, along with other Health and Human Services (HHS) agencies, will provide data about antibiotic use and prescribing trends in order to improve antibiotic use in the future and cut inappropriate prescribing by 50 percent in doctors' offices and 20 percent in hospitals.
- Healthcare systems representing thousands of hospitals, long-term acute care facilities, and skilled nursing centers committed to establishing or expanding stewardship programs across their locations to improve prescribing.
- Major food producers committed to phasing out giving unnecessary antibiotics to animals, and food retailers, like grocery stores, committed to providing more antibiotic-free options to their consumers.

- Drug store and drug companies committed to integrating CDC's stewardship principles into programs that provide free or reduced-price antibiotics to patients.

The opening session of the Forum can be viewed at: <https://www.youtube.com/watch?v=dNXQkoOKbDA>

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