



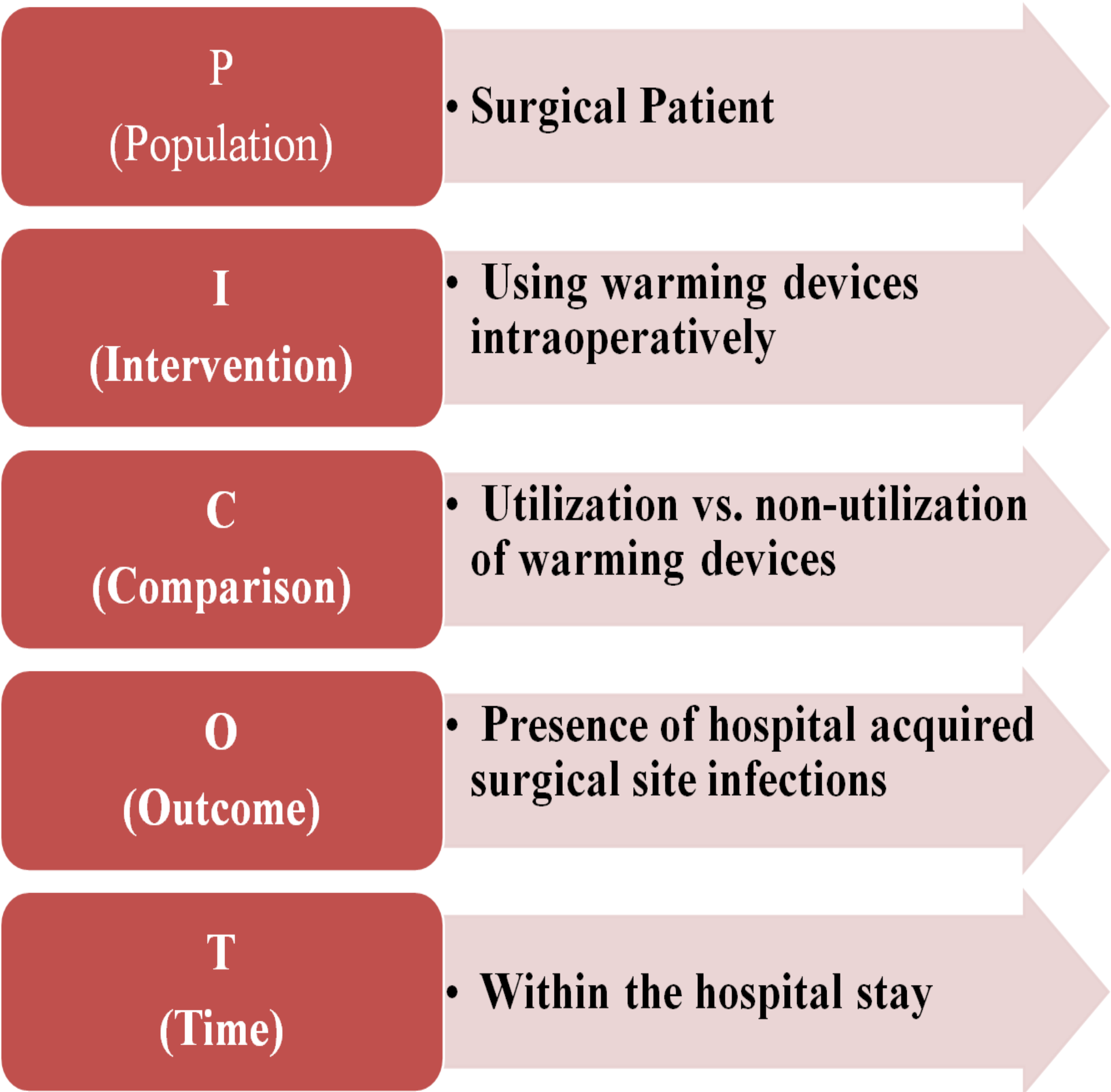
# Does Systemic Body Warming Impact Hospital Acquired Infection Rates?

