Southern Health and Social Care Trust

Medical Directorate
By Email

Dr Michael McBride
Chief Medical Officer
Department of Health, Social Services and Public Safety
Castle Buildings
Stormont Estate
BELFAST BT4 3SQ

29th April 2008 | Our Ref: | Your Ref:

Dear Dr McBride,

**RE: AUDIT OF NPSA PATIENT SAFETY ALERT 22: REDUCING THE RISK OF HYPONATREMIA WHEN ADMINISTERING INTRAVENOUS FLUIDS TO CHILDREN**

Southern Trust continues to focus on the full implementation of the Patient Safety Alert and at the end of March 2008 undertook a re-audit to re-assess our progress against the agreed actions. I have attached this re-audit which I trust will provide you with the information you require. I can also confirm that dates have been arranged for training for nurses working with children up to the age of 16 years, following this the fluid calculation chart will be implemented in adult wards.
Please do not hesitate to contact me if you require any further information.

Yours sincerely,

Patrick Loughran

**Dr Patrick Loughran**
**Medical Director**

Southern Health and Social Care Trust, Trust Headquarters, Craigavon Area Hospital, 68 Lurgan Road, PORTADOWN, BT63 5QQ

Southern Health
and Social Care Trust

Cc: Dr B. Aljarad, Associate Medical Director – Children& Young People's Services
Anne Stanfield, Clinical Sister Children's Ward
Grace Hamilton, Head of Acute Paediatrics
Sr Mary Luckie, Clinical Sister Accident & Emergency Dept.
Dr T. Boyce, Director of Pharmacy
Lynn Watt, Pharmacy Services Manager
Dr M Smith, Consultant Paediatrician
Mary Mackle, Clinical Sister
Helen Fleming, Clinical Sister
Dr J Wright, Consultant Anaesthetist
Dr. D. Lowry, Consultant Anaesthetist
Anne Quinn, Effectiveness and Evaluation Manager

Southern Health and Social Care Trust, Trust Headquarters, Craigavon Area Hospital, 68 Lurgan Road, PORTADOWN, BT63 5QQ

# Patient safety alert 22
## Reducing the risk of hyponatraemia when administering intravenous infusions to children

NHS
National Patient Safety Agency

## Audit checklist

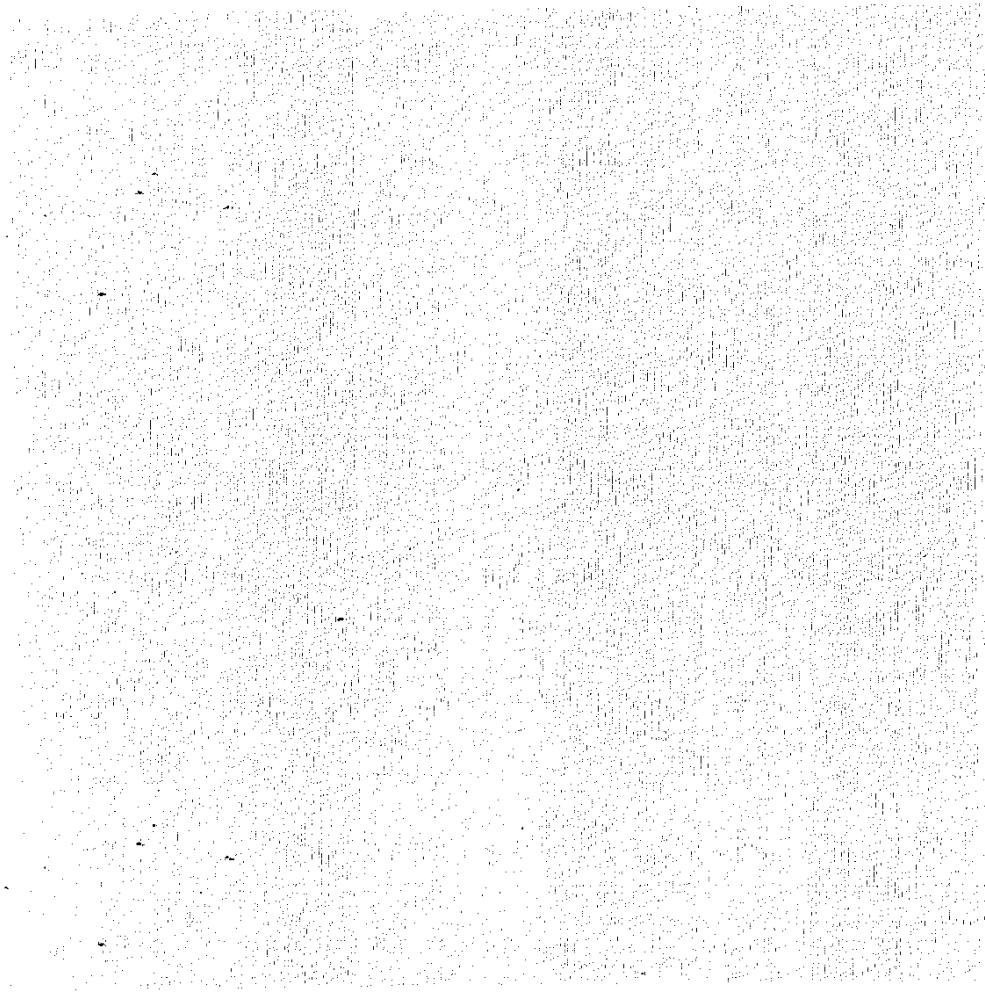
**Name of organisation:** Southern Health & Social Care Trust

**Date:** 30/10/07

**Audit checklist prepared by:**
Anne Quinn & Tony Black, in consultation with clinical staff

## 1. Review of NPSA recommended action

| Recommended action | Suggested evidence | Assessment | Comment/further action required |
|---|---|---|---|
| Remove sodium chloride 0.18% with glucose 4% intravenous infusions from stock and general use in areas that treat children. Suitable alternatives must be available. Restrict availability of these intravenous infusions to critical care and specialist wards such as renal, liver and cardiac units. Ensure that suitable alternatives are available for use. | Copy of:<br>• purchase records illustrating reduction in use of sodium chloride 0.18% with glucose 4% infusion;<br>• list of areas stocking sodium chloride 0.18% with glucose 4%. | Compliance | REMOVAL OF NO 18 SOLUTIONS<br>Confirmation of adherence on both sites to the removal of sodium chloride 0.18% with glucose 4% intravenous infusions from stock and general use in areas that treat children.<br><br>Evidence and supporting documentation re removal of this solution:<br>• Notes of the meeting on 7 September 2007, NPSA Patient Safety Alert 22: Reducing the risk of hyponatraemia when administering intravenous infusions to children, Appendix A) |



- Daisy Hill Hospital Purchase records & Drugs & Therapeutics (D&T) meeting minutes indicate that sodium chloride 0.18% with glucose 4% has been removed and is no longer re-ordered.
  (a) attached stock order Daisy Hill Hospital (Appendix B)
  (b) attached abstract from D&T meeting 14/06/07 (Appendix C).

