



NEW YORK CITY DEPARTMENT OF
HEALTH AND MENTAL HYGIENE
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Commissioner

2024 Veterinary Advisory #2

Antimicrobial Resistance in Companion Animals

- The Centers for Disease Control and Prevention (CDC) classifies certain carbapenem-resistant organisms (CRO) as urgent or serious threats to public health. CRO include gram-negative bacteria that are resistant to carbapenem antibiotics, a class of broad-spectrum antibiotics.
- The New York City (NYC) Health Code has been amended to require CRO detected in animals to be reported to the NYC Department of Health and Mental Hygiene (Health Department). Reports can be made [here](#).
- A CRO outbreak in humans has been linked to the use of artificial tears. Veterinary use of EzriCare Artificial Tears, Delsam Pharma Artificial Tears, and Delsam Pharma Artificial Ointment should be discontinued.

Please share with your staff and other colleagues in Veterinary Medicine

January 30, 2024

Dear colleagues,

Following a recent amendment to the New York City (NYC) Health Code, veterinarians, technicians, diagnostic laboratories, and any other animal care providers are required to report to the New York City Department of Health and Mental Hygiene (NYC Health Department) when a carbapenem-resistant organism (CRO) is confirmed in an animal. CRO are a type of antibiotic-resistant bacteria and include gram-negative bacteria that are resistant to carbapenem antibiotics, a class of broad-spectrum antibiotics, such as meropenem, imipenem, doripenem, and ertapenem. Carbapenem antibiotics are listed as critically important for human medicine by the World Health Organization.¹ Reporting of CRO will allow the Health Department to help contain CRO spread in animals, provide infection prevention support to veterinary facilities if a CRO is detected, and gain a better understanding of CRO and their spread within and between animal and human populations.

While carbapenem antibiotics are seldom used in veterinary medicine,² animals can harbor CRO, and these bacteria can contaminate items and surfaces in and around health care facilities.³ While CRO have been detected in pets, their prevalence and impact to animal health is unknown; also unknown is the human public health impact of animal CRO. CRO often exhibit multi-drug resistance meaning they can be resistant to many antibiotics in addition to carbapenems, limiting the antibiotic selection that can be used for veterinary patients.

Carbapenem-resistant Enterobacterales (CRE), a type of CRO, include common bacteria such as *Klebsiella pneumoniae* and *Escherichia coli*. The Centers for Disease Control and Prevention (CDC) ranks different CRO types according to their public health threat level: CRE and carbapenem-resistant *Acinetobacter baumannii* (CRAB) are urgent threats to public health, and carbapenem-resistant

Pseudomonas aeruginosa (CRPA) is considered a serious threat to public health.⁴ CRO can affect anyone, but people in acute and long-term healthcare settings and those with compromised immune systems or who have invasive devices (e.g., ventilators, intravenous catheters, urinary catheters) are often at highest risk.⁴

There have been documented clusters of CRO in companion animals, highlighting the public health concern. In 2018, there was a companion animal CRE cluster in a veterinary teaching hospital, with improper endotracheal tube disinfection contributing to its spread;⁵ and in 2022, a CRE outbreak was detected in multiple animals from a Midwest rescue facility.⁶ Most recently, in August 2023, two New Jersey dogs were identified with a CRPA strain linked to a human multi-state outbreak associated with artificial tears; the exposure source for the dogs was unknown since neither animal received the contaminated products nor had close contact with a known human case.⁷ The human outbreak involved dozens of people, and by May 2023, it had resulted in 14 people with vision loss, 4 enucleations, and 4 deaths.⁸ The manufacturer voluntarily recalled three products associated with this outbreak: Global Pharma (Chennai, India) EzriCare Artificial Tears, Delsam Pharma Artificial Tears, and Delsam Pharma Artificial Ointment. Patients and healthcare providers were recommended to immediately stop using and discard any existing products in use or on shelves. The [U.S Food and Drug Administration \(FDA\) recommends](#) that veterinary use of these products should also be discontinued due to possible CRO contamination.

A CRO detection in animals should be reported to the NYC Health Department:

- Through an online [secure web-based reporting platform](#)
- By calling 347-396-2600
- By faxing an [animal disease case report form](#) to 347-396-2753

For more information on CROs in animals, see:

- Frequently asked questions about Carbapenem-resistant Enterobacterales for Veterinarians <https://www.cdc.gov/hai/organisms/cre/FAQ-Vets.html>
- Frequently asked questions about Carbapenem-resistant Enterobacterales for Pet Owners <https://www.cdc.gov/hai/organisms/cre/FAQ-Owners.html>

As always, we appreciate your continued collaboration with our efforts to monitor public health issues in New York City.

Sincerely,

One Health Team Antimicrobial Resistance Unit
Zoonotic and Vector-borne Disease Unit
Bureau of Communicable Disease
ZIVDU@health.nyc.gov
347-396-2600

References

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5. Lavigne SH, Cole SD, Daidone C, Rankin SC. Risk Factors for the Acquisition of a blaNDM-5 Carbapenem-Resistant *Escherichia coli* in a Veterinary Hospital. *Journal of the American Animal Hospital Association*. 2021 May 1;57(3):101-5.
6. Minnesota Board of Animal Health. Veterinary alert. Antimicrobial resistance (super bugs) in companion animals. March 28, 2022 [cited 2024 Jan 03]. <https://content.govdelivery.com/accounts/MNBAH/bulletins/310d6a2>
7. New Jersey's Health Alert Network. Canine Cases of Extensively-Drug-Resistant *Pseudomonas aeruginosa* Linked to Multistate Outbreak Associated with Artificial Tears. August 14 2023 [cited 2024 Jan 03]. <https://phm.njlincs.net/Message/GetMessageContent?messageId=111906>
8. Centers for Disease Control and Prevention. Outbreak of Extensively Drug-resistant *Pseudomonas aeruginosa* Associated with Artificial Tears, 2023 [cited 2024 Jan 03]. <https://www.cdc.gov/hai/outbreaks/CRPA-artificial-tears.html>

Visit our webpage for information and resources for veterinarians: [Zoonotic and Vector-borne Diseases: Information for Providers](#)

If you do not receive these alerts via email and would like to be added to the distribution list, email zivdu@health.nyc.gov

Report animal diseases to the NYC Department of Health and Mental Hygiene:

- Online through a [secure web-based reporting platform](#)
- Call 347-396-2600
- Fax the [Animal Disease Case Report form](#) to 347-396-2753

Report upon suspicion: Anthrax, brucellosis, glanders, influenza (novel with pandemic potential), mpox, plague, Q fever, rabies, SARS, tularemia

Report upon laboratory diagnosis: Arboviral encephalitides, carbapenem-resistant organism (CRO), leptospirosis, psittacosis, Rocky Mountain spotted fever, salmonellosis, tuberculosis

Report within 24 hours any outbreak or suspected outbreak of any disease, condition, or syndrome, of known or unknown etiology, which may pose a danger to public health.