

Coolstick, A Cool Trick: Can We Do Away With The Spray?

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Introduction

Ethyl chloride is a local anaesthetic spray which provides a cold sensation to check the level of sensory block in neuraxial and regional anaesthetic blocks. Its use is common practice in Obstetrics at New Cross Hospital.

The Problem

- Large volume usage of ethyl chloride spray has both environmental and financial implications including:
- Prolonged breakdown in the atmosphere associated with toxicity risk to animals and birds.
 - Risk of irritation to eyes and lungs of patients and staff.
 - Allergy risk to patients.
 - Significant financial impact on the Trust, costing nearly £1000 per month on average.

The Solution

The Coolstick is a non-toxic alternative; a one-time purchase cold metal stick which is kept in the fridge and can be cleaned after each use. It costs just £80 per stick.

January 2020 – February 2023¹ (Calculations from University Hospital Dorset):

Total cans used:	1999
Average number of cans:	53 per month
Total carbon footprint:	1,779,443kg/CO₂
Average carbon footprint:	47,178kg/CO₂ per month
Total cost of cans:	£38,075
Average cost of cans:	£991.73 per month

Aim

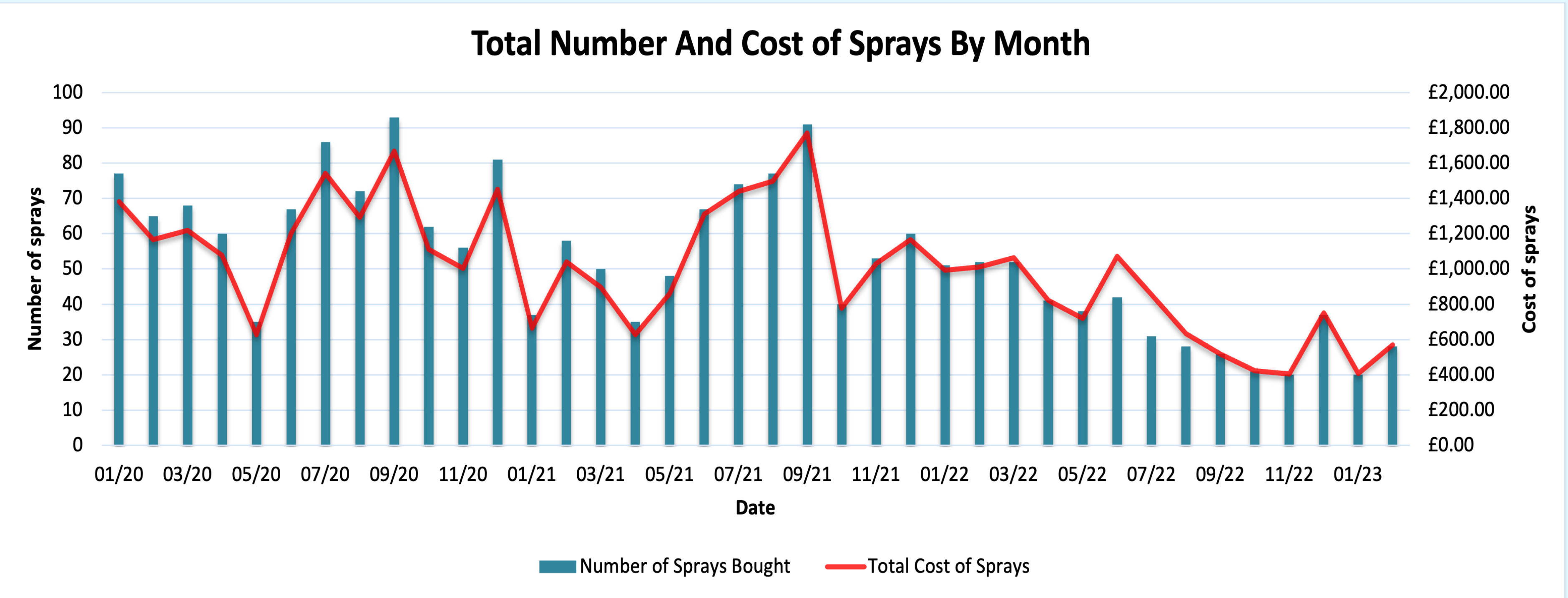