- Confirmation of no stock of sodium chloride 0.18% with glucose 4%, Craigavon Area, Daisy Hill, Lurgan and St Luke's Hospitals (Appendices D,E,F,G)

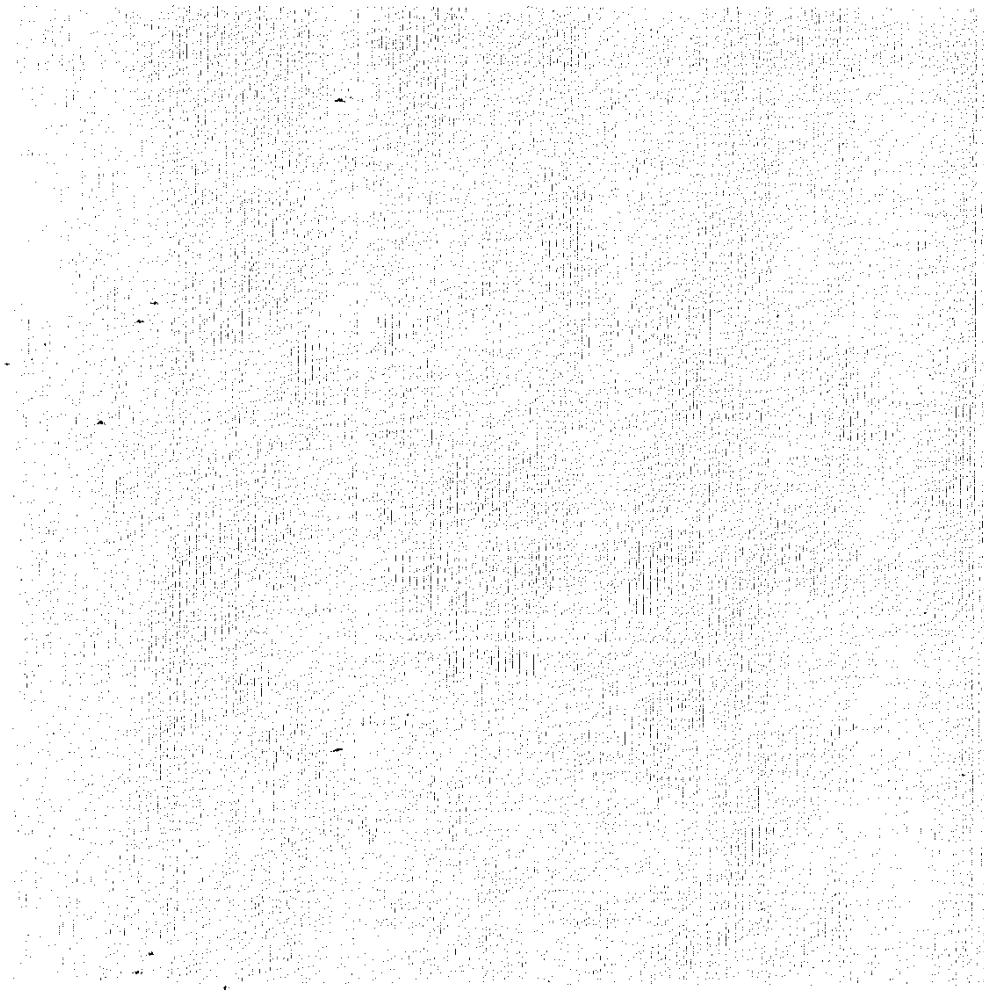
- Confirmation that all No 18 solutions have been recalled from St Luke's Hospital (telephone response from Andrew Dawson, Pharmacist, St Luke's Hospital to Emily Kilpatrick).

- Confirmation that this is not applicable in Minor Injuries Unit, South Tyrone Hospital (verbal conversation with Dr M Smith, Consultant Paediatrician)

- Confirmation that fluids in the Paediatric Ambulatory Unit, South Tyrone Hospital are supplied by Pharmacy, Craigavon Area Hospital and as none of the above fluids are available, these cannot be supplied. (telephone conversation with Lyn Watt)

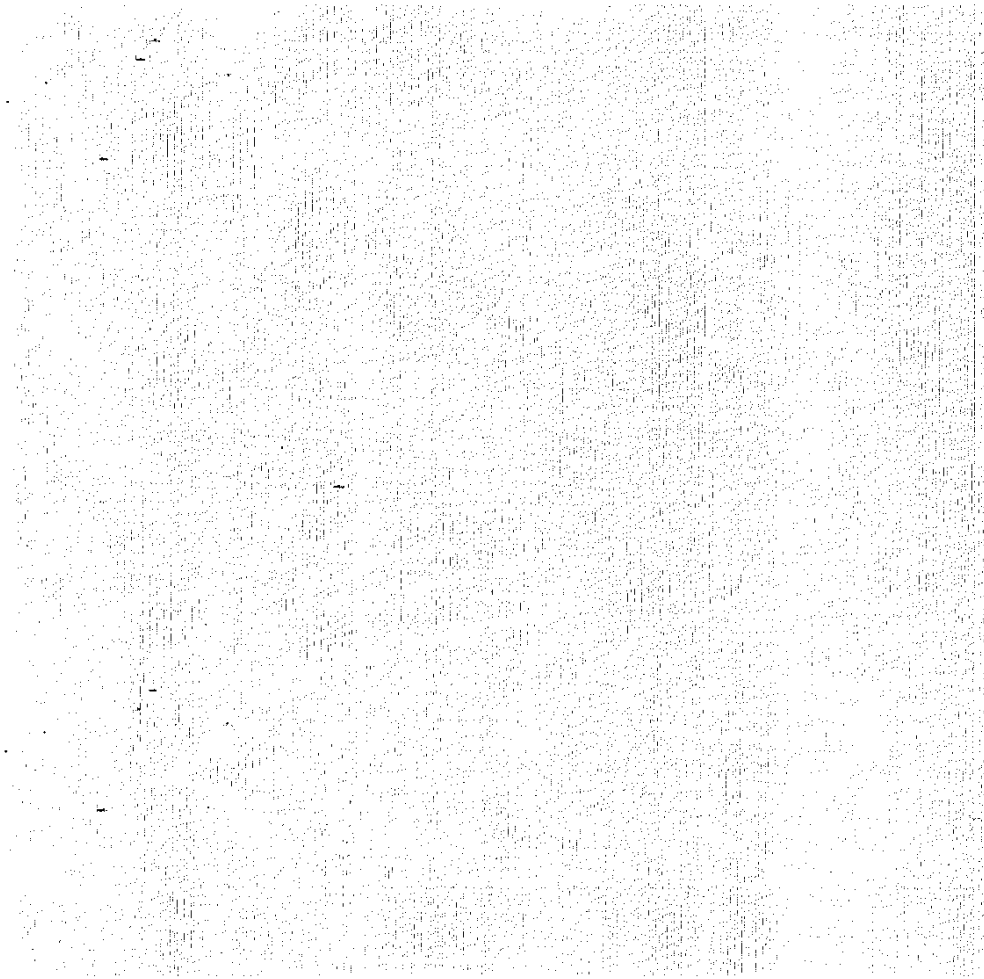
<u>ALTERNATIVE INFUSION FLUIDS REQUIRED AS PART OF THE HYPONATRAEMIA ALGORITHM</u>
Confirmation of the infusion fluids required as part of the hyponatraemia algorithm, stocked in both Craigavon Area and Daisy Hill Hospitals (email from Jillian Redpath, Medicines Governance Pharmacist, 27 September 2007, Appendix H)

| | | | |
|---|---|---|---|
| Produce and disseminate clinical guidelines for the fluid management of paediatric patients. These should give clear recommendations for fluid selection, and clinical and laboratory monitoring. Ensure that these are accessible to all healthcare staff involved in the delivery of care to children. | Copy of:<br>• clinical guidelines;<br>• date of Drugs and Therapeutics Committee review and approval;<br>• distribution list for clinical guidelines;<br>• audit of compliance with clinical guidelines. | Compliance in paediatric wards / A&E resus areas, inclusion of the guidelines in induction packs for Anaesthetists and wide dissemination of the guidelines in theatre, recovery and day surgery / day procedure units, SHSCT<br><br>Some additional action points have been identified | A **summary of infusion fluid usage 07/08 is attached as Appendix** V and is further supported by Intravenous Infusion Fluids stocked in Daisy Hill Hospital – November 2007 (Appendix X).<br><br>DAISY HILL HOSPITAL<br>• Guidelines were discussed at the DHH Paediatrics Governance meeting on 14/09/07) (Appendix I ). Minutes note a new fluid balance and prescription sheet is being considered for use in Daisy Hill Hospital and that clarification is required on who is responsible for IV fluid management pre and post surgery (see Dr Wright's clarification on this point below).<br>• Guidelines poster is displayed on Paediatric Ward and in A&E Resus Room. All Paediatric and A&E Doctors are aware of the guidelines. Guidelines are included in the induction for new Doctors. Plan to roll out to Medical, Surgical wards agreed at ward managers/clinical sisters meeting on 16/10/07.<br>• Guideline location on Paeds Daisy Hill Hospital Intranet Page *http://sharepoint1/sites/paeds/Clinical%20Guidelines/Forms/AllItems.aspx*. (Appendix J – Version 17/9/07).<br>• Guideline location on Paeds Daisy Hill Hospital Network Folder *F:\Dansak\Guidelines* (version 17/9/07).<br>• Confirmation that the algorithm (version 17/9/07) has been disseminated to all Anaesthetists in Daisy Hill Hospital (telephone conversation with Dr J Wright, Consultant Anaesthetist).<br>• Audits conducted in Daisy Hill Hospital (Appendix K). Re-audit planned as part of Paediatric Governance audit programme. |



