# Medication Safety Today

Medicines Governance Team

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# Paracetamol IV

A Fatal Accident Inquiry from Glasgow has described how a 19 year old patient, weighing 35kg, was prescribed and administered intravenous (IV) paracetamol 1g four times daily over a five day period.[1] Given her weight, the patient should have received a dose of 525mg four times daily. As a result of the incorrect dose being prescribed and administered, the patient died of liver failure due to paracetamol toxicity.

Accidental overdoses of IV paracetamol have also occurred in infants and neonates due to confusion between the dose in 'mg' and the dose in 'ml' and where the dose prescribed was not adjusted for the patient's weight. [2]

**Safety tips**

- Be aware that the dose of IV paracetamol is weight based. Document weight on front of Kardex.

| Patient weight | Dose and frequency | Maximum dose in 24 hours |
|---|---|---|
| Adults and children/adolescents over 50kg | 1g every 4-6 hours | 4g per day |
| Children 33-50kg, adults and adolescents less than or equal to 50kg | 15mg/kg every 4-6 hours | 60mg/kg (but not exceeding 3g) |
| Children weighing more than 10kg (approximately 1 year old) and less than 33kg | 15mg/kg every 4-6 hours | 60mg/kg (but not exceeding 2g) |
| Term newborn infants, infants, toddlers and children weighing less than 10kg (up to approximately 1 year old) | 7.5mg/kg every 4-6 hours | 30mg/kg |
| **Consult Summary of Product Characteristics (SPC) for further information including dose adjustments required for severe renal impairment, hepatic impairment and malnutrition** | | |

- Do not prescribe paracetamol by multiple routes for patients less than or equal to 50kg, as the intravenous dose is not the same as the rectal or oral dose.
- Do not co-prescribe any paracetamol containing product by any other route if prescribing IV paracetamol. Discontinue any other products containing paracetamol if initiating IV paracetamol.
- Before giving any dose of IV paracetamol, always check when the last dose was given. This check should include a review of any anaesthetic record or emergency department flimsy.
- When administering IV paracetamol, be aware that the strength of paracetamol infusion is 10mg/ml.
- Review continued need for IV paracetamol and consider enteral route as soon as appropriate.


1. Sheriffdom of Glasgow and Strathkelvin 2011. Fatal Accident Inquiry into the death of Danielle Welsh. http://www.scotcourts.gov.uk/opinions/2011FAI7.html [accessed 22 March 2011]
2. MHRA 2010 http://www.mhra.gov.uk/Publications/Safetyguidance/DrugSafetyUpdate/CON087803 [accessed 6 April 2011]
3. Injectable Medicines Guide. http://medusa.wales.nhs.uk/IVGuideDisplay.asp [accessed 10 May 2011]


# Unattended Baggage

"Any unattended luggage will be removed!" While you may have heard this in a train station or an airport, unattended medicines in a hospital can also cause problems.

Medication incidents have occurred when medicines have been left unattended for a patient to administer. These include:

- Medication left on a tray table between two beds, then taken by another patient
- Medication not taken at all
- Medication 'saved' up by a patient and then taken with other doses later
- Medication taken by the wrong route, for example, a patient swallowing a suppository or a capsule for an inhaler

Medication should not be left unattended by a patient's bedside. If for any reason, administration cannot take place after a dose has been prepared, the dose should be disposed of and prepared again when administration can occur.

# Death by Policy...?

Do you feel that policies are documents which sit on shelves collecting dust or hidden within a section on your Trust intranet site and tend to only ever be resurrected following a medication incident?

Policies or guidelines concerning medicines exist for the following reasons:

1. To ensure patients receive the same standard of care in how their medicines are prescribed, dispensed and administered
2. They help to safeguard patients against experiencing medication incidents by providing information on principles of the safe management of medicines

Are you familiar with your trust medicines related policies and where to find them?

If not contact your ward pharmacist or your Trust Medicines Information Department

# Smoke Signals!

The National Patient Safety Agency shares key risks emerging from the review of serious incidents reported by the NHS to its National Reporting and Learning System (NRLS) in the form of **Signals**.

A number of medication related signals have recently been issued:

**Monitoring plasma sodium levels in babies**
http://www.nrls.npsa.nhs.uk/resources/type/signals/?entryid45=130184
**Intravenous morphine administration on neonatal units**
http://www.nrls.npsa.nhs.uk/resources/type/signals/?entryid45=130181
**Multiple use of single use injectable medicines**
http://www.nrls.npsa.nhs.uk/resources/type/signals/?entryid45=130185
**Over sedation for emergency procedures in isolated locations**
http://www.nrls.npsa.nhs.uk/resources/type/signals/?entryid45=94848
**Overdose of intravenous paracetamol in infants and children**
http://www.nrls.npsa.nhs.uk/resources/type/signals/?entryid45=83757
**Accurate patient weight**
http://www.nrls.npsa.nhs.uk/resources/type/signals/?entryid45=83756
**Anticoagulated patients and head injury**
http://www.nrls.npsa.nhs.uk/resources/type/signals/?entryid45=83760

Find out what is happening in response to NPSA recommendations in your Trust

# Update

NHS National Patient Safety Agency

DHSSPS has issued a Rapid Response Report from the National Patient Safety Agency.

- **Safer Ambulatory Syringe Drivers**

http://www.dhsspsni.gov.uk/hsc-sqsd-18-10-safer-ambulatory-syringe-drivers.pdf

If you have any comments on this newsletter, please contact Sharon O'Donnell, Medicines Governance pharmacist on Ext: 2600 at Belfast City Hospital or by e-mail at Sharon.Odonnell@belfasttrust.hscni.net Further copies of this newsletter and past editions can be viewed at www.medicinesgovernanceteam.hscni.net or on your Trust intranet.