



Carbapenem-resistant *Pseudomonas aeruginosa* Information for Equine Veterinarians

My equine patient has been diagnosed with a CRPA, now what?



What is carbapenem-resistant *Pseudomonas aeruginosa* (CRPA)?

- CRPA infections are resistant to drugs such as imipenem and meropenem, as well as many other antimicrobials.
- Isolating a CRPA has a public health implications because CRPA can cause severe infections that are difficult to treat in both people and animals.

Where did my patient get this bacteria?

- *Pseudomonas* is found in the environment and can be normal flora colonizing people and equids.
- Horses can acquire CRPA from the environment or from contaminated surfaces or equipment in the clinic or barn. Transmission from a person or another animal is also possible through direct contact or bodily fluids.
- CRPA infections in horses are rare and most commonly cause wound, uterine, or sinus infections.

Is there risk to my staff and other patients?

- CRPA is rare in veterinary patients, and there are limited data about the risk of spreading CRPA between species; however, precautions should be taken.
- Immunosuppressed veterinary staff and patients should avoid contact with CRPA-infected horses when possible.
- Everyone can reduce spread by washing hands.
- Anyone concerned about CRPA exposure or illness should consult their healthcare provider.

How can I treat my equine patient?

- Treat infected horses with antibiotics based on culture and susceptibility.
- For CRPA endometritis and sinusitis, thorough flushing is critical prior to topical antibiotic use (aminoglycosides).
- Medications to disrupt biofilms might be necessary.
- Consult with a pharmacologist, theriogenologist, or microbiologist, as needed to discuss treatment options.
- Horses colonized with CRPA do not need treatment.

General precautions

- Isolate hospitalized CRPA horses, keep wounds and surgical sites covered. Minimize the number of staff caring for them.
- Wear gloves, coveralls/gowns, and masks when handling a CRPA horse, changing bandages, or flushing a sinus or uterus; wash hands after all contact.
- Conduct procedures on disinfectable floors rather than dirt or grass, and clean area thoroughly afterward. Avoid high-pressure hoses to prevent aerosolization of CRPA.
- *Pseudomonas* grows well in moist environments such as sinks, soap containers, and mops. Choose disinfectants effective against *Pseudomonas* and follow manufacturer guidelines (e.g., dilution, storage, contact time).

Where can I find more information?

- Kansas Veterinary Diagnostic Laboratory
(785) 532-5650 <http://www.ksvdl.org/>
- MU Veterinary Medical Diagnostic Laboratory
(573) 882-8367 <https://vmdl.missouri.edu/>
- [CDC: *Pseudomonas aeruginosa*](https://www.cdc.gov/eid/content/vol19/issue11/19-1111a10.pdf)

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