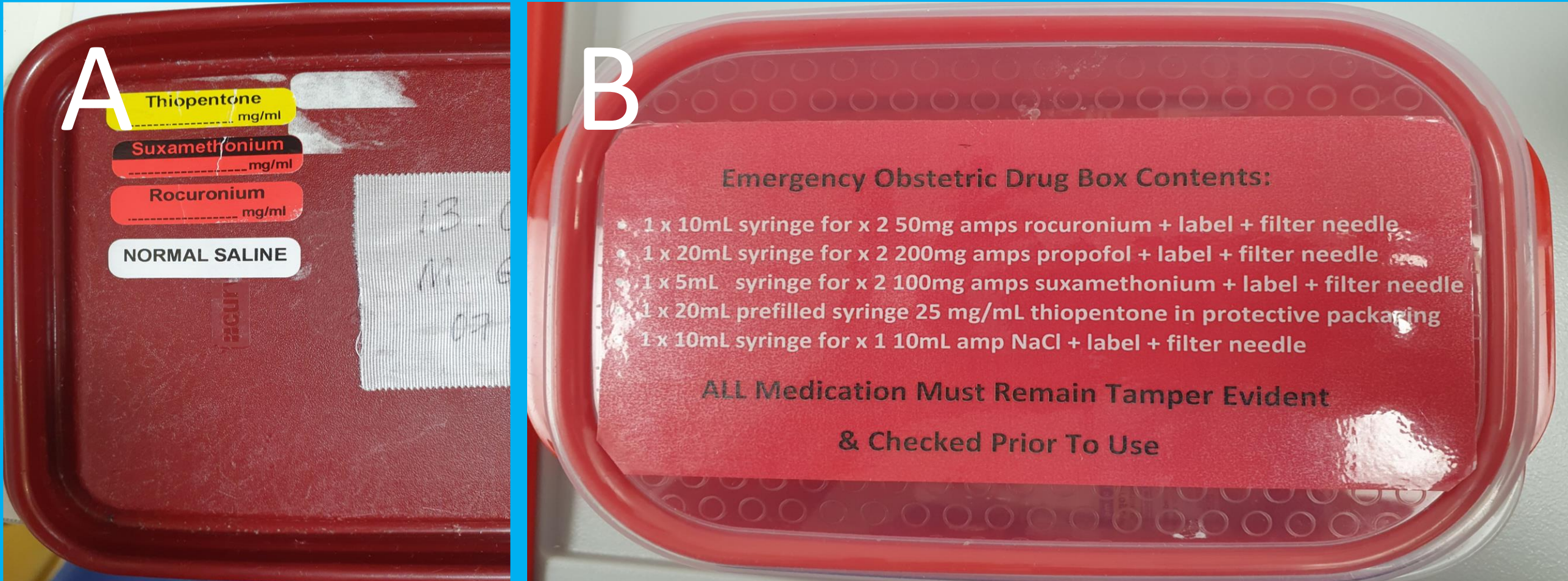


Preventing drug clutter during emergency intubation; an evaluation of the obstetric emergency drug box

