

**Infection control in hospitals: how much do we need active surveillance**

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Several interventions and strategies that have been documented in the literature as being successful in the prevention and control of transmission of resistant pathogens have been recently reviewed. Whereas it is unclear which bundles of interventions are effective, there is a clear suggestion that multiple simultaneous interventions can be effective in reducing infections by multidrug-resistant microorganisms (MDROs). Among these, active surveillance cultures are the most controversial tools to improve MDRO control and compliance with hand hygiene, standard and contact precautions.

Given the lack of high-quality evidence, current practices are variable: some institutions carry out active surveillance and isolation of patients, whereas other institutions do not screen systematically and isolate only patients diagnosed with infections caused by these pathogens. Moreover, existing evidence supports screening and control interventions as cost effective in decreasing transmission of MRSA and VRE in Intensive Care Units (ICUs), but there remains skepticism on whether these measures are cost-effective or even detrimental to the quality of patient care in non-ICU settings. For instance, a recent study evaluated the impact of active screening and contact precautions on compliance with individual and composite process of care quality measures, and found that contact isolation was associated with lower adherence to the composite pneumonia process-of-care measure, whereas other composite measures were not affected.

Despite these ongoing controversies, we will discuss in this presentation evidence arguing in favor of active surveillance and contact precautions as the single most important measure to prevent the spread of MDROs, in conjunction with improved hand hygiene compliance. We will first focus on sporadically occurring MDRO and then discuss the effectiveness of active surveillance and contact precautions in settings with hyperendemic MDRO. In particular, we

will present detailed data about the added value of active surveillance strategies including targeted screening on control of nosocomial MRSA transmission. Two important studies have produced conflicting results on the implementation of active surveillance cultures and their effectiveness in MRSA control. Harbarth et al., found no reduction in the incidence of nosocomial MRSA infections among surgical patients enrolled in a single, large institution crossover cohort trial, whereas Robicsek et al. found that the use of ASC reduced MRSA infections by nearly 70% in an observational cohort study performed in two affiliated hospitals. More recently, two important studies carried out in the United States have highlighted the difficulties in gaining sustained and reproducible results about the effectiveness of active surveillance cultures for MRSA control.