## **ORIGINAL ARTICLE**

## Collaborative Development of a Perioperative Thermal Care Bundle Using the Guideline Implementability Appraisal Tool

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**Background:** Perioperative bypothermia significantly increases a patient's risk of adverse complications, such as surgical site infection; morbid cardiac events, and surgical bleeding. Although guideline recommendations are relatively simple and inexpensive, they are often not adhered to in clinical practice. Knowledge tools are tangible resources that assist clinicians to provide evidence-based care.

**Purpose:** *This article reports the collaborative development of a knowledge tool—a perioperative thermal care bundle.* 

**Methods:** A multidisciplinary panel of experts used the online GuideLine Implementability Appraisal tool to prioritize and select recommendations for inclusion in the care bundle.

Design: Collaborative, iterative design.

**Finding:** Through a consensus process, the expert panel selected three main bundle elements: Assess patient's risk of bypothermia and contraindications to active warming; record temperature frequently preoperatively, intraoperatively, and postoperatively; and actively warm, intraoperatively, if they are at high risk, or anytime they are bypothermic.

**Conclusions:** The GuideLine Implementability Appraisal tool was a simple yet comprehensive tool that enabled the development of a care bundle by expert clinicians.

**Keywords:** *care bundle, perioperative inadvertent bypothermia, evidence-based practice, knowledge translation.* 

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**IT IS WIDELY ACCEPTED** by clinicians, the community, and regulatory agencies that clinical care should be evidence based; however, there are many factors that impede the application of research into practice. Evidence-based guidelines (guidelines) have become internationally

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Conflict of interest: None to report.

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1089-9472/\$36.00 http://dx.doi.org/10.1016/j.jopan.2016.05.007 recognized as an essential element for translation of evidence into practice; yet despite their availability, patients are still failing to consistently receive treatments of proven effectiveness.<sup>1,2</sup> It has become abundantly apparent that guidelines alone are not enough to significantly improve quality of care and patient outcomes, and more effort is needed to bridge the gap between guidelines and practice.<sup>2,3</sup>

The knowledge-to-action framework (Figure 1) used to facilitate the uptake of research evidence into practice—recognizes that knowledge creation is composed of three phases: knowledge inquiry, knowledge synthesis, and knowledge tools.<sup>4</sup> Knowledge tools, as described by the framework, are tangible evidence-based resources that are used to facilitate the implementation of evidence into practice.<sup>5</sup> Examples include patient and provider decision aids, care pathways, mobile apps, and care bundles.

The aim of this article is to report the collaborative development of an evidence-based knowledge tool (a perioperative thermal care bundle) by an expert panel of clinicians and academics using the online GuideLine Implementability Appraisal (eGLIA) tool. A future article will report the results of a knowledge translation study evaluating the impact of the care bundle on the quality of perioperative



Figure 1. The knowledge-to-action cycle. This figure is available in color online at www.jopan.org.

thermal care and patient outcomes at four leading Australian hospitals.

## Background

It is well established that keeping patients warm and preventing hypothermia before, during, and after surgery leads to better outcomes. Perioperative hypothermia has been shown to quadruple the risk of surgical site infection,<sup>6</sup> double the risk of morbid cardiac events,<sup>7</sup> and significantly increase the risk of surgical bleeding.<sup>8</sup> Thermal comfort is also an integral component of a patient's overall perception of well-being, and memories of thermal discomfort during the perioperative period are known to adversely affect a patient's overall surgical experience.<sup>9</sup> Together, the physiologic and psychological adverse effects of hypothermia result in prolonged recovery times, lengthier hospital stays, and increased resource use, which translate into greater overall health care costs.<sup>10</sup>

Perioperative hypothermia is preventable, and guidelines exist that synthesize research findings into evidence-based recommendations. The guideline widely used and endorsed in Australia is from the UK National Institute for Health and Care Excellence.<sup>11</sup> The guideline, first published in 2008 and reviewed without change in 2012, consists of 24 evidence-based recommendations based on a comprehensive systematic review, meta-analysis, and cost-benefit report. The key recommendations common to all perioperative hypothermia prevention guidelines are the monitoring of patient temperature and the provision of active warming devices. Although these interventions are relatively simple and inexpensive, there is good evidence that they are often not adhered to in clinical practice. As a result, the published incidence of perioperative hypothermia ranges from 40% to 70%.<sup>12,13</sup> The repeated failure to successfully address this evidence practice gap has led to calls for implementation researchers to identify effective ways for translating the guideline recommendations into clinical practice.<sup>11,14</sup>

One effective approach for facilitating guideline implementation involves the use of care bundles, which comprise a set of high-impact recommendations from guidelines that, when implemented together with a high degree of fidelity, are expected to significantly improve patient outcomes.<sup>15</sup> There Download English Version:

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