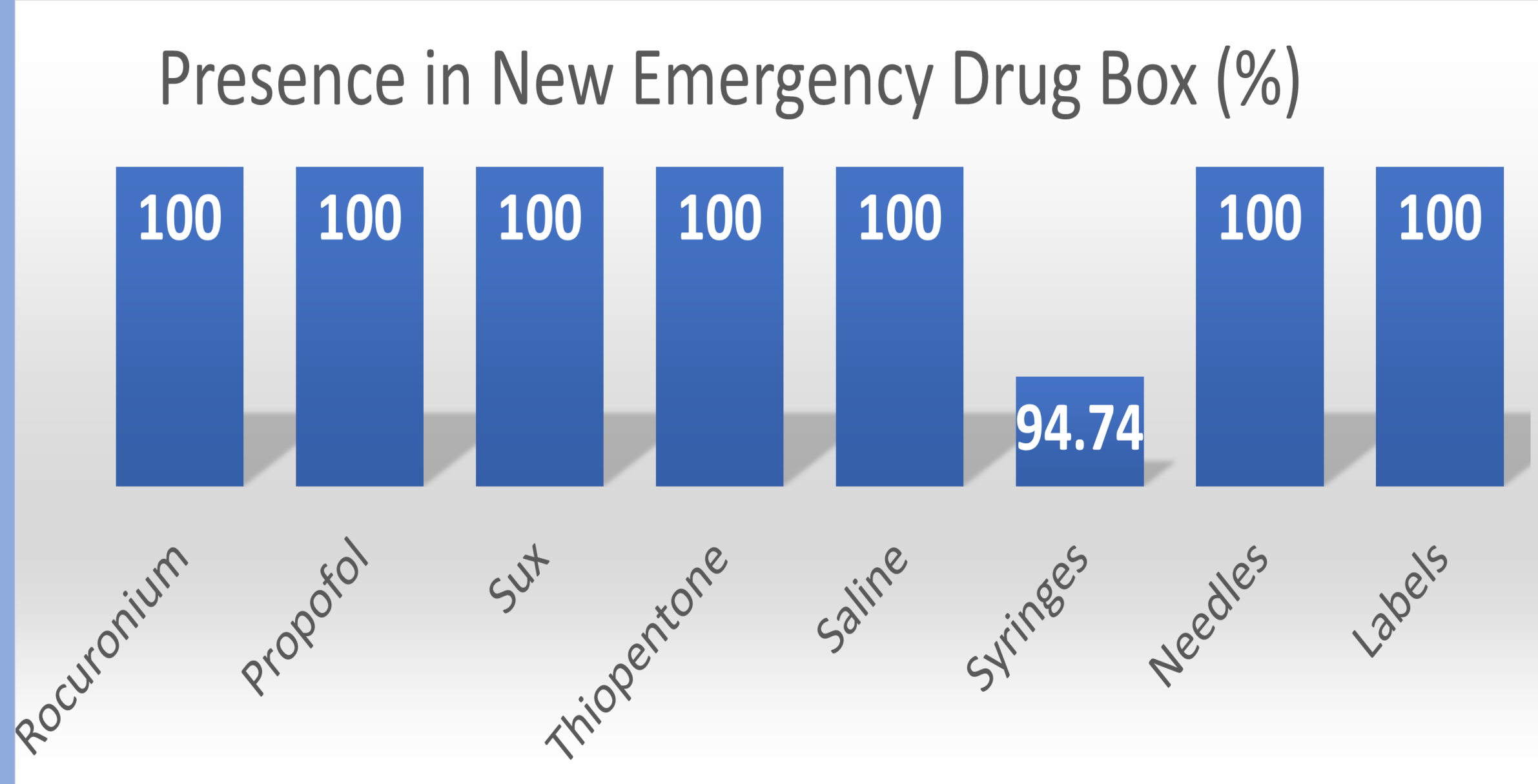
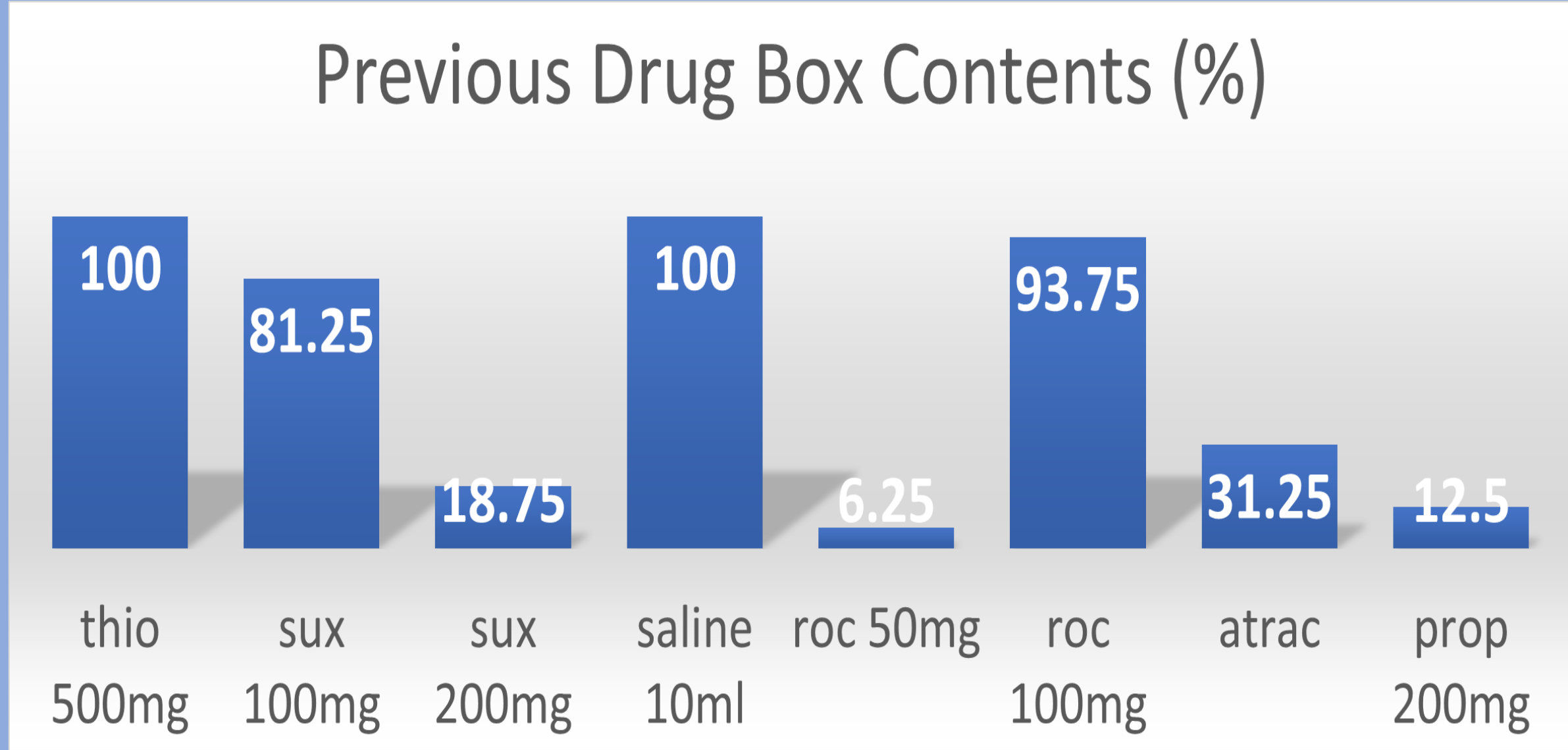
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Introduction Following a critical incident involving wrong drug administration during a general anaesthetic for an emergency lower segment caesarean section, a prepared box was introduced to each of the obstetric theatres in line with RCOA guidance⁽¹⁾. We found that this led to variability in the drugs prepared (dependent on the anaesthetist covering labour ward on a given shift) and whether drugs were drawn up in advance or not. There was also significant wastage, something which has been identified as an issue previously⁽²⁾. To reduce this, a standardised list of emergency drugs was agreed, and these would be placed in a designated container (but not drawn up). We then audited this box for adherence to the change, and measured anaesthetists’ opinion regarding this.

