



The Problem:

Airborne Bacteria in ORs Cause Expensive Implant Infections

Infection rates are increasing and costly because...



Patient Risk Factors

Increasing age and comorbidities in patient population



Cost

No reimbursement to treat implant infections



Dynamic OR Environment

Difficult to control factors that cause airborne bacteria

The Solution:

Air Barrier System (ABS)

ABS delivers localized clean air continuously to the surgery site, creating a barrier that prevents the intrusion of microorganisms directly over the surgical wound.

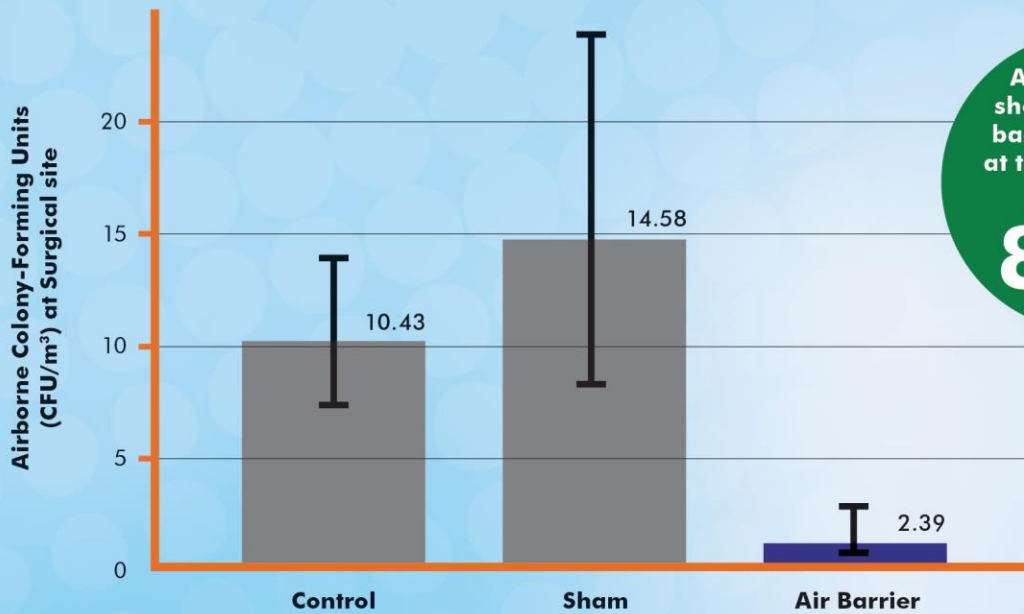


ABS has been shown to reduce bacterial density at the incision site

UP TO
84%¹

Airborne CFUs/m³ at the Surgical Site

by Study Group showing a significantly ($P < .001$) lower CFU Count in the ABS Group.



A group of 36 patients were randomized into three groups to study the effect of a directed air flow system (ABS) on reducing airborne particulate and colony-forming units (CFU) in the surgical field during total hip arthroplasty.

The Control group represented a control condition using the current standard procedure for the surgeon. The Sham group represented a second control condition in which the ABS was in place during surgery but never turned on. The third group represented the experimental condition in which the ABS was in place and turned on immediately before initial incision was made and turned off after closure of the surgical wound.

The Air Barrier System dramatically reduced particulate counts and the presence of CFUs at the surgical site. Particulate counts were decreased on average by at least 66% in the ABS group compared with the Control and Sham groups, including an average 80% reduction in particulate more than 10 μm in diameter.

In conclusion, the Air Barrier System is effective in reducing airborne particulate and CFUs. Its effectiveness in reducing CFU seems to be related to its ability to reduce particulate that may carry and allow proliferation of bacteria.



4910 Wright Road • Suite 170 • Stafford, Texas 77477
281.565.5700 FAX 281.565.5712 www.nimbicsystems.com

¹Stocks GW, O'Connor DP, Self SD, Marcek GA, Thompson, BL. Directed air flow to reduce airborne particulate and bacterial contamination in the surgical field during total hip arthroplasty. J. Arthroplasty 2011; 26(5)