



# Use of Coolsticks in district general hospital

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## Abstract

**Introduction:** Ethyl chloride spray is conventionally used for testing cold sensation during spinal or epidural blocks. Coolsticks are reusable, durable, non-toxic stainless steel sticks that can be cooled and are a cheaper alternative to ethyl chloride spray. The aim of this study was to estimate the cost and carbon savings of switching from ethyl chloride spray to Coolstick use.

**Methods:** The use of Coolsticks at a single district general hospital's (Good Hope Hospital, Sutton Coldfield, UK) main theatres was audited in July 2023. The volume of ethyl chloride use in the obstetric theatre in 2022-23 was calculated based on pharmacy requisition forms. Estimates of CO<sub>2</sub> equivalent emissions per stick and per ethyl chloride spray use were based on published data (Green Ward study from Dorset). Cost and CO<sub>2</sub> equivalent emissions savings with cold sticks were calculated and extrapolated onto all seven theatres within Good Hope Hospital.

**Results:** Only 25% of anaesthetists used Coolsticks, despite all being aware of their availability. The main reason stated for this was "adherence to usual practice". In the obstetric theatre in 2022-23, 104 cans of ethyl chloride were used. Switching to Coolstick use would save £2,080 and 1,693kg CO<sub>2</sub> equivalent per theatre per year. Extrapolating across the hospital, the potential saving was £14,560 and 11,852 kg CO<sub>2</sub> equivalent per year.

**Conclusion:** Use of Coolsticks is cost-saving and carbon-efficient. National associations should consider publishing formal recommendations to support their uptake. Research around clinical efficacy and patient satisfaction would speed uptake into clinical practice.

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