

encapsulate

Welcome to 'encapsulate'

The sixth edition of **encapsulate** looks at medication errors and simple steps we can take to reduce risk. We also revisit vinca alkaloids and the effect of a previous medication safety alert and recommendations in reducing the risk of sentinel events.

You can obtain further copies of **encapsulate** via our website - www.slade.net.au . Please forward any comments or suggested topics for our next issue to marketing@slade.net.au .

Medication Errors

A medication error is defined as “*any preventable event that may cause or lead to inappropriate medication use or patient harm ... Such events may be related to professional practice, health care products, procedures, systems, including prescribing; order communication; product labelling; packaging and nomenclature; compounding; dispensing; distribution; administration; education; monitoring and use.*”¹

Medication management in hospitals is complex and involves a number of systems where a medication error may occur. The hospital uses a risk management tool called RiskMan® to report all medication errors. Reporting of medication errors is important because when things do go wrong it is crucial to find out what happened, where, when, how and why. The hospital undertakes a root cause analysis to determine the underlying causes and contributing factors. System or process changes which aim to reduce future risk of recurrence can be implemented. Reporting is never about blame or the individuals involved. It is about system improvement and patient safety. Staff are encouraged to report all medication errors, from errors resulting in patient harm to near misses. Such broad coverage is important for providing information to develop strategies which better identify, manage and prevent problems.

Must we wait for a medication error to occur?

Often, revisiting basic principles of practice and ensuring that these are built in to our current practice reduces the risk of medication error.

Medication administration errors are examples of this. Commonly reported medication administration errors include:

- Wrong time (where a dose of a medication is not given within one hour of the scheduled time)
- Missed dose
- Wrong dose/strength
- Wrong type of formulation
- Wrong route
- Wrong medication
- Wrong patient
- Wrong duration (where medication is given for a period beyond that prescribed by the doctor)

Nurses are the patient's safety net with a key role in reducing the risk of medication errors at the point of administration. Nurses can reduce the risk of these types of medication administration errors by ensuring they adhere to the **5 rights** of medication administration:

- **Right person** (patient name and wrist band identification number are checked against the patient details on the medication chart)
- **Right drug** (the prescribed medication is that being administered and not expired)
- **Right dose** (the dose is appropriate, correctly calculated and corresponds to the order)
- **Right route** (medication is administered via the prescribed route e.g. PO, NG, SUBLINGUAL, IV, IM, SUBCUT, IT, PR, PV, Gutt, Occ, Top, MA, Neb)
- **Right time** (medication is administered at the correct time interval as prescribed)

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These checks should occur for each and every medication administration independently of any checks that have occurred previously. 100% compliance at all times improves patient safety.

It is important to remember that doctors, nurses, pharmacists and other healthcare professionals are human and make mistakes. Therefore, we will never be 'risk-free'. However there is always scope to simplify processes, improve systems and reduce risk. Whilst we rely on incident reporting to identify problems, we do not have to wait for an error to occur before we implement changes. Everyone's ideas are valuable. If you identify a risk and/or have recommendations to reduce risk, communicate these ideas to your Manager or the Quality/Clinical Manager (or equivalent) at the hospital.

References:

1. World Health Organisation, Committee of Experts on Management of Safety and Quality in Health Care, Expert Group on Safe Medication Practices, Glossary of terms related to patient and medication safety, Oct 2005.

Vinca Alkaloids

Vincristine is a medicine commonly used in the treatment of leukaemias and lymphomas. It is neurotoxic and must only be administered intravenously. There have been numerous sentinel events worldwide associated with the inadvertent administration of vincristine. Adults and children are at risk with 50% of reported cases in each group. The inadvertent administration of vincristine by the intrathecal route results in a fatal outcome in 85% of cases and significant neurological effects in those who survive.