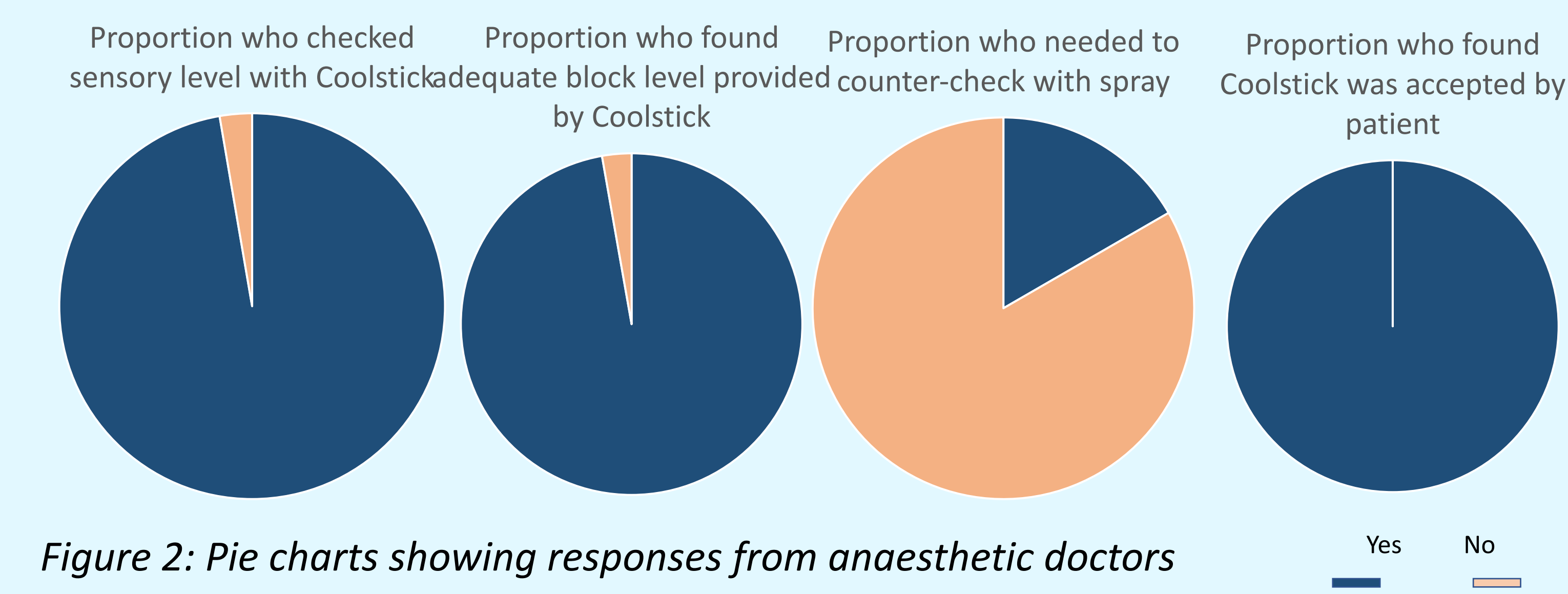
To reduce and eliminate the use of ethyl chloride and replace it with a sustainable, reusable alternative to check the level of sensory blockade.

Methods

We surveyed 37 anaesthetics doctors in maternity theatres over 4 weeks across 4 domains seen in Figure 2.

Discussion

Overall, feedback has been extremely positive with 97% of doctors finding that using the Coolstick alone can provide a confident sensory level, and 100% acceptance by the patient. The Coolstick was found to be readily available for all, easy to use, and gave reproducible results.



Challenges: Providing adequate training to staff regarding proper storage and cleaning of Coolsticks. Language barrier with patients was the main reason reported for needing to counter-check with the spray.

Conclusions and Recommendation: The Coolsticks are a long-term, financially viable and sustainable solution, which should replace all use of ethyl chloride spray.

Next Steps: We will re-audit, and implement the use of Coolsticks into labour ward, orthopaedic and emergency theatres.

References: 1. University Hospitals Dorset Green Ward Competition 2020 Case Studies. (2020) Available at: https://oaa-anaes.ac.uk/assets/_managed/cms/files/Trainee_Hub/Ethyl%20chloride%20case%20study.pdf