



Nebraska Department of Health and Human Services
HEALTH ALERT NETWORK
Update



TO: Nebraska Healthcare Providers, Hospitals, Clinics, Infection Preventionists, Long Term Care Facilities and Public Health

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RE: Antimicrobial Threats and Antibiotic Awareness Week

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This is National Antibiotic Awareness Week and in recognition of this, Governor Ricketts has proclaimed it as such here in Nebraska. Last week the CDC published the 2019 Antibiotic Resistance (AR) Threats in the United States¹, the first since its original AR threat report in 2013. This report highlights the extent of the AR threat we face in this country. Approximately 3 million infections with antimicrobial resistant organisms occur every year in the United States resulting in more than 35,000 deaths. In addition, nearly 223,000 people in the US require hospitalization for *C. difficile* infection (CDI) annually with at least 12,800 annual deaths. The CDC has prioritized the five most urgent threats:

1. Carbapenem resistant *Acinetobacter baumannii* (CRAB)
2. Carbapenem Resistant Enterobacteriaceae (CRE)
3. *Candida auris* (not yet seen in Nebraska)
4. *Clostroides difficile* (*C.difficile*) or CDI
5. Drug-resistant *Neisseria gonorrhoeae*

While CRE infections have stabilized, infections with ESBLs (microbes with extended spectrum beta-lactamases), CRAB, *C.auris*, and CDI are increasing. Although the rate of carbapenemase-producing CRE (also called CP-CRE or CPE) in Nebraska remains low, it has increased over the past year.

The goal of **Antibiotic Awareness Week** is to call attention to how we can better detect, contain and most importantly prevent antibiotic resistant organisms and infections in our state.

Detection. Nebraska has a state-of-the-art antimicrobial susceptibility data mart that collects antibiotic resistance data from over 90% of the laboratories in Nebraska via ELR or electronic lab reporting. Highly resistant organisms like CREs or CRAB can be detected and tracked via this system. Providers can help by supporting the public health electronic reporting system, and by ensuring that necessary information regarding a patient is shared with state or local public health epidemiologists, while implementing containment measures such as contact precautions until further advice can be obtained. All CREs, CRAB and many other highly resistant organisms are reportable immediately and are listed on the Reportable Disease List. We would also advise

healthcare providers to ask patients if they have received medical care outside the US or in New York or Chicago healthcare facilities within the past 6 months as these are the locations with the highest rates of CREs and *C.auris*. If the answer is yes please consider contacting the HAI/AR team for possible colonization screening.

Containment. Transmission of highly resistant organisms needs to be interrupted. There are 3 prongs to containment: contact precautions/isolation, colonization testing of potentially exposed patients, and communication at the time of patient transfer to different facilities. Such communication has been a major gap in containment. A simplified interfacility transfer form is available at

<http://dhhs.ne.gov/HAI%20Documents/Interfacility%20Infection%20Control%20Transfer%20Form.pdf> to enhance and simplify such communication. Colonization procedures and protocols are on our website listed at the very bottom of this HAN. The NEDHHS HAI/AR team is very happy to help in containment onsite at anytime. The Infection Prevention Assessment and Promotion Program (ICAP) can assist facilities in mitigating gaps that might lead to transmission. <https://icap.nebraskamed.com/>

Prevention. Four Strategies:

1-Vaccination -preventing influenza will reduce the number of post-influenza bacterial pneumonias; pneumococcal vaccines in children and adults prevents pneumococcal pneumonia and meningitis which require antibiotic therapy

2-Improved Infection Prevention practices to avoid transfer of multi-drug resistant organisms (MDROs) from one patient to another on the hands of healthcare workers. Improved and consistent environmental cleaning standards to prevent transmission of MDROS from surfaces and shared medical equipment to patients. ICAP can assist healthcare facilities/providers to improve IP practices.

3-Diagnostic Stewardship-Tests to detect infection should be limited to patients who are symptomatic or have a particular reason for culture (e.g. to detect colonization of a CRE.) For example, culturing and treating patients with asymptomatic bacteriuria is a significant source of unnecessary antibiotic use.

4-Antibiotic Stewardship. Approximately 30% of outpatient antibiotics are unnecessary according to the CDC. Stewardship programs create environments where antibiotic use and antimicrobial resistance patterns are tracked, guidance is provided for the right antibiotics for the right reason based on local resistance patterns, and review of antibiotic use trends identifies potentially questionable prescribing patterns. The CDC has put forth 7 core elements for antimicrobial stewardship (AMS) in the hospital setting and 4 in the outpatient setting. In Nebraska, the state HAI-AR program has a robust ASAP effort (antimicrobial assessment and promotion program) that can assist facilities in establishing antimicrobial stewardship programs and which has a resource-rich website and YouTube channel.

<https://asap.nebraskamed.com/>

What else is Nebraska doing for AAW and year-round to battle AMR?

- Facebook Live on Antimicrobial Resistance and Stewardship Wednesday Nov 20 at noon
- Collaborating with Nebraska One Health during a day long educational display on the UNL Campus also on 11-20. Other events will occur in conjunction with Nebraska One Health throughout 2019 that will focus on judicious antimicrobial use in the human, agricultural and veterinary worlds;

- CDI Collaborative -Nebraska has received CDC funding for a CDI Collaborative to focus IP and AMS efforts on facilities with CDI concerns. This collaborative will develop improved strategies to decrease CDI around Nebraska and the country.
- Driving Stewardship Across Nebraska and Annual AMS Summit Educational Campaigns
- Making available information on our website about antimicrobial stewardship and resistance: <http://dhhs.ne.gov/Pages/Healthcare-Associated-Infections.aspx>

2019 Antibiotic Resistance Threats in the United States

<https://www.cdc.gov/drugresistance/pdf/threats-report/2019-ar-threats-report-508.pdf>