CRAIGAVON AREA HOSPITAL

- The fluid therapy algorithm (Appendix L ) is included on the intranet (Appendix M), together with the fluid calculation sheet (Appendix N) and fluid prescription sheet (Appendix O).
- The latter two documents were issued in September 2006 and included a statement that they be reviewed in September 2007.
- The algorithm is also displayed in the treatment room in 3North along with the DHSSPS poster - Any child receiving prescribed fluid is at risk of hyponatraemia. The algorithm and DHSSPS poster are also displayed in the Resuscitation Area in A&E.
- This poster and algorithm is not displayed in the separate paediatric area within A&E, although nursing staff there commented that patients are managed in the resuscitation area in A&E and are quickly transferred to the paediatric ward.
- A hard copy of the algorithm was incorporated in the induction package for all paediatric medical staff in Craigavon Area Hospital. Doctors were also advised of the paediatric guidelines, protocols, etc which are available on the intranet. A copy of the attendance record at the induction programme is attached
- Anaesthetic trainees receive an induction pack which includes information on fluid therapy in children and management of hyponatraemia. The CREST guidelines are available in recovery and ICU. 0-13 year olds are not admitted to ICU. The hyponatraemia poster is available in ICU for 14+ year olds (conversation with Dr D Orr).



- The algorithm is displayed in Theatre and Day Procedure Unit South Tyrone Hospital, Theatre / Recovery and Day Surgery Unit Craigavon Area Hospital, X-Ray, Craigavon Area Hospital and Theatres Daisy Hill Hospital (verbal conversation with Mrs M McGeough).

- A Paediatric trained nurse is employed in Theatre / Recovery Ward Craigavon Area Hospital (verbal conversation with Mrs M McGeough).

**The paediatric parenteral fluid therapy (1month – 16 years) Initial Management Guideline, issued by DHSSPS Sept 2007 (Appendix W) is widely displayed in relevant clinical areas and all previous copies of the guideline have been removed. This will provide a consistent approach to care throughout SHSCT. This copy of the guideline has replaced earlier versions on the intranet sites throughout SHSCT.**

A standardised Children Fluid Chart has been implemented (Appendix Y).

Minutes of the Hyponatraemia meeting, 17 January 2008 demonstrate progress in addressing the action points in the Audit Checklist (Appendix Z).

Memo from Grace Hamilton, Head of Acute Paediatric Services re display of the Paediatric Parenteral Fluid Therapy (1month – 16 years) posters in wards / departments, 18 Mar 2008 (Appendix AJ)

MANAGEMENT OF 14-16 YEAR OLDS

- Craigavon Area and Daisy Hill Hospitals: If patient is admitted with a surgical or medical condition, he/she is managed on a surgical or medical ward respectively. Where an admission is solely for hyponatraemia, the patient is managed on a medical ward. (email confirming advice from Dr C O'Brien and Mr R Brown and verbal conversation with Mr Mackle).

- Mental Health: Adolescent patients who develop hyponatraemia are transferred to an acute bed under the care of the Physicians

ACTION:

- Review the fluid calculation sheet (Appendix N) and fluid prescription sheet (Appendix O) to establish whether or not any changes are required.

- Submit the finalised Regional Paediatric Parenteral Fluid Therapy Guideline (1month – 16 years), [issued by the CMO, CPO and CNO on 16 October 2007] and associated documents to the Drugs & Therapeutics Committees (Appendices P & Q – finalised guideline is dated September 2007).

  The next Drugs & Therapeutics Committee meeting in Craigavon Area Hospital is in December 2007 (deadline for submission of papers is mid-November), and on Thursday 7 February 2008 in Daisy Hill Hospital. These discussions will support implementation of standardised documentation throughout SHSCT.

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| | | | • Agree a process for disseminating the guidelines and associated documentation to all relevant medical and nursing staff who have the potential to treat children and/or adolescents with hyponatraemia in SHSCT.<br>• Implement the new fluid balance and prescription sheet in Daisy Hill Hospital<br>• Formalise arrangements for the management of 14-16 year olds (Letter from Dr Aljarad, Associate Medical Director, 20 Feb 2008, outlines the actions taken for management of 14-16 year olds (Appendix AA). Appendix AB demonstrates the number of elective and non-elective admissions for 14-16 year olds to CAH & DHH, Apr 07 – Feb 08 (Appendix AB)<br>• Seek clarification on who is responsible for IV fluid management pre and post surgery (see comment below)<br>• Consider nomination of key staff to validate that previous guidelines have been withdrawn with effect from a specified date. |
| Provide training and supervision for all staff involved in the prescribing, administering and monitoring of intravenous infusions for children. | Copy of:<br>• training curriculum;<br>• dates of training sessions;<br>• record of staff attending training and level of competency attained;<br>• dates of training updates. | Compliance in paediatric wards / A&E resus areas, inclusion of the guidelines in induction packs for Anaesthetists and wide dissemination of the guidelines in theatre, recovery and day surgery / day | DAISY HILL HOSPITAL<br>• Local training re Parenteral Fluid Therapy has taken place for Daisy Hill Hospital Paeds Medical Staff and some Paediatric Nursing Staff on 11/09/07 and 19/09/07 (Appendix R).<br>• Daisy Hill Hospital Paeds Nursing staff have attended Beeches *Best Practice in Fluid Therapy Course* on 16/01/07 in CAH (Tutor, Jennifer Azzopardi). Next date of this course is in Jan 2008.(Appendix S)<br>• Fluid Therapy is part of induction training in |

