paediatric WATCH

Lessons from the frontline

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Kids Medication Safety involves U 2

Medication incidents are considered to be largely preventable. In the NSW paediatric setting, medication incidents were the second most common type of clinical incident notified into IIMS during 2013-2014. Internationally it is recognised that paediatric patients are at a greater risk of medication error than adults, with up to three times as many medication errors[1].

Review of NSW incidents found that the most frequently reported incidents were administration of the wrong medication dose or volume, duplication of medications, wrong medication timing, omission of a required medication dose, poor documentation and wrong medication. A factor of *2's* emerged as a common theme in all of these incidents.

< 2 *Think twice for kids under 2 years of age*

Approximately half of all notified paediatric medication incidents were reported to involve children who were less than **2** years of age. This age group was not only the most frequently affected but they were also more likely to experience the most harm.

"A ten day old neonate was agitated and in severe respiratory distress. A bolus of IV morphine 'once only' was prescribed on the medication chart as well as a morphine infusion. The medical officer had verbally confirmed with the nurse that the dose was 100mcg/kg but instead prescribed a bolus of 1000mcg/kg; leading to a 10 times normal dose administration of morphine".

Ensure 2 nurse independent check

Contributing to many incidents was the non-adherence to the independent double checking process. This process requires two individuals to separately determine the medication, form, dose, dose calculation, route, timing and patient identification independently against the prescription, rather than just verifying the order. In many cases the incident report stated that the double independent checking procedure had been followed, but had not been performed effectively.

"Wrong dose administered. An incorrect dose of intra nasal fentanyl was given. A RN checked the order with a second RN and, once drawn up, showed the second RN the syringe but not the ampoule……two different fentanyl strength ampoules were available which resulted in the incorrect concentration being administered".

Are 2 medication charts in use?

This was a factor in many of the duplication and omission incidents, particularly when the child was being transferred between different clinical areas or hospitals. Having more than one medication chart and not explaining the existence of multiple medication charts at handover was a contributory factor in many incidents.

"It was noted during the shift that some of the medications were still ordered on the old medication chart, whilst the others were ordered on the new Paediatric Medication Charts x 2".

Avoid In2ruptions

Interruptions during the prescribing and administration phase of medication delivery can contribute to errors.

"During dispensing of medication a phone call was received which interrupted the procedure, distracting the nurses at which time the double dose error occurred."

Beware of doses requiring more than 2 vials, 2 tablets or 2 syringes

Always question a dose requiring more than 2 vials, 2 tablets or 2 syringes.

"The IV gentamicin was documented on the handwritten National Paediatric Medication chart as 37.6mg IV daily but interpreted as 376mg…." (This dose required more than eight ampoules).

These findings provide opportunities for improvement and medication safety priorities which should be considered in your clinical setting.
What can you do to make medication safer for children?

Want to learn more? Please visit the following websites:

Clinical Excellence Commission – Paediatric Quality Program

Clinical Excellence Commission – Medication Safety

Royal College of Paediatrics' and Child Health Meds IQ

References

1. Miller M, Robinson K, Lubomski L, Rinke M, Pronovost P. *Medication errors in paediatric care: a systematic review of epidemiology and an evaluation of evidence supporting reduction strategy recommendations.* Qual Saf Health Care. 2007; 16(2):116-126

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MEDICATION SAFETY AND QUALITY

CLINICAL EXCELLENCE COMMISSION