Early identification and prompt, effective communication is critical for limiting the spread of MRSP throughout the VTH. All staff should be aware of the status of high-risk patients and potentially contaminated materials or environments. Infected or colonized patients should be isolated and restricted in their movement.

Please contact VTH Infection Control Personnel if you have any questions about these policies and procedures.

Quick Facts

- Refer to MRSP in section V of the Infection Control and Biosecurity SOP for more comprehensive information.
- Use “Special Attention Required” sticky notes to facilitate effective communication about MRSA cases within the VTH.
- Consider using the “Managing MRSP” client handout to help with client discussions about this agent.
- MRSP (Methicillin-resistant *Staphylococcus pseudintermedius*, previously known as *Staph intermedii*) is NOT the same organism as MRSA (*Staph aureus*).
- MRSP is generally not zoonotic.
- MRSP is a common, moderately contagious, commensal bacteria found primarily in dogs, but also in other host species, such as cats.
- As an opportunistic agent, *Staph pseudintermedius* is a common cause of skin and soft tissue infections in previously injured tissues (e.g. surgical sites and wounds), ear infections, and pyoderma. Less commonly, it is identified as the agent in respiratory and urinary tract infections.
- Transmission occurs almost exclusively through direct contact, including contact with colonized or infected dogs, contaminated bodily secretions such as pus, and contaminated objects or surfaces.
- Humans can be a vector for MRSP by failing to wash their hands before and after contact with infected or colonized patients. 3-5% of veterinarians may be colonized with MRSP and pose an additional transmission risk (though infections in humans rarely occur).
- MRSP is easily deactivated by soaps and common disinfectants, and does not have extreme environmental persistence.

Identification of High-Risk Patients

Studies suggest that up to 50% of dogs are colonized with *Staph pseudintermedius*, and an additional 6–9% are colonized with MRSP. Infections are most likely to occur in previously colonized dogs and infected patients probably pose a higher transmission risk than colonized patients.

Clinicians should suspect MRSP infection if there is...

- Presence of a wound or infection that does not heal as expected, especially with prior antimicrobial treatment.
- History of MRSP colonization or infection in people or other animals with which the patient has contact.

High-risk patients should not be allowed to remain in waiting rooms, hallways, treatment areas, or common use facilities (water treadmill, stocks, etc.). They should be moved as soon as possible to exam rooms or to isolation facilities where contact and potential contamination can be more easily controlled.

Procedures, Isolation, Barrier Precautions, and Patient Movement

- Hospitalized MRSP patients must be segregated to manage contact transmission. If discharge cannot be contained (i.e., draining wounds cannot be bandaged), patients must be housed in isolation.
- Disposable barrier nursing gowns and gloves are required.*
- Hand washing or use of hand sanitizers must be enforced after any contact with affected patients.
- Contaminated waste (e.g. bandages) should be double bagged and disposed of normally; it is not necessary to use special bags or autoclave these materials.
- There is negligible zoonotic hazard for personnel related to MRSP exposures.* As such, it is not critical to notify Central Supply when returning materials that may be contaminated. Normal procedures for washing and disinfection are adequate for decontamination.
- Exam rooms should be labeled “Special Attention Required” using sticky notes, and clinicians must notify Animal Care and other cleaning personnel of areas that may be contaminated with MRSP. Appropriate disinfection of all contaminated equipment and surfaces is critical.

*Immune compromised people should always take greater precautions, as they are susceptible to infections that the general population is not.
Communication Within the VTH
And With Clients

- Whenever patients are identified as being colonized or infected with MRSP, or when they are considered to be high-risk suspects, an email notification must be sent to the “Alert” listserv, VTH-Contagious-Dz-Alert@colostate.edu.
- The veterinarian responsible for the patient’s care should personally communicate the situation to the supervising clinician, supervising nurse, head of Animal Care, and any students contacting the case regarding patient status, special cleaning requirements, and transmission risk.
- Use “Special Attention Required” sticky notes to facilitate effective communication to other VTH personnel.
- Because of the difference in zoonotic potential, it is important that people understand that you are talking about MRSP, not MRSA.
- Consider using the “Managing MRSP” client handout to help ensure that discussions with clients about this agent are thorough and effective.

Culture of
Suspected Cases

- Appropriate diagnostic testing is required for all patients that are suspected of being infected with MRSP, including non-healing wounds and surgical site infections. This includes outpatients that may be readmitted for follow-up care.
- Appropriate specimens should be taken from infection sites and the patient should be screened for colonization (swab samples of nares/upper respiratory tract and rectum/perineum).
- Culture to detect colonization in patients with known contact in the home environment may be appropriate.
- Request, “enriched MRSP cultures” on laboratory submission forms.
- Any Staph pseudintermedius isolate that is resistant to oxacillin should be considered MRSP. Unlike MRSA, resistance to cefoxitin and ceftiofur is not a sensitive marker for methicillin resistance in Staph pseudintermedius. In other words, isolates may be MRSP and show in vitro susceptibility to cefoxitin and ceftiofur.
- Other Methicillin-resistant Staph species: Coagulase positive species should be considered to have pathogenic potential. Coagulase negative species are generally not pathogenic in humans, but some can be opportunistic pathogens (e.g. Staph epidermidis).

Methicillin-resistance does not necessarily indicate that the strain is more infectious or pathogenic than other strains of Staph pseudintermedius.

Medical Management
Of Confirmed MRSP Cases

- Resistance to oxacillin in Staph pseudintermedius is a marker for strains carrying genes that make them resistant to ALL beta-lactam antimicrobial drugs including potentiated penicillins, cephalosporins, and imipenem. Many strains of MRSP are also resistant to other drugs commonly used to treat infections, including tetracyclines, gentamicin, and enrofloxacin.
- MRSP should be considered resistant to all beta-lactam drugs regardless of in vitro susceptibility results indicating otherwise.
- Because MRSP is resistant to a broad spectrum of antimicrobial drugs, topical therapies should be employed whenever possible, including topical antiseptic therapies (e.g. chlorhexidine).

Culture of Previously
Infected Cases for Colonization

- Two negative cultures, obtained one week apart, are required for all patients with a previous MRSP infection prior to reduction in infection control precautions in the VTH.
- Appropriate samples for colonization screening may be taken from nares/upper respiratory tract and rectum/perineum.
- Request, “enriched MRSP cultures” on laboratory submission forms.

Special Attention Required
- Frequency Seen at VTH: Common
- Transmission Route: Contact
- Risk of Infection in People: No
- Environmental Persistence: Low