Department of Health, Social Services & Public Safety
An Roinn Sláinte, Seirbhísí Sóisialta agus Sábháilteachta Poiblí

From The Chief Medical Officer:
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Medical Directors of Acute Trusts
Directors of Nursing in Acute Trusts
Consultant Paediatricians
Consultant Surgeons
Consultant Neurosurgeons
Consultant Anaesthetists/Intensivists
Consultants in Plastic Surgery/Burns
Consultants in A&E Medicine
Consultant Pathologists

25 March 2002

Dear Colleagues

PREVENTION OF HYPONATRAEMIA IN CHILDREN

Guidance on the Prevention of Hyponatraemia in Children has been published and will be forwarded to you under separate cover. It has been prepared as an A2 sized poster and I ask you to ensure that the posters are prominently displayed in all units that may accommodate children. The Guidance has been developed by a multidisciplinary working group established by the Department and the work has been supported and endorsed by CREST.

Hyponatraemia can be extremely serious and has in the past few years been responsible for two deaths among children in Northern Ireland. Hyponatraemia is a problem of water balance and most often reflects the failure to excrete water. Stress, pain and nausea are all potential stimulators of the antidiuretic hormone ADH which inhibits water excretion.

Any child receiving IV fluids or oral rehydration is potentially at risk of hyponatraemia. The administration of excess or inappropriate fluid to a sick child may result in serious or life threatening hyponatraemia. There is a particular concern about the use of 0.18% Sodium Chloride in Glucose among children as it has been implicated in cases of hyponatraemia. While it may pose a risk because of the relatively low sodium content no specific fluid is without risk. This has been emphasised in a recent letter received from the Medicines Control Agency which stated that while hyponatraemia is a risk with 0.18% Sodium Chloride, electrolyte imbalance is a risk with all intravenous solutions.

The Guidance emphasises that every child receiving intravenous fluids requires a thorough baseline assessment, that fluid requirements must be calculated accurately and fluid balance must be rigorously monitored. Following this simple advice will prevent children from developing hyponatraemia.

The Guidance is designed to provide general advice and does not specify particular fluid choices. Fluid protocols should be developed locally to complement the Guidance and provide more specific direction to junior staff. This is particularly important in subspecialty areas such as renal medicine, burns units and

neurosurgery. It will be important to audit compliance with the guidance and locally developed protocols and to learn from clinical experiences.

I would like to extend my thanks to all members of the multidisciplinary group who have worked together to provide clear and practical guidance to improve the care of sick children. The Guidance is also available on the Departmental website www.dhsspsni.gov.uk.

Yours sincerely

HENRIETTA CAMPBELL (Dr)

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