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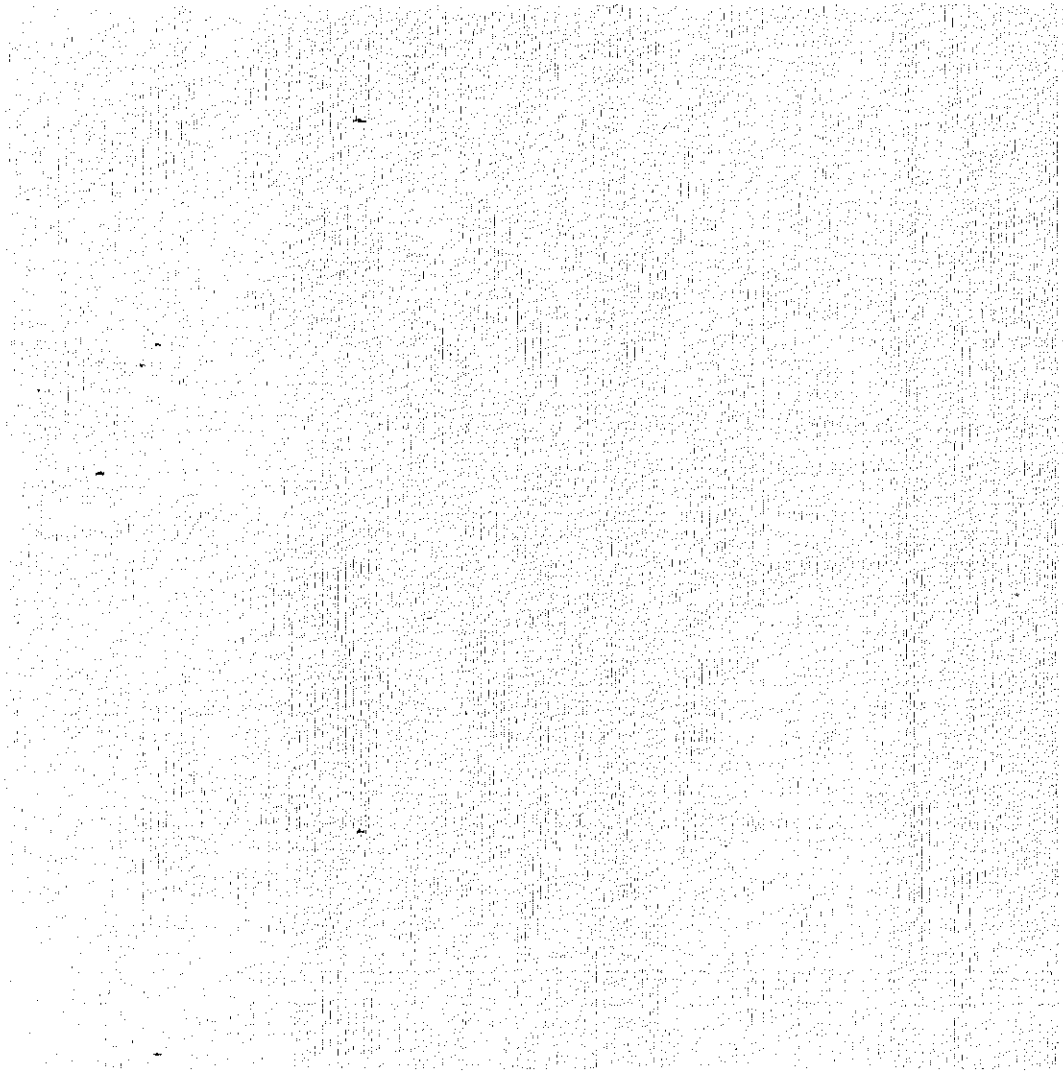
| | procedure units, SHSCT<br><br>Some additional action points have been identified | Daisy Hill Hospital<br>• Clarification on who is responsible for IV fluid management pre and post surgery – confirmation that Daisy Hill Hospital & Craigavon Area Hospital Anaesthetists take responsibility when a child enters Theatre and prescribes the fluids, if needed, for the post-op period. When the child returns to the Ward, responsibility reverts back to Ward medical staff (telephone conversation with Dr J Wright, Consultant Anaesthetist/Dr D. Orr, Consultant Anaesthetist).<br>• Paediatric medical teams are involved in all decisions re infusions in Daisy Hill Hospital.<br><br>CRAIGAVON AREA HOSPITAL<br>• Nursing staff in Paediatric ward, A&E and anaes / recovery ward, Craigavon Area Hospital have attended Best Practice in Fluid Therapy Course on 16/01/07 (Appendix T)<br>• Confirmation that Dr Smith, Consultant Paediatrician discussed the IV fluid therapy chart with paediatric nursing staff. This has been supplemented by ongoing, informal discussions (verbal conversation with Sr M Mackle, 3North).<br>• Confirmation that anaesthetic trainees receive an induction pack which includes information on fluid therapy in children and management of hyponatraemia. The CREST guidelines are available in recovery and ICU. 0-13 year olds are not admitted to ICU. The hyponatraemia poster is available in ICU for 14+ year olds (verbal conversation with Dr D Orr). |



- Confirmation that surgical colleagues seek advice from paediatric and anaesthetic medical staff regarding IV fluids for patients on the paediatric ward (verbal conversation with Mr Mackle). Sr Mackle confirmed that, where appropriate, paediatric nursing staff challenge issues around fluid management.

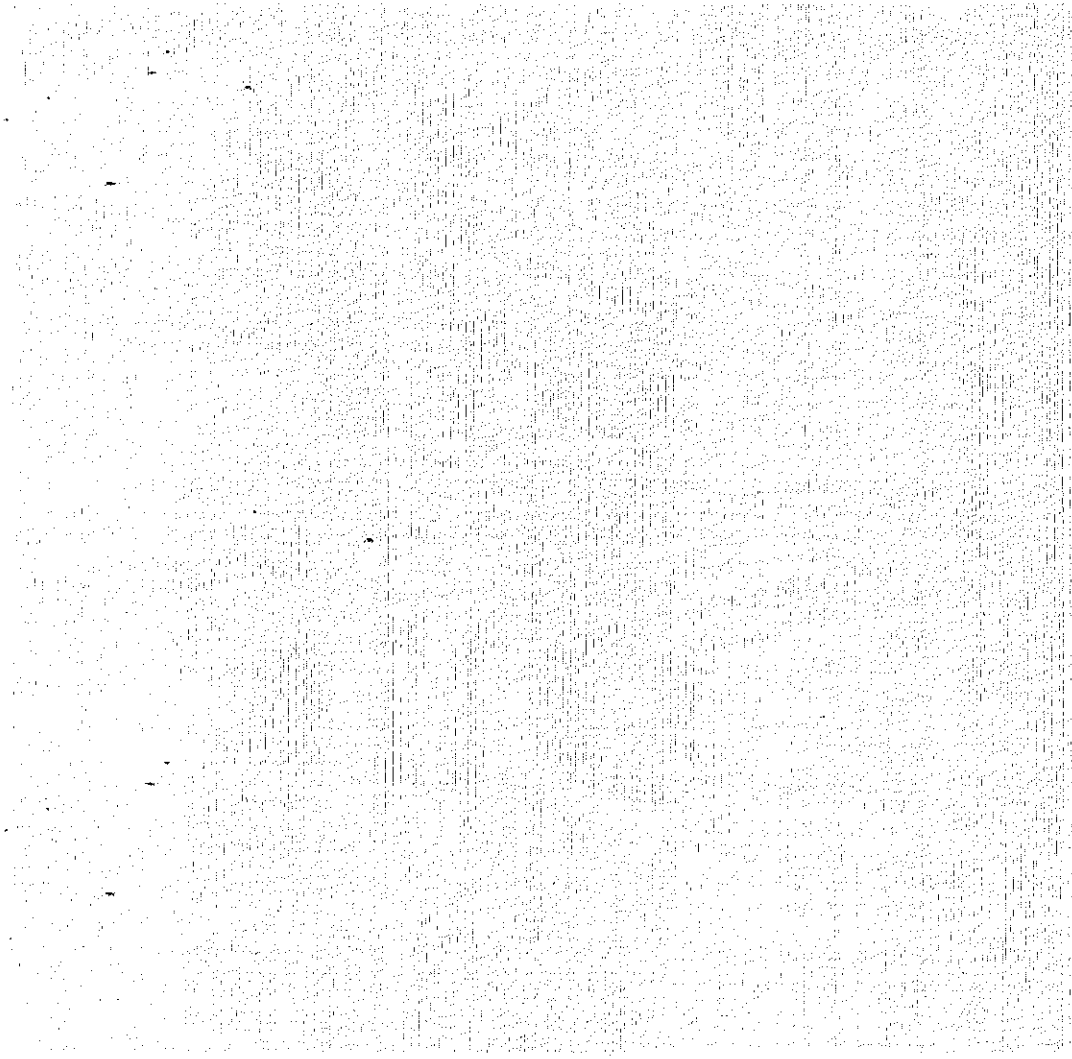
- Staff have attended the Paediatric Life Support course (conversation with Mrs M McGeough).

- All registered Nursing staff have attended mandatory training on Administration of Medicines (this is not specific to paediatrics). Plans are underway to have a paediatric trained nurse available for all paediatric lists in the Day Surgery Unit / Day Procedure Unit. This will also form part of the BADS – HQS Accreditation process (verbal conversation with Mrs M McGeough).

