

New guidance on safe injection practice in hospitals emphasizes the importance of prefilled and labeled syringes

August 9 2023



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New guidance published in *Anesthesia* provides clear advice to reduce avoidable errors on all steps of the pathway involving injectable medications used routinely in anesthesia care. The guidance has been

written by a working party of UK anesthesia experts that include Dr. Mike Kinsella, Honorary Consultant, Department of Anesthesia, University Hospitals Bristol and Weston, Bristol, UK and Chair of the Working Party.

The authors explain, "Peri-operative medication [safety](#) is complex. Avoidance of medication errors is both system- and practitioner-based, and many departments within the hospital contribute to safe and effective systems. For the individual anesthetist, drawing up, labeling and then the correct administration of medications are key components.

These guidelines aim to provide pragmatic safety steps for the practitioner and other individuals within the operative environment, as well as short- to long-term goals for development of a collaborative approach to reducing errors. The aim is that they will be used as a basis for instilling good practice."

This guidance has been produced by the Association of Anesthetists in response to requests from members in view of continuing incidents of medication errors and patient harm. It ties in with the World Health Organization (WHO) 3rd Global Patient Safety Challenge 'Medication Without Harm', which was the theme of the WHO World Patient Safety Day September 2022.

Among other things, the importance, utility and enhanced safety offered by prefilled and labeled medication syringes is emphasized, as well as the use of aids such as color-coded medication trays that can help the anesthetist correctly organize the syringes before and during [anesthesia](#). Neither prefilled syringes nor these colored aids are yet in widespread use in the UK NHS.

The authors say that labeling errors have been noted in around 1–1.25% of peri-operative medication administrations and medication

substitutions in 0.2% of administrations during anesthesia, although precise figures are lacking as research studies use different methodologies. It is important to acknowledge that every practitioner is open to [error](#) and that the risk can increase over time during a case, especially in the presence of specific factors that diminish performance such as fatigue.

The authors say, "Understandably, there is considerable emphasis on medication errors. However, it is also important to give appropriate recognition to the fact that in virtually all cases the correct [medication](#) is given by the correct route, at the correct time. Good practice should be highlighted; in most cases there is a consensus on what this looks like."

The summary recommendations of the Guidelines are as follows:

1. Safe handling of medicines requires clear institutional policy within multiple departments as well as careful individual practice.
2. Departments of anesthesia should have policies for safe handling of medicines.
3. Pharmacy departments should promote purchasing for safety, consistent supply and purchase from those companies complying with good labeling practice
4. Prefilled syringes have multiple advantages, and their purchase and use should be promoted.
5. Standardization of fit-for-purpose [physical structure](#) and medicine storage in workplaces should be developed.
6. Technological solutions that reduce the opportunity for error should be explored and adopted whenever possible.
7. Standardization of practice for syringe labeling and handling should be promoted and should form part of the curriculum for training anesthetists. This should reduce the risk of errors when anesthetists work together.

8. Individual anesthetists may have characteristics that affect their working; these should be recognized by the individual as well as their department, and suitable adjustments to practice made.

More information: S. M. Kinsella et al, Handling injectable medications in anaesthesia, *Anaesthesia* (2023). [DOI: 10.1111/anae.16095](https://doi.org/10.1111/anae.16095)

Provided by AAGBI

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