NSW HEALTH

Safety Notice 006/09

Wrong Route Errors with Oral Medication

Promoting the correct administration of oral medications

25 March 2009

Distributed to:

- Chief Executives
- Directors of Clinical Governance
- Directors of Clinical Operations
- Area Directors of Nursing and Midwifery

Action required by:

- Directors of Clinical Governance

We recommend you also inform:

- Drug and Therapeutics Committees
- Area Directors of Medical Services
- Area Directors of Pharmacy
- Medical staff
- Nurses
- Pharmacists

Expert Reference Group

Content prepared by:

- NSW Therapeutic Advisory Group
- Pharmaceutical Services Branch
- NSW Health Medication Safety Committee

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Background

There have been a number of serious incidents where patients have been administered medications via the wrong route. These have included where medication intended for administration by the oral or enteral route was administered by intravenous injection. At least one of these incidents resulted in the death of the patient.

The risk of these incidents occurring has also been identified in a number of other jurisdictions including Victoria and the United Kingdom.

Factors contributing to these wrong route medication errors

- Medications intended for oral use have been prepared in standard, parenteral syringes and administered intravenously in error. Examples include liquid medications and oral tablets that have been crushed and mixed with fluid.
- Medications were prepared in a parenteral syringe for oral administration by one nurse and then administered by a different nurse, via the intravenous route.
- Medications involved were available in a range of different formulations for administration by different routes (e.g. oral liquid and intravenous preparations of the same product).
- The prescribed drug form (e.g. oral suspension) was not available on the ward.
- Oral dispensers (in the form of colour-coded syringes) which are specifically designed to be incompatible with intravenous cannulae and tubing and other venous access devices were not commonly used or freely available in patient care areas.
- Patients had multiple lines in place, including intravenous lines and enteral lines (eg. nasogastric and nasojejunal lines).
- Staff failed to understand the requirements for preparing an aseptic product for injection.
- Lack of knowledge/understanding of the stringent preparation processes and standards mandated for all intravenous solutions.

Suggested Actions by Area Health Services

1. Ensure that this safety notice is distributed to all clinical staff involved in the administration of medications.
2. Ensure staff members new to areas administering oral medication are made aware of the risks associated with oral medication correct route administration issues.
3. Where a specific protocol for the administration of oral medications exists, ensure that it contains specific guidance on precautions to ensure correct route of administration.
4. Where a specific protocol for the administration of oral medication is not in place, please ensure staff are aware that drug information is available via the CIAP website medicines information to guide treatment decisions. The CIAP is at: http://www.ciap.health.nsw.gov.au/ or http://internal.health.nsw.gov.au:2001/

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Actions that can be taken to prevent wrong route medication errors

- **Never** use intravenous syringes to draw up medications for oral or enteral administration

- Ensure oral dispensers are:
  - ✓ physically incompatible with intravenous cannulae, tubing and other venous access devices
  - ✓ clearly coloured to distinguish them from syringes used for intravenous injections
  - ✓ clearly labelled **"FOR ORAL USE ONLY" or "FOR ENTERAL USE ONLY"**
  - ✓ able to be connected to enteral tubing

- Staff should seek advice from a pharmacist or a medical officer if a medication is not available in the ward in the prescribed form or if the patient is unable to take the medication orally before deciding on a course of action. For example, where a drug is prescribed IV, but only oral tablets are available, staff must not crush medication unless written confirmation is provided by a pharmacist (where available).

- Be alert for products whose appearance can be confused (eg Mucomyst® which looks like an injection vial, but is for inhalation; Spiriva® inhalation capsules which look like oral capsules but are for inhalation).

- For items dispensed from pharmacy for inpatient use, consider adding the route of administration to the label.

- Clearly label intravenous lines and enteral tubes.

- For patients who go home with intravenous access and are taking liquid oral medications, supply an oral dispenser and appropriate instructions for its use.

- Provide clear written instructions available in various written translations for non-English speaking patients and carers. If an interpreter is used, it would be valuable for an interpreter to explain the medications with a pharmacist, nurse, medical staff to ensure that the patient and their family understands the information about their medication and how to administer it.

References

1. Wrong route administration of oral liquid medicines - A quality use of medicines alert endorsed by the Victorian Medicines Advisory Committee : http://www.health.vic.gov.au/vmac/downloads/wrong_route_audit_tool.doc
2. Promoting safer measurement and administration of liquid medicines via oral and other enteral routes. NHS UK, 28 March 2007 : http://www.npsa.nhs.uk/nrls/alerts-and-directives/alerts/liquid-medicines/