

MINIMISING DRUG ERRORS IN ANAESTHETIC PRACTICE

Errors in drug administration are one of the most frequent events reported to the Consultative Council. Some are critical incidents without any adverse outcome. However many are associated with morbidity involving prolonged supervision in recovery, unplanned admission to ICU, potentially hazardous haemodynamic changes and awareness with ensuing post traumatic stress syndrome and the potential for litigation.

Many anaesthetists develop their own particular strategies for avoidance of such errors but the Council believes that there should be a unified approach to the problem, particularly as many cases involve trainees.

The following are the suggestions of the Council.

1. Constant vigilance with the recognition of human factors involved, including fatigue, distraction, change of anaesthetist, and the added hazard of 2 anaesthetists, usually consultant and trainee.
2. Careful checking of labels on ampoules, including name of drug, dosage and concentration and expiry date. Be aware that ampoule size, shape and clarity of label can change. Pharmacy Departments should be instructed to advise anaesthesia directors and advisors as well as the operating theatre charge nurse whenever there is a change of drug brand or presentation so that warnings can be promulgated. *Never* administer drugs that have not been made up or personally checked by you. If the level of assistance is adequate consider double-checking with a nurse assistant or another anaesthetist. However, only one individual should be responsible for the administration.
3. Label all syringes clearly with universal labels according to the Australian Standard. Such labels are produced by Defries Industries, PO Box 876, Noble Park, Victoria 3174, phone 03 9706 3600. Anaesthetic advisors in hospitals should ensure that only these labels are purchased. A marking pen should also be available for backup. Apply the label round the barrel of the syringe, keeping the graduation clear and always read the label before injecting.
4. Standardise syringe sizes for particular drugs. Always use dedicated red-barreled 5 ml syringes for all muscle relaxants. 10 ml syringes are suggested for opiates and 20 ml for intravenous anaesthetic agents. However, it is recognised that this recommendation may not always be applicable for paediatric patients.
5. Keep ancillary drugs such as antibiotics, vasoactive drugs, anticoagulants and local anaesthetic agents labeled and on separate trays away from the agents used for general anaesthesia.
6. Any drugs employed in an anaesthetic holding area must be double checked immediately before use and used sparingly. *Never* take relaxant drugs to a holding area.

It is recognised that optimal strategies include bar coding, pre-loaded syringes, colour-coded infusions and dedicated connectors for all infusions. While advisable the Council felt that these may not be universally possible in the short term. However, strict adherence to the above principles as well as *constant vigilance* would minimise what is seen as a major problem.