

Trust Guideline for the Management of Neonates Requiring a Prostaglandin (Dinoprostone, Alprostadil or Epoprostenol) Infusion

A Clinical Guideline:

For Use in:	Buxton Ward, Children Assessment Unit (CAU), Neonatal Intensive Care Unit (NICU)
By:	All Registered Nursing staff
For:	Neonates
Division responsible for document:	Women's and Children's Services
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Assessed and approved by the:	Professional Protocols, Policies & Guidelines Committee (PPPG) Clinical Guidelines and Assessment Panel (CGAP) If approved by committee or Governance Lead Chair's Action; tick here <input checked="" type="checkbox"/>
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If Yes - does the strategy/policy deviate from the recommendations of NICE? If so why?	N/A

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Version and Document Control:

Version Number	Date of Update	Change Description	Author
4.1	27/04/2020	Reviewed, no clinical changes needed. Version control box added as part of updated Trust template.	Dr Rahul Roy Amy Park

This is a Controlled Document

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Objective

The objective of this guideline is to ensure that neonates who have been prescribed a prostaglandin (dinoprostone, alprostadil or epoprostenol) by medical staff are cared for in a safe and appropriate manner. The objective of the guideline is **not** to identify when a prostaglandin should be prescribed, only to give guidance as to how the neonate may be cared for safely once it has been prescribed by medical staff.

Rationale

This guideline has been written in response to concerns about the appropriate place of care for neonates requiring prostaglandin infusions. Prostaglandins can be used in the treatment of persistent pulmonary hypertension of the newborn and primary hypertension (epoprostenol) or to maintain the patency of the ductus arteriosus (dinoprostone or alprostadil), (BNFc 2013).

Most neonates requiring a prostaglandin infusion will not have been discharged from hospital before the need for this infusion is identified. However, a small number of babies may not have displayed signs of Congenital Heart Disease until following discharge. Once the baby displays symptoms they may be re admitted to hospital via their GP to CAU or as an emergency to A&E and subsequently as an inpatient on Buxton ward.

Administration of a prostaglandin involves a relatively complex reconstitution and administration to ensure the correct dose. Side effects of administration include, gastrointestinal disturbances, hypotension, bradycardia, tachycardia, pallor, flushing, sweating with higher doses; headache, agitation, dry mouth, chest pain, (BNFc 2013).

Due to the significantly small numbers of neonates on Buxton and CAU requiring a prostaglandin nursing staff do not feel confident in the administration of the drug and to monitor neonates for the significant side effects that may occur during administration.

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Following discussion between the multidisciplinary teams on NICU, Buxton Ward and CAU the recommendations below have been agreed to ensure the safe care of neonates requiring a prostaglandin.

Broad recommendations

Once a medical decision has been made that an infusion of prostaglandin is required the nurse in charge of CAU or Buxton needs to contact the nurse-in-charge on NICU to arrange transfer of the baby to NICU. In the best interests of the baby, if no cots are available on NICU, full support to ward staff will be given by NICU staff. However it is recognised that the safest and optimal place for the baby to be cared for during the infusion is NICU.

A Consultant to Consultant handover of the case must be undertaken prior to the baby being moved to NICU.

If required the nurse caring for the baby on Buxton or CAU will accompany and care for the baby and their family on NICU with the support of NICU staff.

The prescription, reconstitution and administration of the infusion along with appropriate monitoring of the baby will take place by appropriately experienced staff whilst ensuring optimal patient safety.

Where at all possible the baby will be cared for in a side room on NICU due to the risk of cross infection following admission, otherwise where it is in the best interest of the baby, care will be provided in rooms 1 or 2 in an incubator.

During the infusion the nurse will need to undertake hourly observations of, temperature, pulse, respirations and blood pressure.

A full explanation to parents as to the need for transfer to NICU prior to transfer to a specialist cardiac centre will need to be given.

Additional Information re: dinoprostone and alprostadil

On the Neonatal Unit our first line choice should be dinoprostone. The drug formulary is in the drug folder.

In very rare instances, such as neonates with renal impairment or when dinoprostone is contraindicated alprostadil may be used. This should be prescribed with consultant approval due to the high cost nature of the drug. A formulary is not available in the drug folder as it should only be used in rare circumstances, however clear instructions regarding administration can be found in the BNFc.¹

Clinical audit standards

To ensure that this policy is compliant with the above standards, the following monitoring processes will be undertaken:

- All neonates readmitted requiring a Prostaglandin infusion will be cared for on NICU.

This standard will be completed yearly.

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The audit results will be sent to the Senior Nurse for Division 3 who will ensure that these are discussed at relevant governance meetings to review the results and make recommendations for further action.

Summary of development and consultation process undertaken before registration and dissemination

This guideline was written by the authors listed above on behalf of the Neonatal Clinical Guidelines Development group, which has agreed the final content. During its development it has been circulated for comment to Heads of Wards and Departments and the Neonatal Clinical Guideline Development Group. Any comments received have been incorporated where appropriate into the document.

This version has been endorsed by the Professional Protocols, Policies and Guidelines Committee and the Clinical Guidelines Assessment Panel.

Distribution list/ dissemination method

All NICU staff
All Paediatric staff
Departmental Nursing Policy and Guideline Folder
Practice Development and Education Department
Trust Intranet via 'Trust Docs'

References/ source documents

BNFc (2016) BNF for Children BMJ Publishing Group Ltd, London