Dr Jim Livingstone
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Department of
Health, Social Services and Public Safety
www.dhsspsni.gov.uk

AN ROINN
Sláinte, Seirbhísí Sóisialta agus Sábháilteachta Poiblí

MÄNNYSTRIE O
Poustie, Resydènter Heisin an Fowk Siccar

Rapid Response Report

Subject:

Prevention of over infusion of intravenous fluid* and medicines in neonates

Circular Reference: HSC (SQSD)14/10

Date of Issue: 10 September 2010

For action by:
Chief Executive, HSC Board for cascade to :
Assistant Director of Pharmacy and Medicines Management
Director of Integrated Care, HSCB
Assistant Director, Primary Care, HSCB
Chief Executives, HSC Trusts for cascade to:
Medical Directors
Directors of Nursing
Directors of Pharmacy
CSCG leads
Community Nurses
Chief Executive RQIA for cascade to:
Independent hospitals and clinics

For Information to:
Chief Executive, Public Health Agency
Director of Public Health/Medical Director, Public Health Agency
Director of Nursing, Public Health Agency
Dir. of Performance Management & Service Improvement, HSCB
Assistant Director of Performance Management, HSC Board
Director of Integrated Care, HSCB
Assistant Director, Primary Care, HSCB
Professor David Woolfson, Head of School of Pharmacy, QUB
Professor Linda Johnston, Head of Nursing & Midwifery, QUB
Professor Hugh McKenna, Head of Life & Health Sciences, UU
Dr Owen Barr, Head of School of Nursing, UU
Professor Paul McCarron, Head of School of Pharmacy, UU
Post Graduate Dean, NIMDTA
Staff Tutor of Nursing, Open University
Director, Safety Forum
Lead, NI Medicines Governance Team
NI Medicines Information Service
NI Centre for Pharmacy Learning and Development

Related documents

NPSA Safety in Doses Improving the use of medicines in the NHS
http://www.dhsspsni.gov.uk/npsa_safety_in_doses-2.pdf

Superseded documents

N/A

Summary of Contents:
The purpose of this circular is to prevent the over infusion of intravenous fluids and medicines in neonates

Status of Contents:
For completion of actions and assurance templates by 10 March 2011

Enquiries:
Any enquiries about the content of this circular should be addressed to:
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Implementation:

Immediate

SQSD material can be accessed on:
http://www.dhsspsni.gov.uk/index/phealth/sqs.htm

Dear colleagues

Prevention of over infusion of intravenous fluid* and medicines in neonates

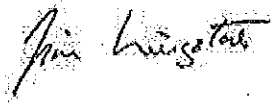
The administration of intravenous fluids and medicines to neonates is often an integral part of their care. However, there is a risk of the inadvertent over infusion of these solutions associated with specific intravenous infusion set up procedures or where the safety mechanisms associated with the administration of intravenous fluids using infusion pumps have been overridden. This risk has the potential to result in death or severe harm.

The content of the attached circular at Annex A has been reviewed by relevant professional colleagues in the Department and approved for regional dissemination.

I would ask you to bring this to the attention of relevant practitioners and key health and social care staff within your organisation. They should consider the best practice for their setting and take appropriate steps to minimise the risks to patients.

I would also draw your attention to the attached 'assurance template' which is a means of recording the response from the Trusts and Board in circumstances where SQS Circulars require action to be taken by a given date.

Yours sincerely



Dr J F Livingstone
Director, Safety, Quality & Standards

Annex A

Prevention of over infusion of intravenous fluid* and medicines in neonates

Issue

1. The administration of intravenous fluids and medicines to neonates is often an integral part of their care. However, there is a risk of the inadvertent over infusion of these solutions associated with specific intravenous infusion set up procedures or where the safety mechanisms associated with the administration of intravenous fluids using infusion pumps have been overridden. This risk has the potential to result in death or serious harm.

National Context

2. The NPSA received a report of a neonatal death following an accidental intravenous dextrose overdose. A 500 ml bag of intravenous 12.5% dextrose had been used to fill a 50 ml syringe which was then administered via a syringe pump. A 3 way tap was used to connect the 500ml bag to the syringe pump and the baby. It is likely that the overdose occurred as a result of the clamp being left open from the 500 ml bag of dextrose and the 3 way tap positioned so that the patient was receiving dextrose from both the bag and the syringe. An alternative explanation is that the tap was closed to the syringe pump and the solution infused directly from the 500ml bag. Following an inquest by HM Coroner a Coroners Rule 43 report endorsed the recommendations for shared learning made by the Court by way of a Patient Safety communication to prevent similar fatalities.

3. The NPSA has identified one further incident in the National Reporting and Learning System (NRLS) which reported an identical intravenous infusion set up to that of the trigger incident. However, due to the positioning of the 3 way tap and the closure of the administration set clamp, over infusion did not occur. In addition to these incidents, a further five 'near miss' incidents were identified where the safety mechanisms associated with volumetric pumps had been overridden. These include instances where intravenous fluids were removed from the infusion device and remained attached to the baby with the clamps open

4. NPSA/2010/RRR015: Prevention of over infusion of intravenous fluid* and medicines in neonates and the supporting information is available on: http://www.nrls.npsa.nhs.uk/resources/?entryid45=75519

Local Context

5. All HSC organisations and independent sector organisations who provide neonatal services should ensure that:

    - Ensure that a local neonatal intravenous administration policy is available that specifies:

a. When using a syringe pump to administer intravenous fluids or medicines to neonates, a bag of fluid should not be left connected to the syringe.*

b. All clamps on intravenous administration sets must be closed before removing the administration set from the infusion pump, or switching the pump off. This is required regardless of whether the administration set has an anti-free flow device.

c. The frequency and responsibility for monitoring:

i. the intravenous infusion device
ii. the infusion administration equipment
iii. the patient receiving intravenous infusion

- The above points should all be included in local standards for education, training, assessment and subject to audit to ensure clinical practice is in accordance with the local policy.

Action Required

6. You will wish to bring the contents of this document to the attention of staff, particularly those involved in governance and risk management within your organisation. Organisations need to be aware of this best practice circular in order to assist in complying with the Quality Standards for Health and Social Care –

(i) Criteria 4.3(i) (the appropriate management of risk);
(ii) Criterion 5.3.1(f)(viii) (ensuring safe practice in medicines management);
(iii) Criterion 5.3.3(f) (implementation of evidence-based practice through guidance, for example, NPSA guidance);and
(iv) Criteria 8.3(l) (effective communication and information)

7. HSC Trusts should take immediate action to implement this Rapid Response Report as outlined in paragraph 5 above by 10 March 2011. Trusts should provide assurance on this action to the HSC Board by completing Section 1 of the attached template.

8. The HSC Board should complete Section 2 of the attached assurance template and forward to the Department by 7 April 2011.

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* This action does not apply to the administration of blood components to neonates. These should continue to be administered as per The British Committee for Standards in Haematology 'Guidelines on the Administration of Blood Components' (2009) http://www.bcshguidelines.org/pdf/Admin_blood_components050110.pdf (Page 51)