

Staff MRSA carriage and environmental contamination by other 'superbugs' found in Portuguese veterinary practices

April 14 2023



Credit: Pixabay/CC0 Public Domain

Examination tables, scales and other surfaces in small animal veterinary

practices are frequently contaminated with multidrug-resistant "superbugs," the results of a Portuguese study suggest.

The research, which is being presented at this year's European Congress of Clinical Microbiology & Infectious Diseases (ECCMID) in Copenhagen, Denmark, (15-18 April) found that 19% of surfaces harbored at least one multidrug-resistant bacterium.

Dogs, cats and other pets are known to contribute to the spread of multidrug-resistant pathogens that can cause [human disease](#). Small animal veterinary practices (SAVPs) are a potentially important link in the spread of these pathogens and, with numbers of SAVPs growing in Portugal, it is important to determine the prevalence of multidrug-resistant [bacteria](#) in this part of the veterinary sector.

Joana Moreira da Silva and colleagues from the Antibiotic Resistance Lab at Centre for Interdisciplinary Research in Animal Health (CIISA), Faculty of Veterinary Medicine, University of Lisbon, Portugal studied eight SAVPs, all of which were in Lisbon and the outskirts.

Critical surfaces, including surgical tables, shearing blades, examination tables and weighing scales were swabbed and [nasal swabs](#) were obtained from the vets, veterinary nurses and other staff.

The swabs were tested for the presence of multidrug-resistant bacteria.

At least one multidrug-resistant bacterium was found on 18.9% (34/182) of the surfaces tested. These include *Acinetobacter* spp. and *Staphylococci*, including *S. pseudintermedius*. These bacteria are responsible for highly resistant clinical infections in both human and [veterinary medicine](#).

In one of the veterinary practices, 18.2% of the tested surfaces (4/22)

were positive for OXA-23-producing *Acinetobacter* spp. These bacteria, which were found on several different surfaces, are resistant to carbapenem antibiotics. Carbapenems are prohibited in veterinary medicine by the European Medicines Agency (EMA) and play vital role in human medicine, where they are part of the last line of treatment when other antibiotics have failed.

Together with previous studies which found carbapenem-resistant infections in pets, this highlights the possibility that SAVPs may play a role in the dissemination of multidrug-resistant bacteria into the community.

No methicillin-resistant *Staphylococcus aureus* (MRSA) was found on any of the surfaces tested.

Approximately 23% of workers were carrying MRSA. While MRSA is not common in veterinary medicine, nasal carriage is common in human healthcare settings and in the community.

However, if MRSA gets deeper into the body, via wounds or catheters, for example, it cause lung, skin and other infections, some of which can be life-threatening. The bacterium is on the World Health Organization's list of antibiotic-resistant "priority pathogens"—meaning it is among the bacteria judged to pose the greatest risk to human health.

Ms Moreira da Silva, a Ph.D. student, says, "Our findings highlight the need to implement and monitor infection, prevention and control (IPC) guidelines in [small animal](#) veterinary practices."

"The inclusion of monitoring of workers for the nasal carriage of MRSA is also important to consider when designing IPC guidelines. Such measures might prevent the dissemination of multidrug-resistant bacteria into the community."

"People should not be afraid to take pets to the vet—it is still by far the best place for them to receive care."

More information: Conference: www.eccmid.org/

Provided by European Society of Clinical Microbiology and Infectious Diseases

Citation: Staff MRSA carriage and environmental contamination by other 'superbugs' found in Portuguese veterinary practices (2023, April 14) retrieved 12 May 2024 from <https://phys.org/news/2023-04-staff-mrsa-carriage-environmental-contamination.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.