Facts About Forced-Air Warming

Safe, effective forced-air warming proven to reduce surgical site infections

As the leaders in forced-air warming, we want to address some inaccuracies about forced-air warming that makers of competing technologies are promoting. We urge you to review the facts, forced-air warming’s proven track record of safety and efficacy, and your own experience in assessing the important role forced-air warming plays in patient care.

• Forced-air warming is the gold standard of care for managing peri-operative normothermia in operating rooms throughout the world.1-6

• During the past 20 years, more than 100 million patients worldwide have been warmed peri-operatively using Bair Hugger therapy forced-air warming. In that time, there has never been a report of a surgical site infection linked to Bair Hugger therapy use.

• Forced-air warming has been studied extensively – there are more than 100 published papers documenting its clinical benefits.

• Published research papers have shown that the use of forced-air warming does not increase either the risk of wound contamination in the operating room or bacterial contamination of operating rooms.7,8 In fact, when tested during actual surgical conditions, research has shown that forced-air warming actually decreases the bacterial count at the surgical site.8

• Normothermia is an important tool in the fight against surgical site infections (SSIs).9-11 Healthcare quality initiatives, including guidelines from the National Institute for Health and Clinical Excellence (NICE), the National Health Service (NHS) Saving Lives program, the 1,000 Lives Campaign in Wales and Scotland’s Patient Safety Programme all note the importance of normothermia maintenance in SSI reduction. Several of these organisations specifically mention forced-air warming as a key means of maintaining normothermia.

• Because Bair Hugger blankets are single use, they cannot transmit infection from one patient to another. The U.S. Centers for Disease Control and Prevention recommends disposable products for patients with known or suspected infections requiring contact precautions.14

• Most forced-air warming blankets are not designed to be sterile, nor do they enter the sterile field. When used properly and as intended, the filtered air flowing from a warming unit is gently and evenly dispersed throughout the attached warming blanket, which is isolated from the surgical site by an adhesive strip on the blanket and surgical barrier drapes. And like many kinds of theatre equipment, forced-air warming units also are isolated from the sterile field with surgical drapes.

• Arizant Healthcare recommends routine cleaning and maintenance of our warming units. Specific instructions for cleaning the warming unit and regularly changing the filter through which air flows have proven appropriate throughout Bair Hugger therapy’s 20-year history. The CDC has published extensive guidelines on the appropriate procedures for cleaning medical equipment and avoiding nosocomial infections. These guidelines do not recommend or even mention cleaning the interior of convective warming devices.

• When tested during actual surgical conditions, forced-air warming systems do not increase bacterial counts at the operating site, which has been shown in both laminar and standard airflow operating theatres.15,16

• Forced-air warming blankets are designed to produce local, short-range increases in airflow velocity. Flow visualisation techniques demonstrate that the airflow from Bair Hugger blankets has no significant effect on operating theatre airflow.15,16

• Bair Hugger warming units provide a second level of filtration. Operating theatre air is already filtered, and the Bair Hugger unit filters inlet air again with a high efficiency 0.2 micron filter. Air from the warming blanket is also isolated from the surgical site by barrier drapes and is forced down by the operating theatre air curtain.

• Bacterial shedding from operating room personnel, especially from foreheads, eyebrows, and ears is the most significant source of bacterial contamination.17

• The motion of air in the theatre is regulated and tested. Air velocity typically 25-35 ft/min18, while air exchange is typically 20-25 times per hour.18 Laminar flow is believed to reduce turbulence using air moving in an orderly way as a single column. Air velocity within the operating theatre is many times stronger than that of the forced-air warming blanket.

We know forced-air warming. We created the category. It’s at the core of who we are and what we do. Every day, we devote ourselves to working with health care providers across the globe to bring patients the benefits of normothermia.
References:


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Issued: 5/11 603184C

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