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Safety Notice

SN:013/07

21 September 2007

Extravasation of IV fluids

Care of the cannula site in neonates and children

Distributed to:

- Chief Executives
- Directors of Clinical Governance
- Directors of Clinical Operations

Action required by:

- Directors of Clinical Governance

For response by:

- No response to the Quality and Safety Branch required

We recommend you also inform:

- Directors of Clinical Services
- Area Directors of Nursing
- Nurses
- Medical practitioners

Deadline for completion of action**Not applicable****Quality and Safety Branch**

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quality@doh.health.nsw.gov.auwww.health.nsw.gov.au/quality/sabs/register.html**Background**

Recent incidents have highlighted the need to ensure appropriate care of venous cannula sites, especially in neonatal and paediatric patients.

Two young children experienced extravasation—the infiltration of a substance that causes blistering of tissue from an intravenous line into the surrounding tissue—in association with a peripheral cannula. One child experienced swelling from the shoulder to the fingertips with cyanosis of the right thumb and subsequent development of blisters on the arm. The second child required surgery following the development of swelling and blistering of the arm.

Care of the peripheral venous cannula site

Simple steps to follow when caring for a peripheral venous cannula site of neonates and children include the following:

- Use limbs in preference to the scalp, with upper limbs in preference to lower limbs.
- Ensure a nurse is available to assist with cannulation and taping.
- Ensure the cannula is taped for security and allows maximum observation of the site.
- Use transparent IV dressings, steristrips, and non-stretchable tape (leukoplast).
- Regularly observe the IV cannula for secure placement, and for changes in the site around the cannula insertion and the fluid tracking direction. Direct observation is required.
- Check the IV cannula site hourly for redness, swelling, blanching and pain, and record a description of these observations.
- Ensure the cannula site is not covered with clothing or blankets to allow for observation of the site.
- Regularly check the infusion pump for the correct infusion rate and pumping action.
- Set appropriate pressure limits for pumps that have this functionality. The pressure should be checked regularly.
- Ensure the infusion pump is appropriate for neonates and children. Do **not** use an adult infusion pump.

Further reading

Hadaway LC. [Preventing and managing peripheral extravasation](#). *Nursing* 2004; 34(5):66-67.

McCullen KL, Pieper B. [A Retrospective Chart Review of Risk Factors for Extravasation Among Neonates Receiving Peripheral Intravascular Fluids](#). *Journal of Wound, Ostomy and Continence Nursing* 2006; 33:133-139.

Suggested Actions by Area Health Services:

1. Ensure that this Safety Notice is distributed to all relevant stakeholders.
2. Review peripheral cannula site practices.