Rosa Johnson BS, LVN and Deepa Sabu, MHA, BBA

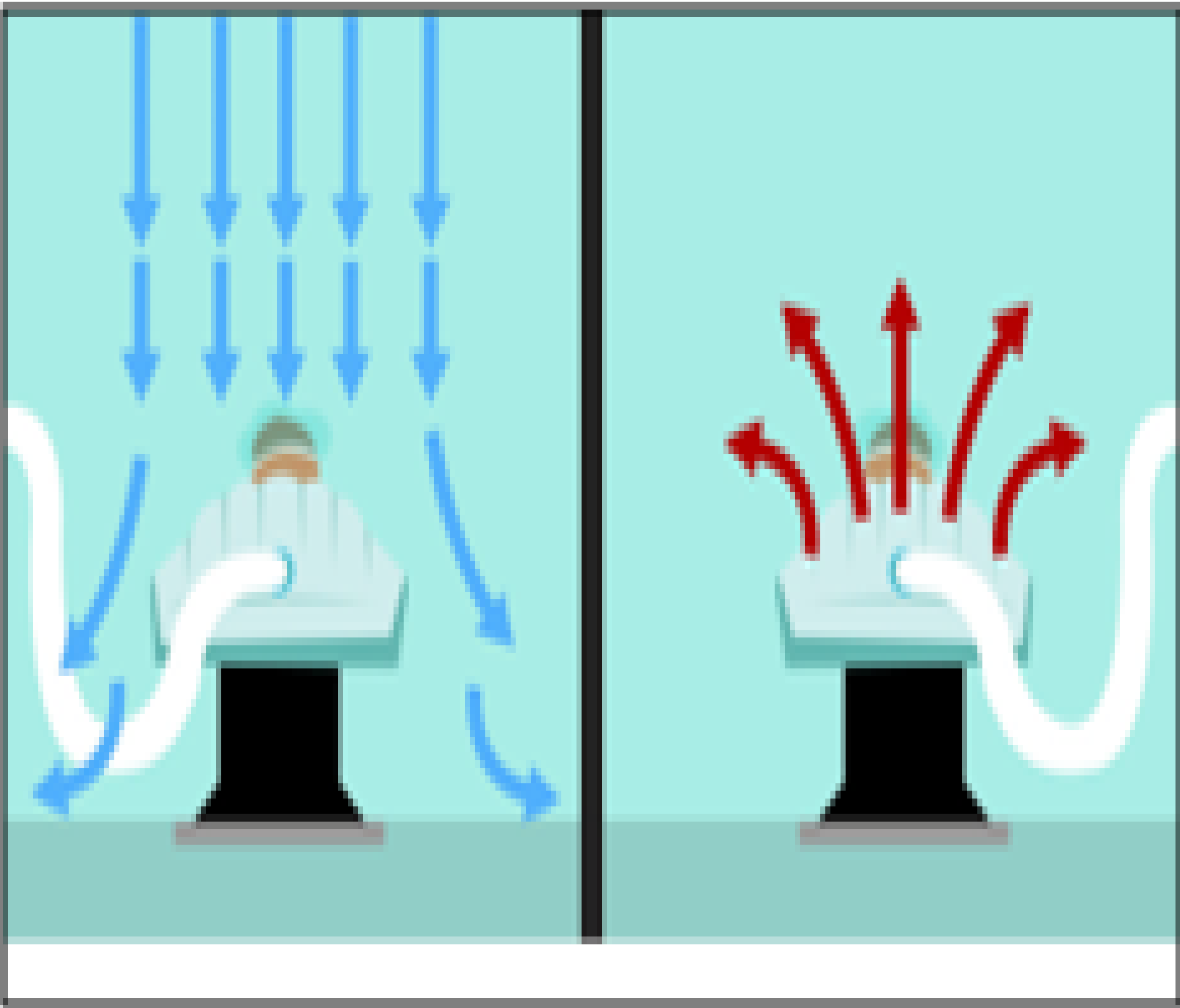
Cheryl Brohard PhD, RN, CNS-ONC, AOCN®, CHPCA® and Lenora McWilliams PhD, MS, RN



## PICOT Question



## Illustration of Forced Air



American Society of Anesthesiologists (2018). [Illustration of the airflow caused by forced air warming]. *Effects of Forced Air Warming on Air Flow around the Operating Table*. Retrieved from <https://goo.gl/images/dJwZZ4>

## Literature Review

**Database:**

- PubMed
- CINAHL
- Google Scholar
- UH Library Database

**Article Selection Criteria:**

- Peer-reviewed article or journal
- Meta-analysis
- Published within the last 19 years (1999-2018)