In 2006, Slade Pharmacy released a medication safety alert endorsing the recommendations of the Australian Council for Safety and Quality in Healthcare. The recommendations include that vincristine be prepared in a minibag, not a syringe. Specific labelling and administration requirements to further reduce the risk of administration errors are also detailed.

A copy of the alert is attached.

In July 2007, the World Health Organisation (WHO) World Alliance For Patient Safety issued a similar alert and recommendations. WHO noted that in some cases vinca alkaloids need to be administered as longer infusions via CADD pumps and elastomeric infusers. These cases were exempt from the recommendations.

The National Patient Safety Agency (NPSA) in the United Kingdom recently reported on the use of minibags for vincristine and findings were positive. They found that no deaths (from inadvertent intrathecal administration of Vincristine) have been reported from hospitals where vinca alkaloids are prepared in a minibag.

The report also dispelled the initial concern that the use of vinca alkaloids in minibags may increase the risk of extravasation. Extravasation would be problematic as vinca alkaloids are a known vesicant and may cause a severe local reaction. NPSA found that the use of minibags did not increase the extravasation rate.

Further efforts are required to ensure appropriate labelling and presentation of vinca alkaloid minibags. They should be differentiated from other minibag infusions by the judicious use of colour and label design to reduce the risk of drug selection errors.

The World Health Organisation also recommends additional research into developing and promoting the separation of intravenous and spinal delivery systems. The research should aim to further reduce the risk of medications intended for intravenous administration being administered by the spinal route and vice versa.

This publication is intended to provide a general outline and is not intended to be and is not a complete or definitive statement of the information on the subject matter. Further professional advice should be sought before any action is taken in relation to the matters described in this publication. To obtain further copies of all documents referred to in this publication please see your pharmacist.

Medication Safety Alert - Vincristine

Safe Practice Recommendation No. 03

Vincristine can be fatal if administered by the intrathecal route

Vincristine is a medicine commonly used in the treatment of leukaemia's and lymphomas. It is neurotoxic and must only be administered intravenously. There have been numerous sentinel events associated with the inadvertent administration of vincristine in Australia and overseas. Adults and children are at risk with 50% of reported cases in each group. The inadvertent administration of vincristine by the intrathecal route results in a fatal outcome in 85% of cases and significant neurological effects in those that survive.

Galen Health endorses the following recommendations from the Australian Council for Safety and Quality in Healthcare to reduce the risk of error with vincristine.

1. Vincristine should be administered in a minibag, not a syringe

- For adults – administer vincristine diluted to 50mL in a minibag over 5 to 10 minutes
- For children – administer vincristine diluted to 20 – 50mL in a minibag over 5 to 10 minutes
- Recommended diluent is sodium chloride 0.9%
- After administration, the line should be flushed with an appropriate volume to ensure no medicine remains
- Despite dilution, vincristine remains a vesicant and extravasation should be avoided.
- Recommend policies ensuring safe administration techniques and stringent monitoring are followed post vincristine administration to avoid extravasation

2. All vincristine products should be labelled with a prominent warning label stating: “FOR INTRAVENOUS USE ONLY – Fatal if given by other routes”

- This includes both product and any outer wraps

3. The timing and location of vincristine preparation, delivery and administration should be separate from all medicines intended for intrathecal administration

4. Vincristine and other intravenous medicines, must be packaged, delivered and stored in specifically designated containers.

5. All medicines for intrathecal administration should be labelled with a prominent warning label, on the syringe and outer wrap, stating “For intrathecal use”

6. Only medical staff specifically trained and experienced in cancer treatments should be designated to prescribe, prepare, dispense, deliver, receive or administer injectable chemotherapy

- This includes registrars, consultants, pharmacists and nurses

7. Staff administering intrathecal medicines must use formal checking procedures

- This should include a ‘time out’ involving at least two health professionals (oncology trained)
- The patient identifiers, drug, dose, volume, route and rate should be verified against the medication order immediately prior to administration
- Both health professionals should then sign the order