**Letter from Dr Aljarad, Associate Medical Director, to Lead Anaesthetist in DHH & CAH confirming that the responsibility of the Anaesthetist in prescribing fluids only applied while the child was in theatre i.e. the responsibility of fluid prescription after leaving theatre falls on the surgical / medical paediatric staff (Appendix AI). Letter copied to Mr Mackle & Mr Brown.**

MANAGEMENT OF 14-16 YEAR OLDS

- Craigavon Area and Daisy Hill Hospitals: If patient is admitted with a surgical or medical condition, he/she is managed on a surgical or medical ward respectively. Where an admission is solely for hyponatraemia, the patient is managed on a medical ward. (email confirming



advice from Dr C O'Brien and Mr R Brown). Confirmation required from Dr Murphy. This response has been discussed with Mr Mackle and he is in agreement with it. Medical input for clarification on Craigavon site.

- Mental Health: Adolescent patients who develop hyponatraemia are transferred to an acute bed under the care of the Physicians

ACTION:

- Training for nursing staff will be advanced via the Beeches Management Centre. The Assistant Directors of Nursing are discussing this request for additional training with the Beeches Management Centre as part of the process for commissioning of nurse training. The next meeting will be held in early November.

- Awareness of the revised guidelines and associated documentation should be disseminated through appropriate structures to all relevant medical and nursing staff who have the potential to treat children and/or adolescents with hyponatraemia in SHSCT.

**Work is in progress regarding further training and awareness sessions:**
**- Dr Aljarad has written to Dr C Shepherd, Clinical Director, regarding the provision of training and awareness sessions for nursing staff in the paediatric wards and Emergency Medicine departments (Appendix AC),**
**- Letter from Dr Aljarad to Sr B McGibbon, 20 Feb 2008, re proposals to hold several large**

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| | | | **teaching sessions in the Boardroom, DHH (Appendix AD).**<br>**- Email from Ronan Carroll to Gerry Johnston, Beeches Management Centre, regarding consultancy days for training on Blood Transfusion and the Management of Hyponatraemia in CAH & DHH and roll out of training to all adult nurses caring for children between 13-16 years. This should incorporate education and awareness on the algorithm and paediatric fluid balance chart (Appendix AE)** |
| Reinforce safer practice by reviewing and improving the design of existing intravenous fluid prescriptions and fluid balance charts for children. | Copy of:<br>• prescription and fluid balance charts;<br>• date of Drugs and Therapeutics Committee review and approval. | Partial compliance Documentation is in place in CAH, same has been ordered for DHH | DAISY HILL HOSPITAL<br>• The new charts have been ordered for use in Daisy Hill Hospital Paeds ward (confirmed by Sr B McGibbon, Ward Manager). This will ensure standardisation of the documentation used in Craigavon Area Hospital.<br><br>CRAIGAVON AREA HOSPITAL<br>• The fluid calculation sheet (Appendix N) and fluid prescription sheet (Appendix O) were published in September 2006. These documents are available on the intranet and are in use in Craigavon Area Hospital.<br><br>It is expected that there will be a single Fluid Balance Chart across the Southern Trust.<br>ACTION<br>• These documents will be reviewed to establish whether or not any changes are required. As outlined above, this documentation and the finalised guidelines will be considered by the Drugs & Therapeutics Committees. A process |

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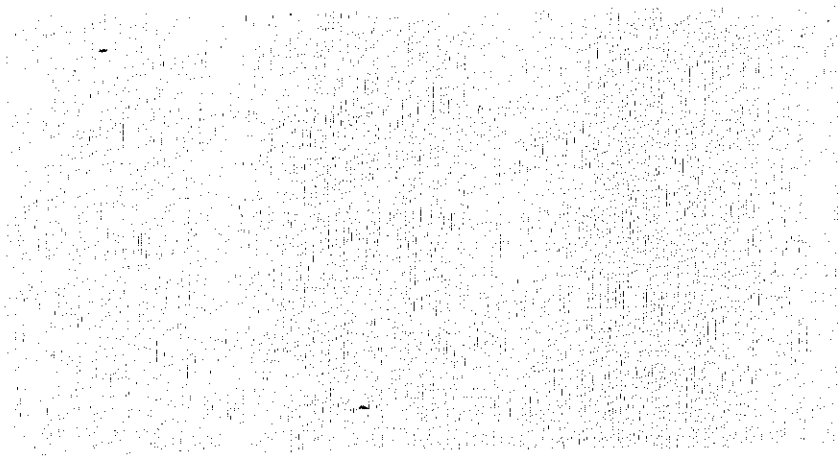
| | | | for raising awareness amongst relevant medical and nursing staff should be developed and timescales identified.<br><br>See above comment re implementation of standardised children fluid chart outlined above. |
| Promote the reporting of hospital-acquired hyponatraemia via local risk management systems and implement an audit programme to ensure NPSA recommendations and local procedures are being adhered to. | Copy of:<br>• regular hospital incident reports featuring episodes of hospital-acquired hyponatraemia and degree of harm;<br>• minutes of meetings to review reports and consider action;<br>• documented action taken;<br>• results of audit of the above parameters | Compliance | • The Southern Trust complies with the relevant circulars in respect of SAI, and has recently developed interim guidance to support the management of SAI's in the transition period between legacy trust and new trust governance arrangements.<br><br>• The Trust places significant importance on SAI reporting and recommend that all incidents relating to hyponatraemia are drawn to the attention of relevant senior personnel and that any SAI reported relating to hyponatraemia will be subject to a full investigation in line with SHSCT policy on incident management policy.<br><br>• A summary of audit activity undertaken in Daisy Hill Hospital is included as Appendix. K. Audit was undertaken in Craigavon Area Hospital two years ago. It is suggested further audit on compliance with the guidelines be undertaken and it has been proposed that a bid for regional funding to facilitate this project be submitted to the Guidelines & Audit Implementation Network (GAIN).<br><br><u>ACTION</u><br><br>• Ongoing monitoring of SAI and incident reporting in line with DHSSPS and SHSCT |



policy. (Copy of Action to be taken by SHSCT staff when a Serious Adverse Incident occurs – interim guidance with effect from 1 Feb 2008) – Appendix AF, AG). Monitoring of clinical incidents relating to hyponatraemia is undertaken on an ongoing basis in line with these processes. Retrospective audit on the management of hyponatraemia has been included in the SHSCT Effectiveness & Evaluation Work Programme Nov 07 – March 09 (in progress), (Appendix AH)

- Undertake regional audit of clinical practice and submit proposal for funding of the audit to GAIN.

SUMMARY

This audit checklist highlights areas of good practice and processes already implemented to reduce the risk of hyponatraemia when administering intravenous infusions to children. Some areas have been identified where action is required to further enhance these arrangements. The issues highlighted in this audit checklist have been used to inform the SHSCT's action plan.

