NACCHO
National Association of County & City Health Officials
The National Connection for Local Public Health

15-07

STATEMENT OF POLICY

Antimicrobial Stewardship and Resistance

Policy

The National Association of County and City Health Officials (NACCHO) recognizes that the development of antimicrobial resistance (AR) represents a growing threat to the health of the public. The World Health Organization, Centers for Disease Control and Prevention (CDC), and the White House have identified AR as a serious threat and called for urgent, coordinated action across all government sectors to address the issue. The active inclusion and support of local health departments is essential to successfully develop and implement AR prevention policies. NACCHO encourages federal and state partners to support and fund local health department participation and workforce training in the development and implementation of policies and strategies to address AR. NACCHO promotes local health department representation in stakeholder meetings, committees, and activities that establish and refine strategies that address AR at the national, state, and local levels.

In 2018, the CDC proposed five core actions to better prepare the United States for continuing, emerging resistance globally. The five core actions are as follows:

1. Prevent infections and reduce the spread of germs
2. Share data and improve data collection
3. Improve appropriate use of antibiotics, reduce unnecessary use, and ensure improved access to antibiotics
4. Invest in development and improved access to vaccines, therapeutics, and diagnostics for better prevention, treatment, and detection
5. Keep antibiotics and antibiotic-resistant threats from entering the environment through actions like improving sanitation and improving access to safe water[1]

Examples of engagement include, but are not limited, to the following:

- Ensuring local health department representation in all aspects of AR policy development, such as national, state, and local AR stakeholder meetings, activities, and committees that establish, review, and refine national AR strategies;
- Supporting local health department staff training in infection control, antimicrobial stewardship (AS), and AR, including infection control certification such as, but not limited to, CIC® certification or a-IPC™ certification;
- Encouraging local health department participation in efforts to educate policymakers, partners, and communities on AR and the ramifications associated with AR;

- Expanding local health departments' access to data, including antimicrobial susceptibility pattern information, antimicrobial prescribing and use data to evaluate patterns of antimicrobial prescribing; and microbiology lab data to inform surveillance and prevention efforts; and,
- Continuing to promote the updated National Healthcare Safety Network (NHSN) data use agreement, which supports local health department access to healthcare-associated infection (HAI) information and antimicrobial use and resistance collected within its jurisdiction, or that relates to healthcare facilities in its jurisdiction and reported via the NHSN.[2]

Increased federal funding and technical support is needed to allow state and local health departments to continue and/or increase the following activities:

- Bolstering communication between healthcare facilities, including facilitating appropriate patient care "handoffs" between healthcare settings to ensure communication of adequate patient-specific information, such as treatment and culture data, to encourage appropriate infection prevention and antibiotic stewardship activities can be maintained;
- Building new and leveraging existing partnerships with a broad array of healthcare partners, including acute care hospitals, long-term care facilities, and outpatient facilities;
- Evaluating microbiologic testing practices for laboratories to ensure adequate testing methodologies, including Food and Drug Administration (FDA)-approved breakpoints, are used;
- Assessing infection control programs to ensure best practices are being used;
- Engaging in infection control and antimicrobial stewardship practice improvement initiatives;
- Supporting containment responses for novel and/or targeted multidrug-resistant organisms
- Promoting the use of best practices; and,
- Addressing gaps in lab capacity within the CDC's Antibiotic Resistance Laboratory Network

Justification

Antimicrobials revolutionized healthcare worldwide. However, their use and overuse has led to an increasing prevalence of infectious microorganisms that are resistant to these treatments. AR is making the treatment of common infections increasingly complex and ever more expensive. Each year in the United States, AR causes at least 35,000 deaths, and 2.8 million people are infected with bacteria that are resistant to one or more antibiotics.[2]

AS refers to the adoption of practices that promote responsible antimicrobial use. This is done by prescribing providers and healthcare organizations, but also includes efforts on the part of consumers and those who work in agriculture. These stewardship practices aim to reduce the

development of AR and seek to maximize the efficacy of antibiotics that are correctly prescribed and used. AS programs have been shown to be cost effective and even cost saving.[3]

Multidrug-resistant organisms (MDROs) are microorganisms, predominantly bacteria, that are resistant to one or more classes of antimicrobial agents. In most instances, MDROs cause disease that is similar to antibiotic-susceptible pathogens, but options for MDRO infections are often extremely limited, which leads to increased lengths of hospital stay, costs, and mortality.[4]

The CDC included a list of current antibiotic resistance threats in their report on drug resistance.[2] The following list of antibiotic resistance threats were classified as urgent threats:

- *Clostridioides difficile* causes infections (CDIs) that occur primarily in persons who are being treated with antibiotics. CDI's spread can be curtailed by infection prevention measures in healthcare facilities and stewardship programs that prevent antibiotic overuse.[2] CDIs 2019 threat estimates were 202,600 infections and 11,500 deaths. [17]. It also causes at least $1 billion in excess medical costs per year.[5]
- Carbapenem-resistant Enterobacterales (CRE), are resistant to all or nearly all available antibiotics. Rates of hospital-onset infections increased 35% from 2019 to 2020. 2020 threat estimates 12,700 cases and 1,000 deaths of CRE.[6] CRE Drug resistant *Neisseria gonorrhoeae*, can cause severe reproductive complications and disproportionately affects sexual, racial, and ethnic minorities. This represents a growing public health concern, especially since the U.S. gonorrhea control strategy relies on effective antibiotic therapy.[7, 8] The 2019 threat estimates 942,000 infections. [6]
- Carbapenem-resistant *Acinetobacter* tend to occur in patients in intensive care units. Rates of hospital-onset carbapenem-resistant *Acinetobacter* decreased from 2012-2017 and began to plateau before increasing 78% in 2020. The 2020 threat estimates 7,500 cases and 700 deaths.[6]
- Antifungal-resistant *Candida auris (C. Auris* can cause severe infections and can be resistant to all three major antifungal drug classes. Overall rates of infections increased 60% from 2019 to 2020 and 2020 threat estimates for *C. auris* were 754 cases. [6]

Role of Local Health Departments

The role of local health departments should not be minimized with regard to AR. The CDC's *Vital Signs Report: Estimated Effects of a Coordinated Approach for Action to Reduce Antibiotic-Resistant Infections in Health Care Facilities — United States* outlines the growing understanding that coordination among facilities will have greater impact on preventing AR than independent, individual facility efforts alone.[9] Local health departments are in an ideal position to facilitate this coordination, and which has been recognized and supported through CDC's development of their Interim Local Health Department HAI/AR Strategy.[10] When they have sufficient resources, they can support efforts to improve awareness, build AS programs and policies, and collect and report the local and regional data necessary for national and international surveillance.[9] As a growing number of local health departments become more

involved in AS, it is important to recognize the need to actively include and support their role in developing and implementing AR prevention policies. When targeted AR organisms are identified in a facility, local health departments can be a critical partner in the containment response, providing education to residents, families, staff, supporting the submission of isolates to the AR Lab Network, and implementing infection control measures, patient screening and notification, and contact investigations essential to preventing further spread.[11]

While AS must be pursued in a broad spectrum of settings regardless of resources, it is also necessary to note that more robust and interoperable public health information systems strengthen this work by improving the tracking of individuals with resistant infections and monitoring prescribing behaviors. Local health departments can also contribute to existing national conversations and partnerships. For example, the National Antimicrobial Resistance Monitoring System for Enteric Bacteria (NARMS) is a collaboration among state and local public health departments, the Centers for Disease Control and Prevention, the Food and Drug Administration, and the Department of Agriculture.[12] NARMS monitors changes in antimicrobial susceptibility of certain bacteria in ill individuals, retail meats, and food animals in the U.S. This program serves to protect public health by maintaining information about emerging bacterial resistance, how resistance spreads, and the differences between susceptible and resistant infections. The NARMS working group, however, which has representatives from state and local health departments, needs more local health department representation: of 54 health departments, only three are local health departments.[13]

Ongoing, proactive leadership by local health departments is already occurring. Local health departments, together with state health departments and federal support, are increasingly called to respond to outbreaks of AR organisms or have developed programs relating to AS.[14] For example, the Cook County Department of Health in Illinois was recognized for its collaboration with the Illinois Department of Public Health (IDPH) and the CDC, in response to an outbreak of CRE.[15] Also, the County of Los Angeles Public Health Department has played an active role in antibiotic resistance education of both providers and consumers.[16] They have increased reporting of certain antibiotic-resistant communicable diseases and have partnered with the California Department of Public Health to ensure that hospitals follow the statewide AS legislation passed in 2008.[17] This, and other collaborative efforts, have enhanced communication channels, started stewardship programs,[17] and educated consumers about AR. These activities provide a powerful model for future collaboration.

Local health departments are uniquely equipped to contribute to the reduction of the health and economic burden associated with AR. Increased collaboration between local health departments and national, state, and local AR stakeholders will improve efforts to implement AR prevention, surveillance, and reporting, as well as foster AS.

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Record of Action

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