

# Reduce linen usage

**Stryker Mistral-Air® Forced Air Warming System, on average, reduces perioperative cotton linen usage by 86 percent.**



## Situation

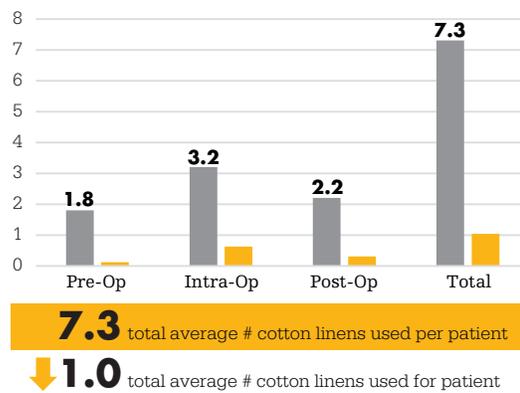
The maintenance of patient normothermia has become increasingly important in today's perioperative environment even while caregivers are also being pressured to cut costs. Essentially they must do more with less.

Using cotton linens is commonplace in perioperative patient warming processes nationwide, however they require constant replenishment as they dissipate heat quickly (see Figure 3). It is also common practice to use cotton linens in conjunction with forced air warming technology in order to keep the forced air warming blankets in place.

## Methodology: Warming Analyses

Stryker representatives conducted warming analyses at facilities across the country. The studies comprised a total of 608 patients who were tracked through the perioperative environment to determine the number of cotton linens used per patient in the Pre-Op, Intra-Op, and Post-Op stages. On average, 7.3 cotton linens were used per patient.

**Average # of cotton linens used per patient**



## Methodology: Warming Trials

Stryker representatives then conducted a trial in which they replaced the facilities' current vendor products and processes with Mistral-Air reflective blankets. They tracked 558 patients through the perioperative environment and found the Mistral-Air Forced Air Warming System reduced cotton linen usage by 86 percent to an average of 1 linen per patient.

## Technology

Two key Mistral-Air Forced Air Warming System features, Diffusion Technology and Reflective Technology, contributed to the substantial reduction in cotton linen usage.

### Diffusion Technology

The Mistral-Air Forced Air Warming System combines a high-volume blower with a low-pressure blanket design to minimize the disruption of airflow in the clinical environment. Instead of forcing air through multiple openings (common with an industry-standard blanket) the blower quietly and evenly diffuses air through the specially designed accompanying Mistral-Air Plus Warming Blankets. This technology eliminates individual high-pressure jets of air that can blow on patients' skin and cause the blanket to loft. As a result, the disposable stays in position, keeping warm air on the patient and out of the surrounding environment, thereby reducing the need for cotton linens in addition to forced air warming.

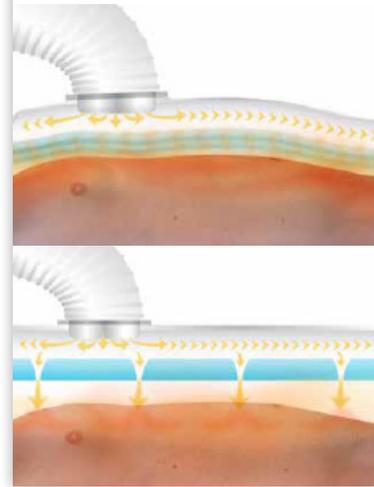
### Reflective Technology

Stryker's reflective options reduce heat loss by up to 80% in the perioperative environment<sup>3</sup>. Warm cotton linens dissipate heat and do not efficiently prevent heat loss from the patient. Cotton linens must be frequently replenished in order to maintain appropriate perioperative patient temperature. The reflective forced air warming blanket replaces these linens and can be used throughout the perioperative environment to maintain heat both passively and actively.

## Conclusion

Mistral-Air Forced Air Warming System reflective blankets can nearly eradicate the need for cotton linens in the perioperative environment thanks to its Diffusion and Reflective Technologies, allowing caregivers to do more with less.

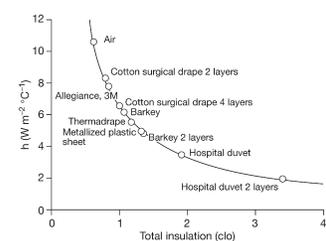
**Diffusion technology**  
Figure 1



**Reflective technology**  
Figure 2



**Total insulation**  
Figure 3



## References

1. Brauer, M.D., Ph.D., D.E.A.A., A., Peri, M.D., T., English, M.D., F.R.C.A., M., & Quintel, M.D., Ph.D., M. 9n.d.) Perioperative Thermal Insulation. Surgical Technology International, XVI, 41-45.