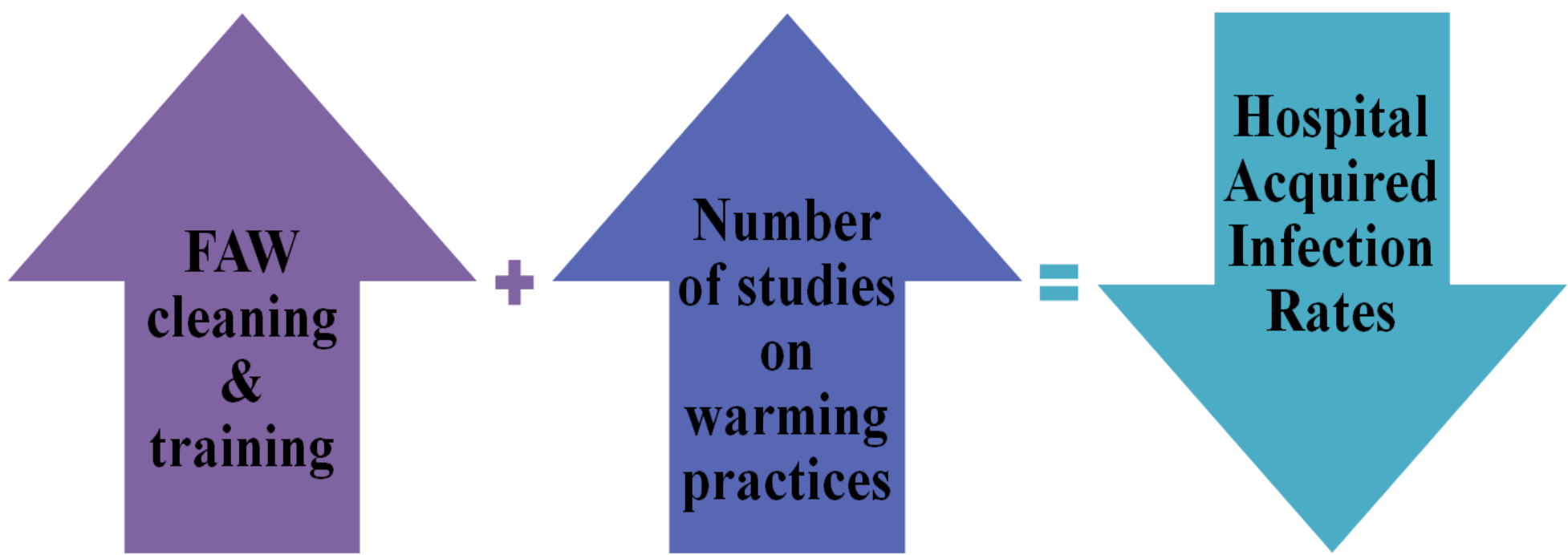
**Key Terms:**

- Warming
- Surgical site infection
- Operating room
- Body warming
- Thermoregulation
- Forced air warmer
- Pre-warming
- Normothermia

## Synthesis

- Thermoregulation or the utilization of warming devices do not reduce the rate or lower the risk of contracting a surgical site infection (SSI).<sup>6</sup>
- Warming devices and forced-air warmers (FAW) introduced new bacterial particles to the operating theatre but this did not increase the rate or promote an increased risk of SSIs.<sup>2, 5, 10, 11</sup>
- Approximately 20 years ago, thermoregulation was thought to prevent or reduce SSI, however, in 2010 new studies indicated that thermoregulation does not reduce rates of SSI. An meta analysis from 2010 revealed no association between normothermia and SSI ( $p = 0.09$ ).<sup>1, 7</sup>
- No significance was noted in SSI rates between warming and non-warming groups ( $p < 0.27$ ).<sup>10</sup>
- Overall infection rate was 38% higher in the warmed group than the control group.<sup>10</sup>
- SSI account for 20% of hospital acquired infections. Maintaining normothermia results in a decreased costs of \$545.40 per patient.<sup>8, 10</sup>

## Evaluation



## Decision to Change

- Develop and implement:
  - ❖ a regulated cleaning schedule of warming devices before and after every surgical procedure <sup>4</sup>
  - ❖ an educational module focused on retraining aseptic and sterile techniques <sup>2</sup>
- Propose a pilot study comparing multiple operating rooms within a single hospital then expand to the entire hospital network <sup>10</sup>
- Conduct a retrospective comparison study including additional surgical populations <sup>9</sup>

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