Decolonization of Non-ICU Patients With Devices

PREVENT HAIs Healthcare-Associated Infections

Section 3 – Toolkit Overview

What Is the Targeted Decolonization Toolkit and Who Should Use It?

This toolkit is for hospital infection prevention programs or performance improvement committees that wish to initiate targeted decolonization as a strategy to reduce hospital infections outside of intensive care units (i.e., in non-ICUs). This strategy is well suited for hospitals that have already successfully implemented universal decolonization in ICUs to reduce bloodstream infections (including central-line–associated bloodstream infections (CLABSI) and methicillin-resistant *Staphylococcus aureus* (MRSA). For implementing universal decolonization in ICUs, please see the Universal ICU Decolonization toolkit (https://www.ahrq.gov/hai/universal-icu-decolonization/index.html).

The Targeted Decolonization Toolkit provides a roadmap to implement topical decolonization for adult non-ICU patients who have selected medical devices. The regimen of topical decolonization includes the use of chlorhexidine as antiseptic soap for bathing and the application of mupirocin antibiotic ointment to the nares to reduce body bacterial bioburden and abate infection. It is based upon a large-scale pragmatic clinical trial (**A**ctive **Bat**hing to **E**liminate [ABATE] Infection Trial)[1] conducted in 53 community hospitals in HCA Healthcare that found a 37 percent reduction in multidrug-resistant organisms and a 32 percent reduction in all-cause bloodstream infections among patients with three specific devices: central lines, midlines, and lumbar drains. This toolkit focuses on the devices studied in the ABATE Infection trial (central lines, midline catheters, and lumbar drains). This does not preclude its use in patients with other devices (e.g., urinary catheters), but such use would be based on pragmatic needs or literature evidence other than from the ABATE Infection trial.[1,2]

Created for clinicians by clinicians, the targeted decolonization toolkit for non-ICU patients with devices is designed to serve as a roadmap for hospital champions of this intervention and frontline staff. This toolkit provides the necessary information and decision-making tools required to perform an evidence-based assessment of the need for this intervention and the hospital's readiness for adoption. Should the decision be made to implement targeted decolonization for patients with devices, this toolkit will provide frontline staff with training tools and resources to support change outside the ICU, presented through a step-by-step guide including the decolonization protocol, training modules, visual aids, skills assessment, and answers to frequently asked questions.

The toolkit assumes that there is existing infrastructure for quality improvement by which interventions and campaigns usually occur. The toolkit is well suited for hospital leaders in infection prevention or quality improvement seeking a practical, evidence-based strategy to improve care, lower infection rates for adult non-ICU patients with medical devices, and reduce the incidence of MRSA and multidrug-resistant (MDR) pathogens.

The Targeted Decolonization Toolkit WILL:

- Provide decision-making tools and the rationale to help hospital leadership understand the evidence for targeted decolonization of adults with medical devices outside the ICU and help determine if this strategy represents the best course of action for your hospital. The decision-making process is addressed in Section 5.
- Provide directions on how to garner institutional support from key stakeholders to support the adoption of a non-ICU targeted decolonization strategy within adult units.
- Provide evidence-based protocols and instructions, including videos, on how to perform targeted decolonization with chlorhexidine and mupirocin. This toolkit will describe the supplies needed and includes alternative methods or products that hospitals may choose.
- Describe the roles of clinical champions who will oversee the decolonization intervention and support protocol and educational training materials for frontline staff
- Provide tools to assess adherence to the decolonization protocol and reinforce training.

The Targeted Decolonization Toolkit WILL NOT:

- Provide instructions on how to build a comprehensive infection prevention or quality improvement program.
- Address how to construct the basic infrastructure that underlies general quality improvement campaigns.
- Change your usual processes for finding patients who are MRSA-positive. You should continue to use your hospital's current mechanisms for identifying these patients.
- Necessarily be appropriate for all hospitals. Hospital-based assessment and decision making are necessary parts of the implementation process.
- Necessarily be appropriate for children. The toolkit was not evaluated in pediatric populations in the ABATE Infection trial. Therefore, special considerations for pediatric units are not addressed.

Organization of Toolkit for Staff

Table 3-1 below can be used as a reference to direct staff to sections of this toolkit that are relevant to their job descriptions.

Table 3-1. Organization of Toolkit for Staff

Job Description	Sections
Administrators/Decision Makers/Champion	Section 1 – Introduction and Welcome Section 2 - ABATE Trial Investigators and Toolkit Project Team Section 3 – Overview Statement Section 4 – Scientific Rationale Section 5 – Decision Making and Readiness for Implementation Section 6 – Estimated Cost Implications of Reducing Bloodstream Infections in Patients With Medical Devices Section 7 – Action Chart Section 8 – Prelaunch Activities
Physicians	Section 1 – Introduction and Welcome Section 3 – Overview Statement Section 4 – Scientific Rationale Section 9 – Nursing Protocols (if standing order protocol for mupirocin is used)
Nurse Managers and Directors Only	Section 1 – Introduction and Welcome Section 8 – Prelaunch Activities
All Nurses, Including Managers and Directors	Section 9 – Nursing Protocols Section 10 – Instructional Handouts Section 11 – Protocol Training Section 12 – Adherence and Skills Assessments Section 13 – Huddle Documents Section 14 - FAQs and Talking Points

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.
2. Huang SS, Septimus E, Hayden MK, et al. Effect of body surface decolonisation on bacteriuria and candiduria in intensive care units: an analysis of a cluster-randomised trial. Lancet Infect Dis. 2016;16(1):70-9. PMID: 26631833.

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