

Decolonization of Non-ICU Patients With Devices

Section 9-3 – Standing Order Protocol: Nasal Mupirocin

The following is a standing order protocol for implementing nasal decolonization in adult non-intensive care unit (ICU) patients who are methicillin-resistant *Staphylococcus aureus* (MRSA) carriers and have medical devices (particularly central lines, midline catheters, and lumbar drains). The ABATE (**A**ctive **B**athing to **E**liminate) Infection Trial,¹ which included nasal decolonization of MRSA carriers, found that decolonization of adult non-ICU patients with the medical devices noted above resulted in a 32 percent reduction in all-cause bloodstream infections, and a 37 percent reduction in positive cultures for MRSA and VRE.

Protocol Overview

- Five days of twice-daily nasal decolonization for non-ICU adult patients who have medical devices and are known to be MRSA carriers by history, screening test, or clinical culture, or identified by your hospital's usual MRSA screening/testing processes (if any).

Identifying Patients for Nasal Decolonization

- Target Patient Population
 - **Include:** Adult non-ICU patients with medical devices of interest who are known to be MRSA+ by history, screening test (if performed), or clinical culture.
 - **Exclude:** Patients with known allergy to mupirocin or patients with nasal packing or anatomical conditions precluding use of mupirocin.
 - Remember, your hospital should not change its testing/screening processes for MRSA. Use your current processes.
- If a patient with a device is readmitted, restart the protocol.

Protocol for Mupirocin

1. Dispense mupirocin unit dose (blueberry-sized amount) for each nostril onto a new clean swab from multidose single patient tube before entering patient room. Do not take multidose tube into contact precaution room.
2. Place patient's bed at 30 degrees, if tolerated.
3. Apply unit dose into each nostril using swab applicator.
4. Have the patient press nostrils his/her together and massage gently for 60 seconds. Assist if needed.

5. Do this twice a day for 5 days while in hospital.
6. Stop protocol on hospital discharge.
7. If patient is readmitted and still meets inclusion criteria for the protocol, restart the protocol.

Special Circumstances

- If nasal devices are in place (e.g., nasal intubation, nasogastric [NG] tubes), apply mupirocin around tubing, if possible.
- If nasal packing is in place (e.g., for recent surgery/trauma), do not apply to that nostril.
- Missed doses: If one dose is missed, nurse should resume mupirocin as soon as possible on the original schedule. Do not double up doses. If more than two doses' worth of mupirocin are missed, the protocol should be restarted and a new count for 5 days of nasal decolonization should begin.

Escalation Efforts for Patient Refusals

As is the case with other medical care, patients can refuse any portion of decolonization, either the chlorhexidine gluconate (CHG) bath or the nasal product. To make sure your patient is maximally informed before a refusal is accepted, perform the following:

1. Review tools in Section 14, which provide suggested responses to common patient questions and scenarios for addressing patient refusals.
2. Patient initially declines
 - a. Assess why: Is your patient tired? Uncomfortable due to poor bed positioning? In pain? These things need to be addressed before they will be likely to accept the nasal product.
3. Patient declines after bedside nurse explains concept
 - a. We recommend an escalation pathway, not because a patient refuses, but because some patients may respond to a different approach or style with better understanding. For example, if a patient refused a critical anti-hypertensive or diabetic medication, their healthcare providers should ensure that the person truly understood the implications of that refusal and make every attempt to help the patient take their medication. Similarly, the goal here is to ensure that the patient understands that they are refusing a protective product that has been proven to reduce their infection risk. Escalating simply means asking a more senior or experienced leader or peer to attempt to communicate key concepts to your patient. An escalation pathway may include asking an expert peer

champion, a nurse manager or director, or other member of unit or hospital leadership to speak to the patient about their refusal.

- b. In the ABATE Trial, escalation pathways were commonly used, to help explain and reinforce the importance of the protection and safety provided by targeted decolonization. If the patient refused after the concepts and purposes were clearly conveyed through more than one attempt by the primary nurse and through escalation to at least one other person, the refusal was accepted as well understood.

References

1. Huang SS, Septimus E, Kleinman K, et al. Chlorhexidine versus routine bathing to prevent multi drug-resistant organisms and all-cause bloodstream infection in general medical and surgical units: the ABATE Infection Cluster Randomized Trial. *Lancet*. 2019. Mar 23;393(10177):1205-15. PMID: 30850112.