

U - tie up with LC
for.

(CSCS equal issue - potentially)

From the Chief Medical Officer
Dr Henrietta Campbell CB



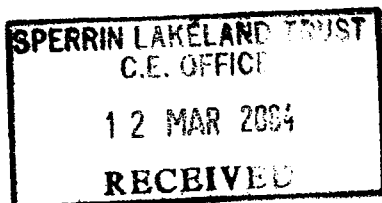
Department of
**Health, Social Services
and Public Safety**

An Roinn

**Sláinte, Seirbhísí Sóisialta
agus Sábháilteachta Poiblí**

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RECEIVED



n 14/3
Chief Executives of Acute / Acute & Community Trusts

Castle Buildings
Stormont Estate
Belfast BT4 3SQ

Tel:
Fax:
Email:

cc: Mr Fee
Dr Cody
? Dr Kelly
Ms O'Rune

Eugene / Diana

Please confirm current
situation and any recent
audit to enable me to
respond. *High 14/3*

Your Ref:
Our Ref:
Date: 4 March 2004

Dear Colleague

PREVENTION AND MANAGEMENT OF HYPONATRAEMIA

In March 2002, guidance on the prevention of hyponatraemia in children was issued to all Trusts. The guidance emphasised that every child receiving intravenous fluids should have a thorough baseline assessment and monitoring to prevent the development of hyponatraemia. An A4 sized black and white copy of the guidance is attached and it may also be accessed on the Departmental website www.dhsspsni.gov.uk. Large laminated posters were distributed to all Trusts which should now be displayed in appropriate clinical areas.

When the guidance was issued, Trusts were encouraged to develop local protocols to complement the guidance and to provide specific direction to junior staff. Emphasis was given to the need to ensure implementation of the guidance in clinical practice. It was also noted that the guidance should be supplemented locally in each Trust with more detailed fluid protocols relevant to specific specialty areas.

Following the development of guidelines for fluid replacement in children the Clinical Resource Efficiency Support Team (CREST) drew up guidance on The Management of Hyponatraemia in Adults. These guidelines focussed on the diagnosis and treatment of hyponatraemia in adults and included infusion guidelines. This was made available in the form of wall charts which were circulated widely last year. [Further copies are available if required from the CREST Secretariat] *(2)* The purpose of this letter is to ask you to assure me that both of these guidelines have been incorporated into clinical practice in your Trust and that their implementation has been monitored. I would welcome this assurance and ask you to respond in writing before 16 April.

Yours sincerely

H.C. Campbell

Dr Henrietta Campbell

Copied to:
Medical Directors of Acute Trusts
Directors of Nursing, Acute Trusts
Chief Executives of HSS Boards
Directors of Public Health

LC - SLT

any CHILD IS AT RISK OF HYPOVOLAEMIA IF PRESCRIBED FLUIDS

Any child on a fluid prescription is at potential risk of hypovolaemia. Hypovolaemia is a potentially serious condition, which if not recognised and treated, may lead to shock, coma and death. It is a condition which may be non-specific and involve multiple systems and organs.

Hypovolaemia may result in a child becoming dehydrated, with a fall in blood pressure, tachycardia, and a rapid pulse. It may also lead to a child becoming lethargic, with a fall in consciousness.

Complications of hypovolaemia may include: • Renal impairment • Electrolyte imbalance • Acidosis • Hypotension • Shock • Death

Hypovolaemia may also result in a child becoming dehydrated, with a fall in blood pressure, tachycardia, and a rapid pulse. It may also lead to a child becoming lethargic, with a fall in consciousness.

Postoperative patients • CNS impairment • Bronchospasm • Burns • Vomiting

Factors which may lead to hypovolaemia include: • Dehydration • Shock • Burns • Vomiting • Diarrhoea • Infection • Trauma • Surgery • Anesthesia

Weight accurately in kg (1kg = 2.2lb) • Fluid balance chart • Urine output • Intake • Output • Balance

UAE (urine serum sodium) not considered

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Fluid balance must be assessed at least every 12 hours by an experienced member of clinical staff.

Intake: All oral fluids (including medicines) must be recorded and IV intake reduced by actual amount.

Output: Measure and record all losses (urine, vomit, diarrhoea, etc.) as accurately as possible.

If a child still needs prescribed fluids after 12 hours of starting, their requirements should be reassessed by a senior member of medical staff.

Biochemistry: Blood sampling for U&Es is essential at least once a day - more often if there are significant losses or if clinical course is not as expected.

The rate at which sodium falls is as important as the plasma level. A sodium that falls quickly may be accompanied by rapid fluid shifts with major clinical consequences.

Consider using an indwelling heparinised cannula to facilitate repeat U&Es.

Do not take samples from the same limb as the IV infusion. Capillary samples are adequate if venous sampling is not practical.

Urine osmolality/sodium: Very useful in hypovolaemia. Compare to plasma osmolality and consult a senior Paediatrician or a Chemical Pathologist in interpreting results.

STAFF AND VICE

Advice and clinical input should be obtained from a senior member of medical staff, for example a Consultant Paediatrician, Consultant Anaesthetist or Consultant Chemical Pathologist.

In the event of problems that cannot be resolved locally, help should be sought from Consultant Paediatricians Anaesthetists at the PICU, RBHSC.

The Department Of Health, Social Services And Public Safety guidance is also available on the Departmental website