

Antibiotic Commonsense

National Action Plan for Combating Antibiotic Resistant Bacteria



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White House Roadmap for Antibiotic-Resistance: Urgent Action Required

On March 27, 2015, the White House released the National Action Plan for Combating Antibiotic-Resistant Bacteria. In 62 pages, the plan provides an overview of antibiotic resistance, detailing five main goals that call a wide range of sectors and stakeholders to action.¹ Recognizing the urgency of this public health crisis and the collaboration necessary for progress, the plan provides a roadmap of opportunities for multiple sectors at the local, state, federal, and global levels.

In Pierce County, the goal of the Antibiotic Resistance Taskforce is to reduce antibiotic-resistant infection incidence, transmission, and associated morbidity and mortality. Taskforce activities, including coordination of agencies, prevention, and surveillance, align with objectives detailed in the national action plan.



Pierce County's Antibiotic Resistance Program works to reduce the occurrence and impact of antibiotic resistant pathogens in our community.

CDC Recognized Threats

The plan provides information on the Center for Disease Control's recognized Antibiotic Resistant Urgent, Serious, and Of Concern Threats. CDC identifies three "Urgent Threat Level" pathogens: Clostridium difficile, Carbapenem-Resistant Enterobacteriaceae, and Neisseria gonorrhoeae. Twelve "Serious Threat Level" pathogens include Methicillin-Resistant Staphylococcus aureus (MRSA) and Drug-Resistant

Streptococcus pneumonia. Additionally, CDC lists three pathogens "Of Concern Threat" level, including Vancomycin-Resistant Staphylococcus aureus.

Plan Identifies Targets and Goals

The Action Plan identifies specific national targets for addressing these CDC recognized Urgent and Serious Threats. Examples include reducing the incidence of overall C. diff infection by 50 percent (compared to 2011 estimates) and reducing carbapenem-resistant Enterobacteriaceae infections acquired during hospital stays by 60 percent.

To meet the identified targets in five years, the plan is organized around five main goals requiring collaborative action from the U.S. Government, in partnership with foreign governments, individuals, and organizations from various sectors: healthcare, public, veterinary medicine, agriculture, food safety, and research and manufacturing. Each of the five main goals includes key milestones to be achieved within one, three, and five years.

The following goals and their descriptions are found in the National Action Plan for Combating Antibiotic Resistant Bacteria:

GOAL 1:

Slow the Emergence of Resistant Bacteria and Prevent the Spread of Resistant Infections. Improved antibiotic stewardship in both healthcare and agricultural settings to slow the emergence of resistance and extend the lifetime of effective antibiotics is essential. Judicious use and effective dissemination of information to the public, along with a coordinated approach from public health, healthcare systems, and the community supports the goal.

GOAL 2:

Strengthen National One-Health Surveillance Efforts to Combat Resistance. An integrated "One-Health" approach will achieve improved detection and control of drug-resistant organisms. This includes creating a regional public health laboratory network that provides a standardized platform for resistance testing and advanced capacity for genetic characterization of bacteria (e.g., through whole genome sequencing). Goal 2 activities will also enhance monitoring

of antibiotic sales, usage, resistance, and management practices at multiple points along the food-production chain, from farms to processing plants to supermarkets.

GOAL 3:

Advance Development and Use of Rapid and Innovative Diagnostic Tests for Identification and Characterization of Resistant Bacteria. Improved diagnostics for detection of resistant bacteria and resistance pattern characterization will help healthcare providers make optimal treatment decisions and assist public health officials in taking action to prevent and control disease. Improved diagnostics also will help decrease unnecessary or inappropriate use of antibiotics. Goal 3 activities accelerate new diagnostics development and expand their availability and use to improve treatment, enhance infection control, and achieve faster response to infections and outbreaks.

GOAL 4:

Accelerate Basic and Applied Research and Development for New Antibiotics, Other Therapeutics, and Vaccines.

The advancement of drug development—as well as non-traditional therapeutics and vaccines—will require intensified efforts to boost scientific research, attract private investment, and facilitate clinical trials of new drug candidates. Goal 4 activities accomplish these objectives: Support basic and applied research. Provide researchers with scientific services (e.g., specimens, sequence data, and regulatory guidance). Foster public-private partnerships that strengthen the clinical trials infrastructure and reduce the risks, uncertainty, and obstacles faced by companies who develop new antibiotics and/or other therapeutics and vaccines.

GOAL 5:

Improve International Collaboration and Capacities for Antibiotic-resistance Prevention, Surveillance, Control, and Antibiotic Research and Development. One nation in isolation cannot tackle the worldwide problem of antibiotic resistance. Goal 5 activities include working with foreign ministries of health and agriculture, the World Health Organization, the Food and Agriculture Organization, the World Organization for Animal Health, and other multinational organizations to enhance global capacity to detect, analyze, and report antibiotic use and resistance, create incentives for the development of therapeutics and diagnostics, and strengthen global efforts to prevent and control the emergence and spread of antibiotic-resistance.

Current Efforts in Pierce County

Pierce County's Antibiotic Resistance Program works to reduce the occurrence and impact of antibiotic resistant pathogens in our community. The program engages a wide variety of community members to achieve these goals.

Objectives include:

- Collect laboratory and epidemiologic data to track antimicrobial resistance patterns in Pierce County.
- Develop partnerships with community members to reduce the emergence and spread of resistance in various community settings.
- Provide targeted and community-wide education about the dangers of inappropriate antibiotic use.
- Collaborate with state and national experts to develop and implement interventions and policies to reduce inappropriate antibiotic use.
- Provide healthcare providers with tools for reducing inappropriate antibiotic use.

Summary

The CDC states antibiotic resistance is one of the most pressing health threats facing the world today.² Because of increased federal funding and focused efforts, including the White House's formal action plan, more opportunities will be available for collaborative action from public health, healthcare systems, and partners from other sectors. For information on how to become involved in Pierce County's Antibiotic Resistance program, please contact Tacoma-Pierce County Health Department.

References:

1. National action plan for combating antibiotic-resistant bacteria. (2015, March 27.) The White House. https://www.whitehouse.gov/sites/default/files/docs/national_action_plan_for_combating_antibiotic-resistant_bacteria.pdf
2. Antibiotic resistance solutions initiative. The U.S. Centers for Disease Control and Prevention, 2015. http://www.cdc.gov/drugresistance/solutions-initiative/index.html?cid=ostltsdyk_govd_649

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