## 2. Review of patient safety incident data involving paediatric infusions for preceding 12 months

| Clinical area reporting incident | Number of reports | |
|---|---|---|
| Accident and emergency | CAH<br>(Medication related, paediatric wards & reporting to Dr Hogan) | 0 |
| | DHH | 0 |
| Critical care (PICU) | | |
| General paediatrics | | |
| Specialist ward areas (e.g. liver/renal/cardiac units) | | |
| Surgery | | |
| Trauma and orthopaedics | | |
| Other | | |
| **Total** | | |

| Clinical outcome | Number of reports |
|---|---|
| Death | |
| Severe (permanent harm) | |
| Moderate (significant, but not permanent, harm requiring additional treatment) | |
| Low (temporary harm requiring extra observation or minor treatment) | |
| No harm | |
| Near miss | |
| **Total** | |

## 3. Overall comments and actions recommended by Drugs and Therapeutics Committee

Comments:

Action:

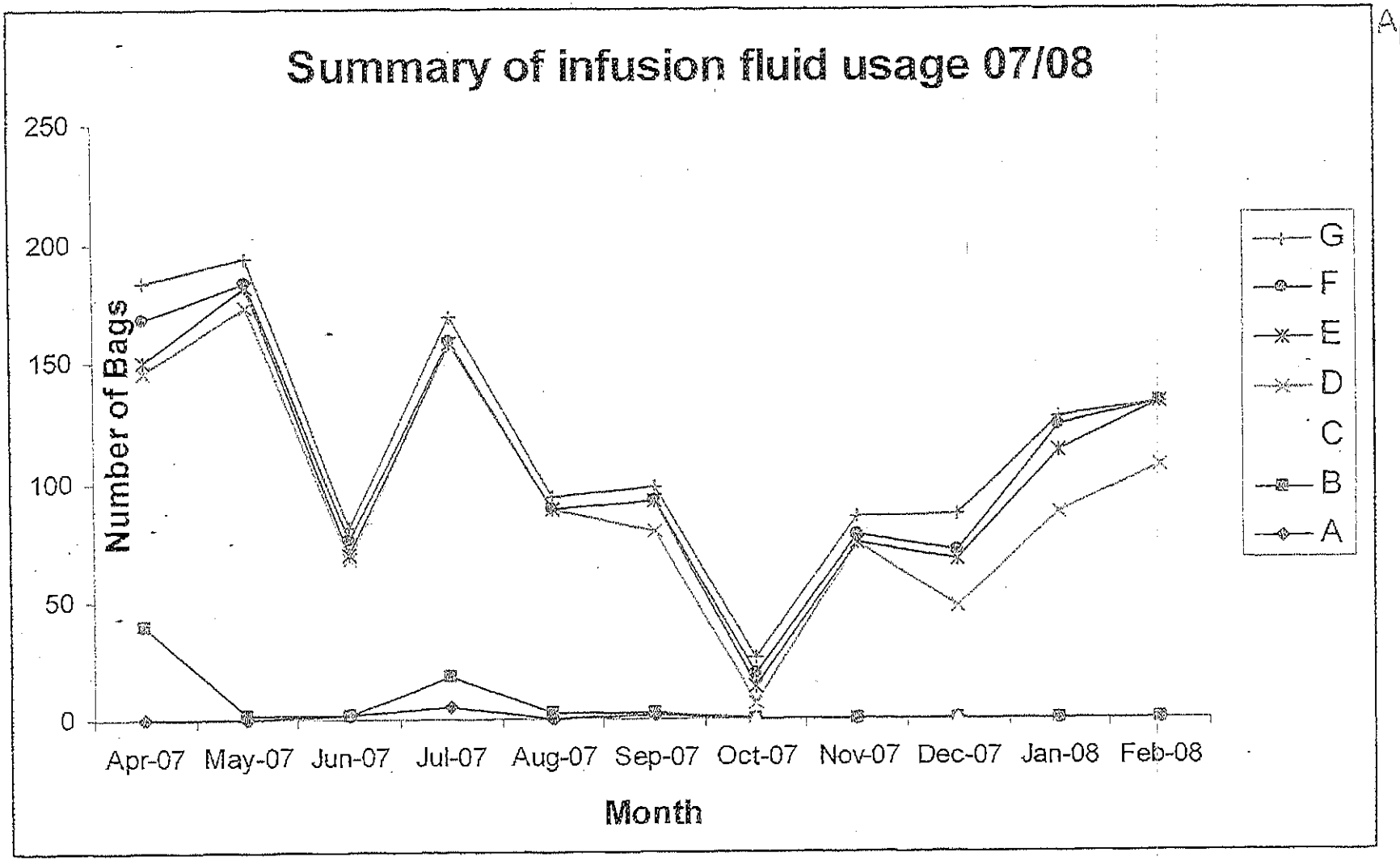
Signature of Drugs and Therapeutics Committee Chair:

Name of Drugs and Therapeutics Committee Chair:

Date:

Date of next annual audit review:

Appendix V.




| LETTER | FLUID |
|---|---|
| A | GLUCOSE 4% + SOD. CHLORIDE 0.18% 500ML |
| B | GLUCOSE 4% + SOD.CHLORIDE 0.18% 1000ml |
| C | GLUCOSE 5% + SOD. CHLORIDE 0.45% 500ml |
| D | SODIUM CHLORIDE 0.9% + KCL 0.3% INF 20mmol 500ml |
| E | SODIUM CHLORIDE 0.9% + KCL 0.15% 10\mmol 500ml |
| F | GLUCOSE 5% + SOD. CHLORIDE 0.45% + 20MMOL KCL 500ML |
| G | GLUCOSE 5% + SOD CHLORIDE 0.45% + 10MMOL KCL 500ML |

Appendix X

# Intravenous Infusion Fluids Stocked in Daisy Hill Hospital

## November 2007

| INTRAVENOUS FLUID | SIZE | ITEM CODE |
|---|---|---|
| GLUCOSE 5% | 100ML | 7218 |
| GLUCOSE 5% | 250ML | SD1068 |
| GLUCOSE 5% | 500ML | 7219 |
| GLUCOSE 5% | 1000ML | 7220 |
| GLUCOSE 5% + SOD. CHLORIDE 0.9% | 500ML | SD1376 |
| GLUCOSE 10% | 500ML | 7221 |
| HARTMANS SOLUTION | 500ML | SD1010 |
| HARTMANS SOLUTION | 1000ML | 7100 |
| SODIUM BICARBONATE 1.26% | 500ML | 13338 |
| SODIUM BICARBONATE 1.4% | 500ML | HD2088 |
| SODIUM BICARBONATE 8.4% | 200ML | 7574 |
| SODIUM CHLORIDE 0.45% | 500ML | 7232 |
| SODIUM CHLORIDE 0.9% | 50ML | HD2043 |
| SODIUM CHLORIDE 0.9% | 100ML | 8823 |
| SODIUM CHLORIDE 0.9% | 150ML | 11828 |
| SODIUM CHLORIDE 0.9% | 250ML | 11662 |
| SODIUM CHLORIDE 0.9% | 500ML | 7231 |
| SODIUM CHLORIDE 0.9% | 1000ML | 6561 |
| SODIUM CHLORIDE 1.8% | 500ML | 5756 |
| SODIUM CHLORIDE 2.7% | 500ML | 7577 |
| SODIUM 0.45% + 5% GLUCOSE | 500ML | 7235 |
| SODIUM 0.45% + 2.5% GLUCOSE | 500ML | SB7161 |

# Ready to use Dilute Potassium Chloride Solutions

| *Potassium Content (mmol/bag)* | *Volume* | *Diluent* | *Pharmacy Code* |
|---|---|---|---|
| 10mmol | 500ml | Sodium chloride 0.9% | SB7320 |
| 20mmol | 1000ml | Sodium chloride 0.9% | SB2044 |
| 20mmol | 500ml | Sodium chloride 0.9% | SB7319 |
| 40mmol | 1000ml | Sodium chloride 0.9% | SB7094 |
| | | | |
| 20mmol | 1000ml | Glucose 5% | SB2045 |
| 20mmol | 500ml | Glucose 5% | SB7318 |
| 40mmol | 1000ml | Glucose 5% | SB7095 |

| Unlicensed and more concentrated solutions – treat as Controlled Drug. | | | Suggested use | Pharmacy Code |
|---|---|---|---|---|
| 40mmol | 500ml | Sodium chloride 0.9% | Fluid restricted patients | SB7321 |
| 40mmol | 500ml | Glucose 5% | Fluid restricted patients | SB7322 |
| 10mmol | 500ml | Glucose 10% | Peri-operative management of diabetes | SB7323 |
| 10mmol | 500ml | Sodium chloride 0.45% and Glucose 2.5% | Paediatrics | SB7326 |
| 10mmol | 500ml | Sodium chloride 0.45% and Glucose 5% | Paediatrics | SB7344 |
| 20mmol | 500ml | Sodium chloride 0.45% and Glucose 5% | Paediatrics | SB7327 |
| 10mmol | 500ml | Sodium chloride 0.45% and Glucose 10% | Management of Diabetes | SB7645 |

