Rapid Diagnostics Play Prominent Role in Federal Plan to Combat Antibiotic Resistance

By Lori Solomon, Editor, Diagnostic Testing & Emerging Technologies

The White House recently unveiled a comprehensive, federal plan to combat the growing threat of antibiotic-resistant bacteria. Diagnostics play a prominent role in the national action plan.

The emergence of drug resistance in bacteria is posing a national health threat and undermining clinicians' ability to treat bacterial infections and perform a range of therapeutic medical procedures. It is estimated by the U.S. Centers for Disease Control and Prevention that drug-resistant bacteria cause 23,000 deaths and 2 million illnesses annually in the United States.

Advancing development and adoption of rapid and diagnostic tests for identification and characterization of resistant bacteria is one of the stated goals of the action plan. The plan calls for both tests that can distinguish between viral and bacterial infections and those that can identify bacterial drug susceptibilities quickly. The plan calls for availability of these new, rapid diagnostic tests by 2020 in an effort to "significantly" reduce unnecessary antibiotic use.

While improved antibiotic stewardship in both health care and agricultural settings will extend the useful lifetime of existing antibiotics, enhanced surveillance achieved through routine testing is also needed. Disease surveillance will be achieved through the creation of a regional public health network (the Detect Network of AR Regional Laboratories) that will be used for resistance testing, a specimen repository for resistant bacterial strains, and a National Sequence Database of Resistant Pathogens. Routine testing of zoonotic and animal pathogens for antibiotic susceptibility will also occur at 10 to 20 National Animal Health Laboratory Network and Veterinary Laboratory Investigation and Response Network member laboratories.

Additional federal activities outlined over the next five years include enhancing domestic and international capacity to prevent and contain outbreaks of antibiotic-resistant infections and to accelerate basic and applied research for development of new antibiotics, other therapeutics, and vaccines. Together, the activities outlined in the action plan will require $1.2 billion of federal funding, which is requested in the President's FY 2016 Budget. This represents nearly a doubling of federal funding to combat and prevent antibiotic resistance. The national action plan was developed by an interagency task force, but implementation will require coordinated efforts of public and private sector partners, health care providers, veterinary and agriculture industry leaders, and patients.

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