paediatric WATCH

Lessons from the frontline

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Kids Medication Safety- How independent are you?

'A neonate was prescribed 3.5 mg hydrocortisone intravenously but was inadvertently administered 3.5 mg of methylprednisolone'.
Following review of the incident it was identified that the wrong medication was administered by the registered nurse as the 'medication order was confirmed verbally with the second registered nurse checking the medication without ***independently*** *checking the written prescription'.*

95% of errors are detected during double independent checking[1]

Medication Handling in NSW Public Health Facilities PD2013_043 [1] stipulates that the second person check involves clinicians checking all five aspects of the medication prescription. These include:

- Confirming the identity of the patient
- Confirming the selection of the correct medication and fluid
- Confirming that the dose is appropriate and the calculations are correct
- Confirming that a rate limiting device such as an infusion pump has been correctly set
- Countersigning the administration on the medication chart against that of the administering person.

Non-adherence to the second person checking process is identified as a contributory factor in many medication incidents in children.

Simulation studies show that clinicians are better at finding others' mistakes rather than their own. Confirmation bias fogs our ability to see mistakes that are present.[2] When checking alone you are more likely to see what you expect to see, rather than see what is actually present, even if an error is present.[3]

It is hard to find your own mistakes[2]

In a recent review of paediatric medication incidents in NSW, many reports indicated the second person checking process had been followed, but had not been performed effectively.

'A neonate was ordered 50 mg of meropenem. The medication was diluted as per protocol and checked by another registered nurse. 500 mg was administered instead of 50 mg'

The second person check should be conducted using independent double checking principles. That is nurses separately check (alone and apart from each other) each component before administering it to the patient. This includes the patient's identification. Where a calculation is involved the second person should undertake the calculation independently. In children most medications require a calculation to be performed. Errors in converting units or weight adjustments and working in small volumes make this process more complex and error prone.

All components of the medication prescription must be checked including the calculation

'A neonate received 5 times the normal dose of oral hydrochlorothiazide/ spironolactone resulting in moderate diuresis and a decrease in sodium level requiring sodium supplement to be administered.
The administering registered nurse checked the calculations on the calculator and confirmed that 2.2 mL was required for an 11 mg dose; the 11 mg dose related to another medication. The nurse checking the medication stated 2.2 mL sounded like a large dose, however did not proceed to double check the calculation was correct'.
In this case both registered nurses reflected that they 'needed to stop any task that they were performing to ensure full attention when checking medication'

Time pressures and interruptions are cited to be influencing factors why the second person checking process does not always occur or is not effective.

A second person check before administering medications to a child may be the last chance to prevent a medication error. It only takes a moment and it could save a life.

Want to learn more? Please visit the following websites:

Clinical Excellence Commission – Paediatric Quality Program

Clinical Excellence Commission – Medication Safety

Meds IQ- QI resources for paed medication safety

References

1. Ministry of Health NSW. Medication Handling in NSW Public Hospitals. Sydney: NSW Ministry of Health; 2007
2. Institute for Safe Medication Practice. *Santa checks his list twice. Shouldn't we?* Acute Care ISMP Medication Safety Alert! 2009; 14(25):1-2
3. Institute for Safe Medication Practice. Acute Care ISMP Medication Safety Alert! Independent Double Checks: Undervalued and Misused: Selective Use of this Strategy Can Play An Important Role in Medication Safety [Internet]. Pennsylvania: ISMP; 2013; [cited 14 April 2016]. https://www.ismp.org/newsletters/acutecare/showarticle.aspx?id=51

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