

## **Drug-Resistant Infections in the U.S. Congressional Staff Briefing and Roundtable July 19, 2005**

Over the past year, daily reports of drug-resistant infections have swept the news: deadly staph striking high school and college athletes, impervious hospital pathogens killing elderly patients, fast food industry bans against antibiotic growth promoters in farm animals. Against this backdrop, the Alliance for the Prudent Use of Antibiotics (APUA) led a Congressional staff briefing and roundtable on July 19, 2005. “Drug-Resistant Infections in the U.S.: A Threat to Patient Safety, National Security and Health Care Costs” portrayed the crisis of antimicrobial resistance (AMR) from several key perspectives.

The briefing featured experts from the worlds of scientific research, health care management, and health care quality improvement. It began with an impassioned plea from Congressman Stephen F. Lynch (D-MA), who warned his colleagues: “It will not be long, if current trends continue, that we have some type of outbreak or breach of our current defense to certain very dangerous bacteria ... It is a real threat to our national security and to global security. We’re in a race against time.”

APUA Executive Director Kathleen T. Young stressed that while the AMR threat was dauntingly complex, its real-life consequences were stark. “While you hear statistics and clinical terminology,” she said, “you have to remember that behind every statistic is a life-and-death moment, when the doctor and patient realize that a deadly infection is not responding to the medicine that we thought we could rely on.”

APUA President Stuart B. Levy, M.D., summarized the findings of APUA’s recent GAARD 2005 report published as a supplement in *Clinical Infectious Diseases*. He noted that misuse of antimicrobials has led to some of today’s most worrisome threats, including drug-resistant forms of *E. coli* (which causes urinary tract infections, among a host of other ills), *Klebsiella* (a hospital pathogen), *Neisseria gonorrhoeae*, *Streptococcus pneumoniae*, and *Staphylococcus aureus* (the most common disease-causing agent in hospitals).

Indeed, Levy likened the threat of antimicrobial resistance to other forms of terrorism in the post-9/11 era. “Our communities aren’t safe from these kinds of organisms, which creep in and go from person to person ... Many of these threats are more important, more real, and more possible than the threats of bioterrorism,” he said. “We are trying to alert both the scientific and the lay community, and especially our own government, to this threat to the homeland.”

Dale N. Gerding, M.D., Associate Chief of Staff for Research and Development at the Hines Veterans Affairs Hospital, described the frightening emergence of drug-resistant and spore-forming *Clostridium difficile*, which triggers an often lethal hospital complication, *Clostridium difficile* associated diarrhea (CDAD). “This new organism makes about 20 times as much toxin as standard organisms,” he said. Worse, *C. difficile* has acquired resistance to the fluoroquinolone antibiotics – an essential group of broad-spectrum treatments.

*Clostridium difficile* is just one of many drug-resistant gram-negative species endemic in hospital environments today. Not only do these bacilli cause abdominal, urinary, respiratory, and bloodstream infections, but they are resistant to most antimicrobial classes, including cephalosporins, penicillins, carbapenems, aminoglycosides, and fluoroquinolones (including Cipro).

“We desperately need incentives for new drug development in this area,” Gerding said, adding that the number of newly-approved antibiotics in the U.S. has been dropping steadily over the past two decades. Between 1983 and 1987, 16 new antibacterials reached the market; between 2003 and 2004, only three such drugs were approved. To reverse this trend, pharmaceutical and biotechnology companies will need incentives to invest in research and development for new infectious disease therapies and vaccines.

Gordon W. Grundy, M.D., Regional Medical Director for the Northeast Region of Aetna, Inc., carried out this theme by rhetorically asking the Congressional staffers: “What do we want from you?” As part of the answer, he told his listeners that, “Federal government leadership is the key Grundy summarized strategic solutions to this multifaceted problem. Broad-based approaches to address antimicrobial resistance – including APUA’s multi-pronged efforts in research and education – are vital. To this end, the establishment of the 1999 Interagency Task Force on Antibiotic Resistance was a watershed event. The Task Force’s Public Health Action Plan to Combat Antimicrobial Resistance has led to important domestic initiatives in surveillance, prevention and control, research, and product development. But as Grundy warned, this well-conceived strategy will mean nothing without “comprehensive and sustained funding.”

Robert Scalettar, M.D., Chair of the Coalition for Affordable Quality Health Care, concluded the briefing by explaining the health care industry’s role in attacking antimicrobial resistance. “The good news is that over time and through public education, there is more of a sense of the appropriate use of antibiotics from a consumer perspective,” he said. “On the other hand, that has not translated into significant changes in the patterns of use, much less the patterns of resistance.”

The costs of AMR have climbed to staggering levels. Recent data from a Pennsylvania study, extrapolated to the entire nation, show that more than 125 people a day die from hospital-associated infections; associated charges total upwards of \$50 billion a year. And a growing percentage of those hospital-associated infections are antibiotic-resistant. According to Scalettar, “The take-home message is: It’s much bigger than any of us clearly anticipated, and a significant part of rising health care costs in this country.”

Stuart Levy highlighted the importance of investments in new drugs, vaccines and rapid diagnostics as well implementation of known infection control and provider education interventions to match the threat emerging epidemics of more powerful pathogens. He said that the GAARD Report makes the case for immediate action. AMR can no longer be considered a “threat,” said Levy. “It’s actually occurring posing an immediate danger to patient safety – and national security. These are diseases that *we* are creating and we can contain... Gesturing to the panelists, he said, the experts are here, ready to help, but we need the kind of funding and support that only a government can provide.”



Dr. Stuart B. Levy (APUA President) and Kathleen Young (APUA Executive Director), and Dr. Gerding greet Congressman Lynch (D-MA).



Congressman Stephen F. Lynch (D-MA) opens the Staff Briefing with a plea to his colleagues to support AMR initiatives.



Dr. Robert Scalettar presents the "Save Antibiotic Strength" Campaign, the cost of AMR, and the need for appropriate antimicrobial use.



Dr. Gerding meets with Tanisha Parker and Robert Guidos of Infectious Diseases Society of America (IDSA).