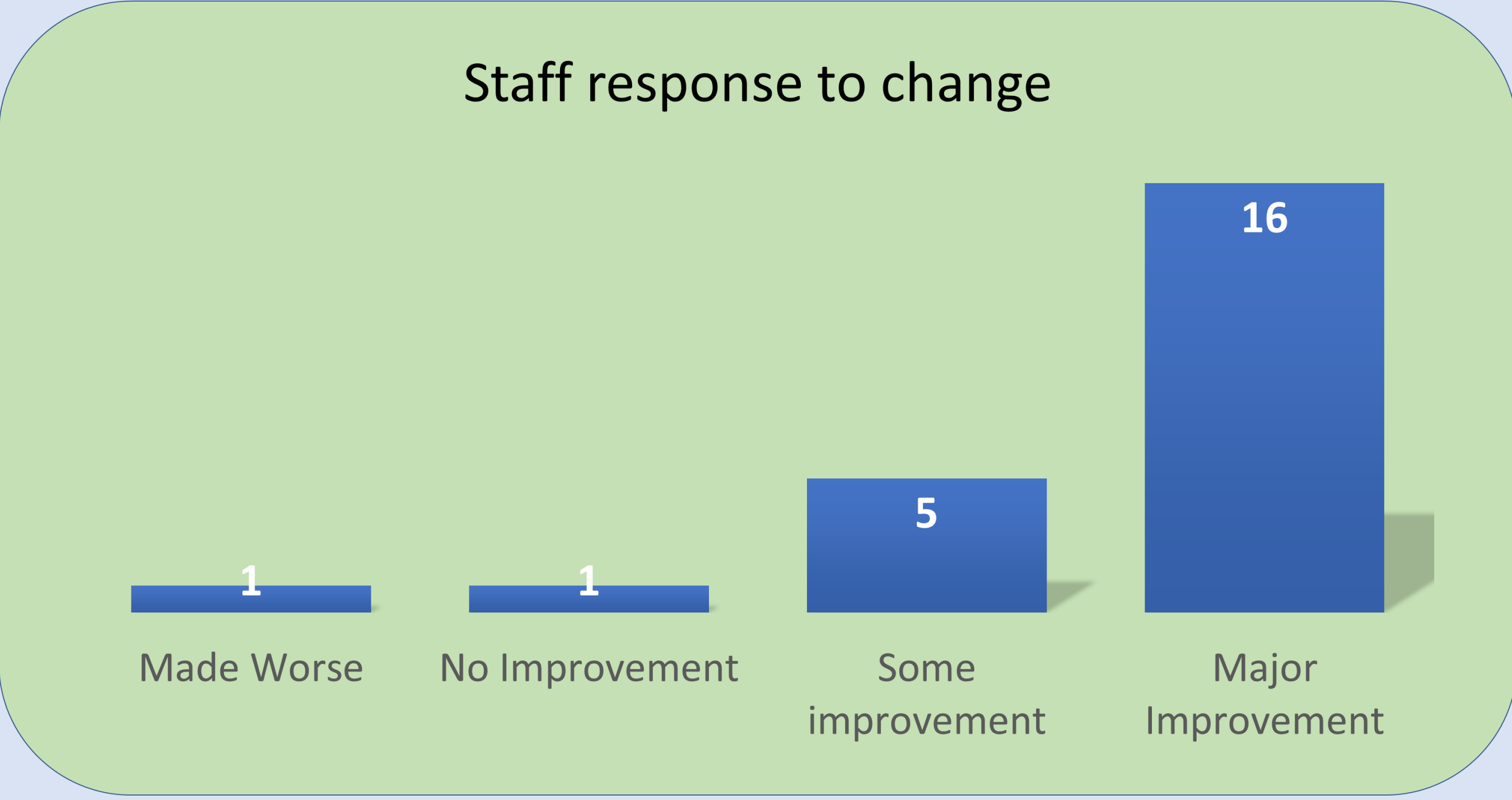
Methods Over a 16-day period, the emergency drugs prepared each day were recorded (n=16), and the frequency each drug and dose was used compared. Following this a standardised list of drugs was developed in collaboration with the pharmacy department, and a labelled box reflecting this created. Then over a four-week period this new box was audited at random (n=19) to ensure the correct contents were being adhered to. Finally, the faculty were surveyed on their opinion of the change, with 23 responses received.



