

Reply to the Letter to the Editor: *Staphylococcus aureus* Screening and Decolonization in Orthopaedic Surgery and Reduction of Surgical Site Infections

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To the editor:

We appreciate the meta-analysis performed by Verhoeven and colleagues and respect that it is a well-conducted meta-analysis only looking at randomized, prospective studies. The benefit of this analysis is that the authors were able to combine the study results to provide statistics to determine the significance of *Staphylococcus aureus* screening and decolonization, which demonstrated significance in surgical patients. However, because the authors narrowed their search parameters so greatly, they only included 3 orthopaedic randomized, prospective studies.

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For our systematic review, we purposely laid out a search for all orthopaedic literature evaluating *S aureus* screening and decolonization. To our knowledge, this type of systematic review had not yet been performed in orthopaedics before, but had been conducted in general surgery. We did not attempt to perform a meta-analysis, as we knew it would not be appropriate to combine data mathematically from studies of such varied designs. We purposely included retrospective and nonrandomized studies to provide an increased number of studies, which all reported the trend that *S aureus* screening and decolonization was effective for reducing surgical site infections. Although the authors correctly pointed out that the entire patient population of Bode et al. [1] was utilized in our review, even if the study was removed from our review, the results of our findings would still show favorable results for *S aureus* screening and decolonization.

In summary, we believe that both our systematic review and the meta-analysis of Verhoeven and colleagues demonstrate that there is a trend for *S aureus* screening and decolonization to reduce surgical site infections in orthopaedics. We wholeheartedly agree that the current orthopaedic literature is lacking in a large, prospective, randomized control trial evaluating the effectiveness of a *S aureus* screening and decolonization strategy in orthopaedic patients, specifically total joint arthroplasty patients. Conducting such a study would be the most robust method to determine if this protocol is effective. However, as the authors noted, this would be a sizeable study, since the prevalence of orthopaedic surgical site infections is low. For now, we believe that our systematic review and the meta-analysis of Verhoeven and colleagues both provide support for instituting *S aureus* screening and decolonization protocol in orthopaedic patients, and further research is needed either to strengthen or refute this finding.

Reference

1. Bode LG, Kluytmans JA, Wertheim HF, Bogaers D, Vandenbroucke-Grauls CM, Roosendaal R, Troelstra A, Box AT, Voss A, van der Tweel I, van Belkum A, Verbrugh HA, Vos MC. Preventing surgical-site infections in nasal carriers of *Staphylococcus aureus*. *N Engl J Med*. 2010;362:9–17.