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## Introduction

Drug errors are among the top five reported patient safety incidents occurring during anaesthesia<sup>1</sup>. Whilst they often go unreported, errors are a cause for serious harm to patients<sup>2</sup>.

An incident in our department involved inadvertent suxamethonium administration to an awake patient due to syringe mislabeling. We subsequently investigated anaesthetists' attitudes towards drug handling and errors with a view to improving patient safety.

## Methods

Anaesthetists of all grades in our hospital were invited to anonymously complete a *Survey Monkey* survey. Comments including personal experiences were encouraged.

Eight questions pertained to drug handling, the frequency, type, contributing factors, consequences and reporting of drug errors. The final question related to potential methods for improving safety. Results were discussed by a multidisciplinary working group formed to address anaesthetic drug errors. The authors did not deem ethical approval necessary for this survey.

## Results

62 anaesthetists completed the survey (CT1 to Consultant grade). Whilst 67% of anaesthetists had not used their emergency suxamethonium in the last year, suxamethonium given in error stood out as occurring regularly with a particularly destructive effect. Drug "swaps" and vasoactive drugs featured highly in "near misses".

71% and 32% respectively would **not** report "near misses" or errors not resulting in patient harm.

80% of anaesthetists rated **distractions** whilst handling drugs as a very important factor contributing to errors. In incidents mentioned in free text, there were errors in every route and class of drug (Fig 1).

## Discussion

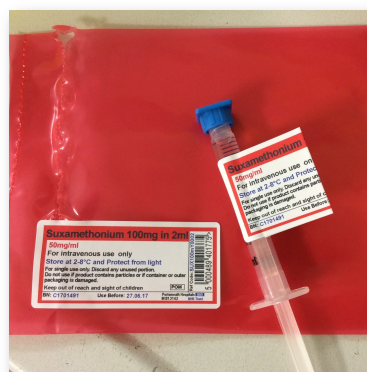
Consequences of drug errors may be disastrous. This survey revealed great inconsistency amongst anaesthetists' drug handling practices when a standard approach would be desirable.

### Change to be implemented

- Pre-filled suxamethonium syringes (Fig. 2)
- Yellow drug trays to reduce clutter (Fig. 3)
- Only induction drugs to be drawn up prior to cases
- Minimise pharmacy changes in drug presentation
- Annual review of drug errors

**Table 1.** Departmental changes following a multi-disciplinary working group meeting to improve drug handling hygiene

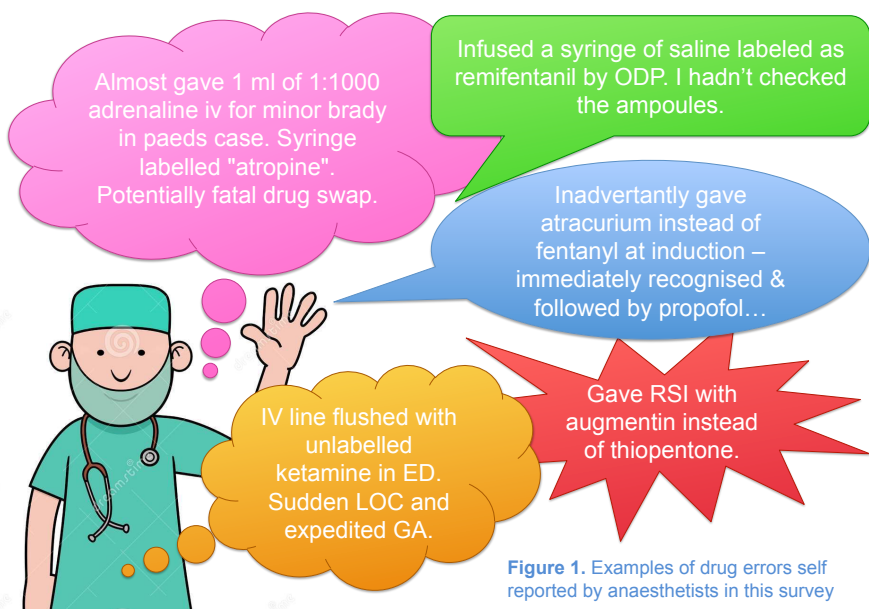
NPSA patient safety incident data shows that most errors occur during **drug administration**<sup>3</sup>. Following the survey, our departmental Drug Errors Working Group agreed specific changes would be made (Table 1). Red syringes for all muscle relaxants were considered but not implemented due to the expense of sourcing coloured syringes.



**Figure 2.** Pre-filled emergency suxamethonium syringes



**Figure 3.** Yellow "drugs trays" to reduce drug syringe/ampoule clutter



**Figure 1.** Examples of drug errors self reported by anaesthetists in this survey

As demonstrated by our survey, drug errors are notoriously **poorly reported**<sup>2</sup> which makes it difficult to accurately quantify the scale of the problem or widely share lessons learned from drug errors. A "no blame" reporting culture is essential.

**Distractions** were the most commonly cited contributing problem in this survey. In 2010 the NPSA suggested drug administration safety was improved by double-checking. Whilst this approach may cause delays, it may ensure "a moment" to give the process appropriate importance.

The future may involve an "e-Hospital" with bar coded syringe labels and barcode reader checking prior to drug handling and administration.

## References

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