Since their introduction in the 1980s, single-use forced-air warming blankets have proven highly effective at combating inadvertent perioperative hypothermia (core temperature lower than 36ºC), a surgical complication that increases risk of wound infection, bleeding, delayed recovery, and morbid cardiac events for all surgical patients.\(^1\)

Forced-air warming blankets also have a remarkable history of safety, but serious issues can arise when these single-patient use products are used on multiple patients ("reused").

If patients are hypothermic after surgery, it’s too late to avoid risk. For this reason, normothermia guidelines call for active intraoperative patient warming. Several healthcare organizations specifically recommend forced-air warming (table 2), which has been shown to be more effective than conductive warming methods such as water mattresses.\(^2\)

Single-use, forced-air warming is both clinically effective and cost effective. Please use it correctly.

**Healthcare organizations calling for intraoperative forced-air warming to maintain normothermia**

<table>
<thead>
<tr>
<th>United States</th>
<th>United Kingdom</th>
<th>Australia</th>
<th>Canada</th>
</tr>
</thead>
</table>

To learn more contact your 3M Patient Warming representative.

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**PLEASE USE SINGLE-USE BLANKETS ONLY ONCE.**

Compared to the costs associated with hypothermic patients, \textit{single-use}, forced-air warming blankets are remarkably inexpensive.

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\(^1\)Please refer to your 3M Patient Warming representative.

\(^2\)A trademark of 3M Company, used under license in Canada.

\(^3\)A trademark of Arizant Healthcare Inc., used under license in Canada.

**Is it safe to reuse single-use blankets?**

3M™ Bair Hugger™ warming blankets were designed for single-patient use to eliminate the possibility of bacterial cross-contamination. Clinical evidence supports this precaution.

An independent investigation recommends against the repeated use of single-use blankets because of bacterial contamination, regardless of whether these blankets are used intra-operatively or post-operatively. The bacteria type most often identified in the study was coagulase-negative staphylococci from patient skin, a major cause of post-operative surgical site infections.

Improper use of any medical product can also undermine its safety and effectiveness. Single-use, forced-air warming blankets are not designed to withstand the rigors of multiple use or decontamination between patients.

**Does placing a cotton blanket between the patient and the single-use blanket reduce cross-contamination risk?**

There is no evidence that this practice reduces the potential of patient-to-patient contamination. But placing a cotton blanket between a forced-air warming blanket and a patient is certain to reduce the forced-air warming blanket’s effectiveness. Forced-air warming blankets are designed to transfer warmth primarily with moving air – air that is effectively blocked by a cotton blanket.

Over 100 studies support the safety and efficacy of forced-air warming for maintaining patient normothermia. This evidence does not apply to forced-air warming when it is improperly used.

**Inadvertent hypothermia: the impact on hospital costs**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Decrease for normothermic vs. hypothermic patients</th>
<th>Your cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infection (probability)</td>
<td>64%</td>
<td>Per surgical site infection?</td>
</tr>
<tr>
<td>Red blood cell use (units)</td>
<td>86%</td>
<td>Per unit of blood?</td>
</tr>
<tr>
<td>ICU time (hours)</td>
<td>44%</td>
<td>Per hour of ICU time?</td>
</tr>
<tr>
<td>Myocardial infarction (probability)</td>
<td>44%</td>
<td>Per MI?</td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>44%</td>
<td>Per day of hospital stay?</td>
</tr>
</tbody>
</table>

Multiple patient use or reuse of single-use blankets is usually done to reduce cost. But the cost of effective forced-air warming therapy is small compared to the high costs associated with inadvertent hypothermia.

A meta-analysis of outcomes and patient care costs found that maintaining normal patient temperatures resulted in significant decreases across a wide range of expensive complications (Table 1). Even a conservative estimate of the costs of these complications supports the cost-effectiveness of warming therapy that succeeds in reducing rates of inadvertent hypothermia.

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