Appendix Y

| Children's Ward | ADDRESSOGRAPH | IV Site Key |
|---|---|---|
| Date _____ | NAME _____ | 0 - No Pain, no erythema |
| | DOB _____ | 1 - Pain, no erythema |
| | UNIT NUMBER _____ | 2 - Pain, erythema |
| | | PP - Pump Pressure |
| | | SN - Serial Number |

RECCOMMENDED 24 HOUR FLUID REQUIREMENTS _____ MLS

| TIME | Oral/Enteral | | Intravenous Infusion 1 | | | | | Intravenous Infusion 2 | | | | | All Output | | | | | B/M | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Amt | Type | Amt hrly | Type | Total | IV Site | P P | Amt hrly | Type | Total | IV Site | P P | PU | BO | N/G | Vomit | Drain | | |
| | | | | | | | | | | | | | | | | | | | |
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| Total Across Page | | | | | | | | | | | | | | | | | | | |

Prescription sheet is valid for a maximum of 24 hours

Date: / / Weight . Kg

Fluid Bolus (for shocked patients only use 0.9% Sodium Chloride)

Signs of shock include HR ↑, CRT>2sec, RR ↑, BP ↓, urine ↓

| | Date Time | Bolus mls/kg | Rate in mls | Volume and Type of Fluid Prescribed | Doctors Signature | Given by | Start time | Finish time | Total Volume |
|---|---|---|---|---|---|---|---|---|---|
| A | | | | | | | | | |
| B | | | | | | | | | |
| C | | | | | | | | | |
| D | | | | | | | | | |

**Maintenance / Deficit / IV Infusion (see laminated page for volume calculation)**

| | Maintenance/ Deficit/ IV Infusion | Date + Time | Volume + Type of IV Fluid to be erected | Additives | Rate mls per hr | Combined rate in mls per hr | Prescribed by | IV Fluids Erected by | IVFluids +Label checked by | Start Time | Finish Time | Total Volume infused in mls |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | Maintenance | | | | | | | | | | | |
| F | Deficit | | | | | | | | | | | |
| G | | | | | | | | | | | | |
| H | | | | | | | | | | | | |

**12 hour reassessment:** is the fluid prescription still suitable? Yes ☐ No ☐

Dr. Signature _____ Time _____ & Date _____

**IV Medication OR Replacement of ongoing losses (e.g. vomiting, drainage, diarrhoea)**

| | Date + Time | How to replace? (e.g. ml for ml over 4 hrs) | Volume + Type of fluid to be erected | Additive s | Rate mls/hr | Doctors Signature | Bag erected by | Bag + Label checked by | Start time | Finish time | Volume infused in ml |
|---|---|---|---|---|---|---|---|---|---|---|---|
| J | | | | | | | | | | | |
| K | | | | | | | | | | | |
| L | | | | | | | | | | | |

**12 hour reassessment:** is the fluid prescription still suitable? Yes ☐ No ☐

Dr. Signature _____ Time _____ & Date _____

A fluid prescription for longer than 12 hrs requires rechecking the Blood Glucose and U& E of the patient!

Results: _____ Glucose _____ mmol/l Na _____ mmol/l K _____ mmol/l Urea _____ mmol/l

Creatinine _____ umol/l

Date _____ Time taken

NSW Code WO5267N

Appendix 2.

# SOUTHERN HEALTH AND SOCIAL CARE TRUST

## Notes of Hyponatraemia Meeting held on 17th January 2008 in Meeting Rom, Trust Headquarters

**Present:** Dr P Loughran
Ronan Carroll
John Carroll
Dr B Aljarad
Anne Ross
Tracey Boyce

| ITEM | NOTE | ACTION |
|---|---|---|
| 1 | **APOLOGIES**<br><br>It was noted that Dr Shepherd would represent CAH Paediatrics at future meetings | |
| 2 | **NOTES OF MEETING HELD ON 07th September**<br><br>• Notes of the meeting were agreed<br>• The Group noted the assistance of Anne Quinn and her team in the compilation of the audit | |
| 3 | **Action 1: Remove sodium chloride 0.18% with glucose 4% intravenous infusions from stock and general use in areas that treat children. Suitable alternatives must be available. Restrict availability of these intravenous infusions to critical care and specialist wards such as renal, liver and cardiac units.**<br><br>Group were advised that as per audit this action had been completed.<br>A query was raised in relation to the use of fluid in GP practices. Tracey Boyce agreed to discuss with colleagues in Southern board. | *Tracey Boyce to confirm removal of infusions from GP practices within Southern Board* |
| 4 | **Action 2. Produce and disseminate clinical guidelines for the fluid management of paediatric patients. These should give clear** | |

| | | |
|---|---|---|
| | **recommendations for fluid selection, and clinical and laboratory monitoring.** | |
| | The group referred to the updated fluid balance sheet and (Appendix N&O) and were advised that this is being commonly adopted across trust | *Dr B Aljarad to confirm delivery/use of new sheets in DHH* |
| | Prescription sheet has been ordered in for the Daisy Hill Site and delivery was awaited | |
| | The group agreed to include copy of guidance in induction for A&E , Medicine and Surgery staff. | *Dr Aljarad to disseminate guidance to identified staff groups* |
| | The group agreed that there was a need to consider process for Trust wide processes for clinical guidelines | *Dr Loughran and Medical Directorate team to consider processes for clinical guidelines in new Trust structure* |
| | The group discuss processes to reach the 14 – 16 year old age group of patients who may not be on the paediatric wards. | |
| | It was agreed to disseminate guidelines and information to the Associate Medical Directors and Clinical Directors of Medicine and Surgery to alert them. It was also agreed to include Obs & Gynae. | *Dr Loughran to disseminate information* |
| | It was also agreed to make copies of the fluid prescription chart available on the adult wards | *Tracey Boyce to advise pharmacy team* |

| | | |
|---|---|---|
| | Ronan Carroll reviewed the prescription charts and agreed to discuss the most appropriate means to educate/advise nursing staff on adults wards of their use.<br><br>The group discussed the use of IV fluids for children pre and post surgery. The group refereed to the audit which clarified the position and it was agreed that when child arrives back to ward pandemic medical staff are responsible for fluid. | *Ronan Carroll to advise group on roll out of prescription charts to nursing staff on adult wards*<br><br>*Confirmation letter to be sent from Dr Aljarad regarding responsibility for fluids pre and post surgery.* |
| 5 | **Action 3: Provide adequate training and supervision for all staff involved in prescribing, administering and monitoring of intravenous fluid for children**<br><br>The group were advised that paediatric medical staff have training in Daisy Hill Hospital<br>A number of nursing staff attended DHH training also<br><br>Training has also been provided in paediatric induction and should be formally included in medical induction.<br><br>The group agreed that training for clinical staff in A&E and paediatrics should be mandatory, with a phased approach to training in adult wards and theatres. | *Ronan Carroll to confirm if training provided by Beeches Management Centre* |

| | | |
|---|---|---|
| | The Group discussed whether member of medical staff could provide training to ensure continuity.<br>Dr.Aljarad to discuss with colleagues.<br><br>It was agreed that Paediatric medical staff agree would provide training for nursing staff in mandatory group [A & E and paediatric wards]<br><br>It was agreed that Beeches Management staff would be asked to provide training for 14-16 year olds | *Dr Aljarad to discuss provision of training in house with medical colleagues.*<br><br>*Dr Aljarad to confirm training provided in house for mandatory groups.* |
| 6 | **Action 4: Reinforce safer practice by reviewing and improving the design intravenous fluid prescriptions and fluid balance charts for children**<br><br>See discussion under Action 2 above | |
| 7 | **Action 5: Promote Reporting of hospital-acquired hyponatraemia via local risk management reporting systems. Implement an audit programme to ensure NPSA recommendations & local procedures are being adhered to**<br><br>The group discussed the need to reinforce the requirement to report Hospital acquired hyponatrameia. Dr Aljarad write to medical staff to advise that incident should be reporting, following discussion with Consultant medical staff if Sodium below130o<br><br>Dr Loughran,requested that an audit be completed on each site every 6 months. | *Dr Aljarad to write to colleagues to advise of SAI requirement*<br><br>*Clinical audit to be advised of need to re-* |

