

eters can prevent bacteriuria in hospitalized patients during short-term catheterization...^{4(p116)} Lastly, Niel-Weise et al.⁵ do conclude that there are insufficient data to support the use of silver-coated catheters because of the paucity of well-controlled studies.⁵ However, in another meta-analysis (not referenced in the compendium), Saint et al.⁶ conclude that “this meta-analysis clarifies discrepant results among trials of silver-coated urinary catheters by revealing that silver alloy catheters are significantly more effective in preventing urinary tract infections than are silver oxide catheters.”^{6(p236)}

Lo et al.² also state that “silver-alloy catheters may decrease bacteriuria but have not been shown to decrease symptomatic infection or other undesirable outcomes.”^{2(p543)} This statement contradicts the statement by Brosnahan et al.³ that “the risk of symptomatic urinary tract infection was also found to be reduced with the use of silver alloy catheters.”^{3(p1)} Other unreferenced publications, such as those by Newton et al.⁷ and Karchmer et al.,⁸ offer similar conclusions. In addition, the value of reducing bacteriuria is described in section 1.4^{2(p542)} of the article by Lo et al.,² wherein references are provided to support statements that bacteriuria can serve as a reservoir for organisms that can be transmitted to other patients or lead to sepsis.

Finally, section 4^{2(p543-46)} of the article by Lo et al.² lists many recommendations for implementing prevention and monitoring strategies. The great majority of these are people dependent and resource intensive. Nursing staff constraints and fatigue can lessen the impact of people-dependent measures, especially over time and during off-hour shifts. The use of silver alloy-coated catheters offers a strategy that is independent of infrastructure and bedside practices. Although cost-effectiveness data are limited, the data that exist support the use of these catheters.^{9,10}

Device manufacturers share with clinicians a common goal dedicated to reducing the risk of healthcare-associated infection. We want to ensure that Foley catheters are used only when clinically indicated. For patients who need a Foley catheter, we want to reduce the risk of infection. The decision to use an antimicrobial-coated catheter should be based on the best available evidence, and we believe that the evidence supports the use of silver alloy-coated Foley catheters in patients at risk of a catheter-associated urinary tract infection.

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Reply to Ciavarella and Ritter

To the Editor—Ciavarella and Ritter¹ discuss 4 meta-analyses in their letter questioning the recommendation that addresses routine use of antimicrobial-coated indwelling urethral catheters in the recently published compendium of strategies to prevent healthcare-associated infections.² They acknowledge Niel-Weise et al.³ concluded that evidence does not support the use of antimicrobial catheters and that there are substantial problems with the quality of most reported studies. The Cochrane review of Brosnahan et al.,⁴ as Ciavarella and Ritter¹ note, concluded that silver-alloy catheters are associated with a decrease in asymptomatic bacteriuria and symptomatic infection, but it also concluded that “further economic evaluation is required to confirm that the reduction of infection compensates for the increased cost.” This Cochrane review was updated in 2008, subsequent to the publication of the compendium.⁵ The updated review again concluded that catheters coated with silver alloy or antibiotics may decrease asymptomatic catheter-acquired bacteriuria but that study quality is generally poor and further economic analysis is needed. Symptomatic urinary infection was addressed in only one study in the update, with no benefit

reported. The meta-analysis of Saint et al.⁶ is an early publication that incorporated clinical trials only to 1993, which were also incorporated into the later meta-analyses.^{3-5,7} The meta-analysis by Johnson et al.⁷ concluded that there is only "fair quality evidence"^{7(p116)} that antimicrobial catheters can prevent bacteriuria in hospitalized patients during short-term catheterization and that there is no evidence for prevention of symptomatic infection. Johnson et al.⁷ concluded that the poor quality of published studies and the lack of valid economic analysis mean that further studies are required to clearly define the role of these catheters. The articles by Newton et al.⁸ and Karchmer et al.⁹ to which Ciavarella and Ritter¹ referred were considered in the systematic review of Johnson et al.⁷ As noted in the compendium, several more-recent publications not included in these meta-analyses^{10,11} raise further questions about the effectiveness of antimicrobial catheters.

Thus, the recommendation in the compendium to "not routinely use silver-coated or other antibacterial catheters"^{2(p546)} is appropriate, given the evidence. This topic, however, remains controversial, and this is acknowledged by the inclusion of "use of antimicrobial-coated catheters for selected patients at high risk for infection"^{2(p546)} as an unresolved issue in the compendium.

The ultimate solution for catheter-acquired urinary infection seems to require the development of catheter materials that are biofilm resistant. Device manufacturers certainly have an important role to play in achieving this goal. The introduction of potentially beneficial devices, however, must be accompanied by clinical trials that are methodologically rigorous, evaluate important clinical outcomes, and support the use of the devices.

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Importance of Postoperative Factors in the Study of the Epidemiology of Surgical Site Infection Due to Methicillin-Resistant *Staphylococcus aureus*

We read the recent article by Anderson et al.¹ with interest and commend their effort to shed light on the timely topic of surgical site infection (SSI) due to methicillin-resistant *Staphylococcus aureus* (MRSA). However, we wish to comment on some of the limitations and conclusions of their study.

With regard to surgical site isolates, the definition of MRSA and the method for identifying MRSA were not stated. Since this was a multicenter study, it would have been desirable to have used a uniform definition and method for identifying MRSA across the entire network of participating hospitals. In addition, the frequency with which polymicrobial results were detected (ie, MRSA and other organisms growing concurrently from the same specimen) and how they were handled in the data analysis (if at all) were not presented.

It was interesting that the postulate by Anderson et al.¹ that preoperative patient debility is a risk factor for MRSA colonization—and therefore infection—was not consistently supported by their own data. Specifically, they failed to find a significant association between MRSA SSI and admission from outside facilities that are likely to house debilitated patients (eg, a nursing home or a rehabilitation facility).¹ Is the failure to confirm such an association due to a type 2 error,