Comparing the drug boxes; A shows the previous box, with no clear instruction on required contents. B is our new box, with clear instructions of the contents as well as instruction regarding drug checking



Results Prior to standardisation, there was a wide variability in the emergency drugs prepared. We found evidence of inappropriate drugs (e.g. atracurium, 31.25%) or insufficient doses (e.g. 50mg rocuronium, 6.25%) to deliver a safe RSI. Following standardisation there was a dramatic improvement in the adherence to the content list of the drugs available, with 100% presence of drugs at doses required and only one incident (5.26%) of the incorrect number of syringes. From the feedback from our colleagues, 16 (67%) of those who had used the emergency drug box felt that the new format was a vast improvement in terms of safety and standardisation of an obstetric emergency general anaesthetic.



Discussion We believe that a relatively inexpensive and simple change has dramatically improved safety in our department in terms of the ability of our faculty to provide a rapid general anaesthetic in the obstetric setting. This is a change we would recommend considering in any anaesthetic department. Going forward we plan to refine the model further, which will help reduce the environmental impact primarily through plastic waste

References
1) <https://roca.ac.uk/sites/default/files/documents/2020-09/Safe%20Drug%20Management%20in%20Anaesthetic%20Practice%20v2.0.pdf>
2) Stone, J, Fenner, L.D, Christmas, T.R. The preparation and storage of anaesthetic drugs for obstetric emergencies: a survey of UK practice. Int J Obstetric Anesth. 2009;18(3): 242-248.