

# **Methicillin-resistant *Staphylococcus aureus* (MRSA)**

## **Information for Veterinarians**

### **What is MRSA?**

Methicillin-resistant *Staphylococcus aureus* (MRSA) is a bacterium that is commonly found in nasal passages and skin of humans and multiple animals. Methicillin-resistant *Staphylococcus aureus* is resistant to beta-lactam antibiotics and in some cases to other antibiotics (CDC). Although MRSA is primarily found in people, animals can also be infected.

### **Can animals get MRSA?**

MRSA has been recovered from animals including horses, dogs, cats, cows, and pigs. Some of these animals have not been exposed to antibiotic therapy and in several of these cases the MRSA infection appears to result from human-to-animal transfer.

### **How is MRSA transmitted to people and animals?**

Direct skin-to-skin contact is the most common way MRSA is transmitted, but it can also be transmitted by contaminated objects and surfaces.

### **Can a pet or person have MRSA and not be sick?**

Yes, people and pets can carry MRSA on their skin or in their nose and have no outward signs of illness. This is called colonization. Encounters with carriers usually do not result in infection and clinical illness.

### **What are the symptoms of MRSA in animals?**

MRSA most commonly causes skin infections or wound infections.

### **What are the symptoms of MRSA in people?**

Symptoms of a MRSA infection depend on where the infection is located. Infections of the skin are the most common, and cause symptoms such as redness, warmth, pus and a wound that does not heal. You may refer to these infections as boils, furuncles, impetigo, or abscesses. Infections can also develop in the blood, bone, bladder, lungs, and other sites. Other symptoms may include fever and pain at the site of the infection.

### **How is MRSA diagnosed?**

A swab taken from the affected area is submitted to a laboratory for bacterial culture.

### **How is MRSA treated?**

Treatment varies from case to case. If the pet is colonized, no treatment may be needed. Localized skin infections may be treated with topical cleaning agents and antibiotic ointments. More serious infections are treated with oral antibiotics. The choice of antibiotics should depend on culture based antimicrobial sensitivity tests.

### IS MRSA in animals a reportable disease?

No; however, the Virginia Department of Health is available to answer your questions, address your concerns and assist you in educating your clients about MRSA and their pets.

### If a patient has an MRSA infection, what do I tell the client?

1. Follow the wound care instructions that I have given to you.
2. Practice good hand hygiene. You, your family, and others in close contact should wash their hands frequently with soap and warm water or use an alcohol based hand sanitizer, especially after changing the infected animal's bandage or touching an infected wound.
3. If possible, wear disposable gloves when touching items such as the animal's bedding, bandages or any other objects that may have been in contact with the infected wound.
4. Clean washable items that become soiled with hot water and laundry detergent (use bleach if possible). Drying laundry in a hot dryer, rather than air-drying, also helps kill bacteria.
5. Use a household disinfectant or bleach solution to clean any surfaces contaminated by wounds or drainage.
  - To make bleach solution mix 2 teaspoons bleach into one quart of water.
  - Be sure to make a new bleach solution every day.
6. If anyone in you home has recently had surgery or is immunocompromised, he/she should avoid contact with the infected pet, the pet's wound and any contaminated items such as bandage materials.
7. Seek advice from you doctor if you think you might be experiencing symptoms of a MRSA infection and at anytime if you feel sick.

### **References:**

Center for Disease Control and Prevention, [www.cdc.gov](http://www.cdc.gov)

National Association of State Public Health Veterinarians, Veterinary Standard Precautions Compendium, [www.nasphv.org/documentsCompendia.html](http://www.nasphv.org/documentsCompendia.html)

Department for Environment Food and Rural Affairs, [www.defra.gov.uk](http://www.defra.gov.uk)