

A Joint Statement on Antibiotic Resistance from XX National Health Organizations and the Centers for Disease Control and Prevention

Center For Disease
Dynamics, Economics &
Policy

Centers For Disease Control
And Prevention

Infectious Diseases Society
Of America

Robert Wood Johnson
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The Pew Charitable Trusts

The Society For Healthcare
Epidemiology Of America

The Society For Infectious
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Since their introduction into medicine in 1941, antibiotics have saved millions of lives and transformed modern medicine. As a result, bacterial infections have become easily treatable, and the horizons for surgeries, transplants, and more complicated life-saving procedures have expanded. But increasing antibiotic resistance is leading to higher treatment costs, longer hospital stays, and unnecessary deaths.

The more we use antibiotics, the more we contribute to the pool of antibiotic-resistant microbes. The development of resistance is an inevitable byproduct of exposure to antibiotics. All antibiotic use, whether warranted or not, places selection pressure on bacteria, and some organisms that possess genetic mutations will survive antibiotic treatment. Over time, resistance threatens to return us to an era where simple bacterial infections will once again be deadly.

As representatives from a range of fields concerned with human health, we jointly recognize our collective responsibility to protect the effectiveness of all antibiotics – those we have today, and those yet to be developed. We also recognize the potential for these life-saving drugs to be overused in both the human and agricultural sectors. Antibiotics are a shared resource, and every individual should consider how each prescription or use of antibiotics affects the overall effectiveness of the antibiotic arsenal. The problem is defined by challenges on both the demand and supply sides of the equation – just as antibiotics are frequently overused, there are few new drugs in the development pipeline.

Understanding this situation, we jointly commit to the following principles to both conserve and replenish our antibiotic resources:

- To seek greater coordination among all stakeholders in antibiotic effectiveness, including healthcare personnel, hospital administrators, policymakers, patients, and individuals working in medical centers, universities, and pharmaceutical companies to promote knowledge sharing and a mutual commitment to improving antibiotic use, a practice referred to as antibiotic stewardship
- To work towards optimizing antibiotic use through antibiotic stewardship programs and interventions, which help ensure that patients get the right antibiotics at the right time for the right duration

- To identify the most effective examples of antimicrobial stewardship and to replicate these strategies and best practices, while also taking into account local context
- To support research that deepens our understanding of the current situation and trends in antibiotic resistance and use
- To use information about the drivers of antibiotic use to contribute to the evolving definition of “appropriate antibiotic use,” and to use this definition to guide stewardship efforts, including the education of the general public and healthcare personnel at all levels
- To improve surveillance for drug-resistant infections and to encourage reporting activities in a way that supports both positive outcomes and accuracy
- To encourage the development of pharmaceutical products to combat antibiotic resistance, including new antibiotics or novel therapies, compounds to boost antibiotic effectiveness, diagnostics to better diagnose infections and their resistance characteristics, and vaccines to prevent infections from occurring
- To recognize that antibiotic resistance is one of the world’s most pressing public health threats and that global collective action is required to effectively address the challenge of managing our scarce supply of effective antibiotics
- To acknowledge that the way we use antibiotics today in patients impacts how effective they will be in the future in other patients
- To communicate that antibiotic resistance is an infectious disease and public health concern: some resistant bacteria have the potential to spread rapidly from person to person, which increases the threat of resistant infections
- To work with regulatory, veterinary and industry partners to promote the judicious use of antibiotics in food animals
- To reinforce the judicious use of antibiotics in agriculture by: limiting the use of medically important human drugs for food animals; supporting the use of antibiotics in animals only for treating and controlling infectious diseases; and having veterinary oversight for all antibiotics used in animals