Nursing Decolonization Protocol:
Nasal Mupirocin

ICU & Non-ICU

**Note:** Mupirocin should generally be chosen over iodophor when possible. A recent study showed a mupirocin & chlorhexidine gluconate (CHG) decolonization strategy to be more effective at reducing *Staphylococcus aureus* isolates in the intensive care unit (ICU) compared to iodophor & CHG.1 However, iodophor has the advantage of bypassing the need for a prescription, which may present less of a logistical burden. You may also opt to use nasal iodophor if you have a known high prevalence of mupirocin resistance. The following protocols can be adjusted to match the site’s needs.

**Background**

* 2% mupirocin ointment was approved by the Food and Drug Administration in August 1995 for nasal use.
* Anti-staphylococcal action by stopping RNA synthesis.
* Commonly used for:
	+ Methicillin-resistant *S. aureus* (MRSA) decolonization.
	+ MRSA or methicillin-sensitive *S. aureus* (MSSA) decolonization prior to cardiac and orthopedic surgery.
* Nasal ointment is not systemically absorbed.
* High rate of MRSA and MSSA eradication for the first 2 weeks after 5-day application.
* The goal is to prevent MRSA and MSSA infection during high-risk periods (ICU stays, post-op).
* Requires a healthcare provider’s order for use.

**Overview**

* Five days of twice-daily nasal decolonization during unit stay.
* Exclude:
	+ Patients with known allergies to the nasal decolonization product.
	+ Patients with nasal packing or physical inability to use nasal decolonization.

**Protocol**

For each patient\*, starting on day 1 of unit admission, for a total of 5 days:

\*The use of nasal mupirocin for MRSA decolonization has not been studied in the pediatric population.

* Perform nasal decolonization for each patient twice a day, starting on day 1 of unit admission, for 5 days or until discharge (if prior to 5 days).
* If patient is in the unit for longer than 2 weeks, restart the protocol.
* If patient is readmitted, restart the protocol.

**Application**

1. Dispense 0.5 grams (about the size of a pea) of mupirocin onto each of two clean cotton swabs from a multidose single-patient tube before entering patient room.
	1. Do not take multidose tube into contact precaution room.
2. Have the patient blow their nose into a tissue to clear their nostrils.
3. Place the head of patient's bed at 30 degrees, if tolerated.
4. Apply dose directly into nostril using swab applicator. Ensure coating of the sides of the nostril.
5. Repeat for the other nostril.
6. Press nostrils together and massage gently for 60 seconds.
7. Do this twice a day for 5 days while patient is in the unit.
8. Avoid contact with eyes and other intranasal products.

**Notes**

1. If nasal devices are in place (e.g., nasal intubation, nasogastric tubes), apply mupirocin around tubing.
	1. Gently massage mupirocin to distribute ointment.
2. If nasal packing is in place (e.g., for recent surgery/trauma) or the patient has another anatomical condition precluding application of decolonization, do not apply to that nostril.
3. Missed doses: If one dose is missed, resume decolonization as soon as possible on the original schedule. Do not double up doses. If more than two doses’ worth of decolonization are missed, the protocol should be restarted and a new count for 5 days of nasal decolonization should begin.

**References**

1. Huang S, Septimus E, Kleinman K, et al. Nasal iodophor antiseptic vs nasal mupirocin antibiotic in the setting of chlorhexidine bathing to prevent infections in adult ICUs: A randomized clinical trial. JAMA. 2023;330(14):1337-1347. PMID: 37815567.

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**Adapted from** “Universal ICU Decolonization: An Enhanced Protocol”:

[*https://www.ahrq.gov/hai/universal-icu-decolonization/index.html*](https://www.ahrq.gov/hai/universal-icu-decolonization/index.html)

and

“Toolkit for Decolonization of Non-ICU Patients With Devices”:

[*https://www.ahrq.gov/hai/tools/abate/index.html*](https://www.ahrq.gov/hai/tools/abate/index.html)