

## **A multicenter, phased, cluster-randomized controlled trial to reduce central line–associated bloodstream infections in intensive care units.**

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Marsteller JA, Sexton B, Hsu Y-J, et al. A multicenter, phased, cluster-randomized controlled trial to reduce central line-associated bloodstream infections in intensive care units\*. Crit Care Med. 2012;40(11):2933-9. doi:10.1097/CCM.0b013e31825fd4d8.

<https://psnet.ahrq.gov/issue/multicenter-phased-cluster-randomized-controlled-trial-reduce-central-line-associated>

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The [Keystone ICU project](#) was able to nearly eliminate [catheter-related bloodstream infections](#) (CRBSI) in more than 100 ICUs in Michigan through use of an evidence-based [checklist](#) and a [comprehensive unit-based safety program](#). However, as a pre–post cohort study, it was unable to clearly establish a causal relationship between the intervention and the decrease in CRBSIs. This study utilized a multicenter, phased randomized controlled trial design to validate this causal relationship. Both groups in this study dramatically decreased infection rates after implementation of the multifaceted intervention, and they sustained these rates over time. This finding lends further evidence for the [preventability](#) of most CRBSIs.