| | | |
|---|---|---|
| | Group agreed to undertake a full audit of actions taken on NPSA alert at the end of February | *audit end of February* |
| 8 | **NPSA PATIENT SAFETY ALERT 22: REDUCING THE RISK OF HYPONATRAEMIA WHEN ADMINISTERING INTRAVENOUS INFUSIONS TO CHILDREN – REGIONAL CLINICAL GUIDELINES Circular HSC (SQS) 20/2007 – Addendum 16/10/07** | |
| 8.1 | **HSC Trust should ensure that the guidelines is available and followed for fluid prescribing for children aged 1 moth to 16 years, Children may be treated in adult wards and Accident & Emergency units, therefore the guideline should be implemented in all settings where children age 1 month to 16 years are treated** | *See Action 2 Above* |
| 8.2 | **Where a senior clinician considered that a special maintenance infusion fluid is required then this alternative choice for fluid maintenance must be endorsed by the Chief Executive of the Trust with clear documentation of the reasons for that endorsement** | *Requests for special maintenance fluids will be considered by Trust Drugs and Therapeutic Committee and send to Chief Executive for approval if warranted* |
| 8.3 | **'Organisations should use ready to administer preparations and if possible avoid the need for potassium chloride to be added in a clinical setting. Staff should consultant he local Trust poluc policy on IV strong potassium. Information about the availability of infusion fluids in individual hospitals should be attached to the Regional Paediatric Fluid Guideline wall chart so that all prescribers are made** | *Tracey Boyce and John Carroll to ensure list of alternatives is made available.* |

| | | |
|---|---|---|
| | aware of the infusion fluids available for use in the local hospital' | |
| 8.4 | Medical Directors in collaboration with the Directors and educational providers, should ensure that all prescribers are made aware of this circular and wall chart and that the contents are brought to the attention of new junior prescribers on an ongoing basis. | *See Action 2 & Action 3* |
| 8.5 | Trust Directors of Pharmacy should develop a progress report on important supply issues in respect of all infusion fluids relevant to this regional paediatric fluid guideline and submit a report to the Pharmacy Contracting Evaluation Group and copied to the Regional Paediatric Fluid Therapy Working Group | *Trust Director of pharmacy will compile report for Regional Pharmacy Contracting group at year end* |
| 9 | DATE OF NEXT MEETING<br><br>Meeting to be arranged in early March 2008 | |

Appendix A.J

Southern Health and Social Care Trust

# Memorandum

Our ref: Your ref:

To: Ronan Carroll
Simon Gibson
Anne McVey
Lindsay Stead

From: Grace Hamilton, Head of Acute Paediatric Services

Date: Tuesday, 18 March 2008

Subject: RQIA Hyponatraemia Review Visit March 31st URGENT

Dear Colleagues,

As you are aware RQIA are visiting the Trust on the 31st March to audit our actions in relation to Patient Safety Alert 22. The inspection team are visiting wards in CAH between 1130-1230pm and in DHH between 4-5pm. They are particularly interested in how the Trust meets the needs of the 14-16 year old age group requiring intravenous fluid therapy.

In preparation for this visit it is essential the enclosed A3 posters 'Paediatric Parenteral Fluid Therapy (1 month-16 years)' are clearly displayed in all wards and departments which may come into contact with children and young people. This poster replaces previous guidance in relation to this area, therefore please ensures all out of date information is removed.

In addition, it is vital this information is relayed to frontline staff through team meetings etc, so that they will be able to answer questions from the inspection team in relation to fluid therapy for children and young people.

Dates for training in relation to 'Best practice in fluid therapy for children and young people' will be circulated shortly and it is important staff attend these sessions

If additional posters are required please do not hesitate to contact me.
Many thanks for your cooperation in this matter.

Regards,

Grace Hamilton
Head of Acute Paediatric Services

Email: [redacted]

Copy To: Jim McCall
Brian Dornan
Dr Aljarad
Geraldine Maguire
Noleen O'Donnell
Eileen O'Rourke
Mary McGeough

Appendix AA

Medical Directorate,
[redacted]

20th February 2008.

Dear Colleague,

**Re: Prevention of Hyponatraemia in Children**

You will be aware that the Prevention of iatr*ogenic* Hyponatraemia in Children has been a priority issue for the Trust for quite a while. A set of Guidelines were issued by NPSA (Patient Safety Alert 22) on reducing the risks of Hyponatraemia when administering intravenous infusions to children. Subsequently, Guidelines were issued in July 2007 by the Department of Health on Paediatric Parental Intravenous Fluids.

As you will, on occasions, be involved in looking after Children in the age group 14-16 years, I would like to ask for your co-operation in implementing the following Recommendations:-

- Please ensure that the Poster for *Paediatric Parental Fluid Therapy* is on display in Medical and Surgical Units, Theatres, Emergency Medicine and the Gynaecological Wards. I would suggest an A3 laminated poster would be appropriate, I'm happy to supply the posters if required.. I am aware that some of the CREST Guidelines posters are still in place, however, the new Guidelines produced by the Department of Health should replace/be added as they are more detailed and more recent.
- As a new group of Doctors have just started in February I would ask you to bring these Guidelines to their attention, along with existing members of the Team
- Please advise your Team that if they need more help with implementing these Guidelines or any advice in prescribing IV fluids for children,to seek help from the Paediatric Team in Craigavon or Daisy Hill Hospital
- An audit is to be undertaken on the Implementation of these Guidelines, and we would aim to capture data of all cases with *iatrogenic* Hyponatraemia. Therefore I will urge you to encourage your staff to report cases of iatrogenic Hyponatraemia by filling in a Clinical Incident form. I am in discussion with the appropriate staff members to see how we can undertake this audit in the future.

Appendix AB

# SOUTHERN HEALTH AND SOCIAL CARE TRUST

**Number of Elective and Non-Elective Admissions to CAH and DHH - 14 to 16 year olds by Ward (Wards - Paediatric Ambulatory, Paediatric and 3 North are Excluded)**
**April 2007 to February 2008**

| Age | (All) |
|---|---|

| | | | Hospital on Admission | | |
|---|---|---|---|---|---|
| **Ward on Admiss** | **Specialty on Adr** | **Data** | **CAH** | **DHH** | **TOTAL** |
| 2 South Urology | General Surgery | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 2 | 0 | 2 |
| | Urology | Sum of Elective Admissions | 5 | 0 | 5 |
| | | Sum of Non-Elective Admissions | 5 | 0 | 5 |
| | Paediatric Urology | Sum of Elective Admissions | 1 | 0 | 1 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| **2 South Urology Sum of Elective Admissions** | | | **6** | **0** | **6** |
| **2 South Urology Sum of Non-Elective Admissions** | | | **7** | **0** | **7** |
| 3 South Ent | Ear Nose And Thro | Sum of Elective Admissions | 91 | 0 | 91 |
| | | Sum of Non-Elective Admissions | 35 | 0 | 35 |
| **3 South Ent Sum of Elective Admissions** | | | **91** | **0** | **91** |
| **3 South Ent Sum of Non-Elective Admissions** | | | **35** | **0** | **35** |
| 3 South Surgical | General Surgery | Sum of Elective Admissions | 1 | 0 | 1 |
| | | Sum of Non-Elective Admissions | 29 | 0 | 29 |
| | Ear Nose And Thro | Sum of Elective Admissions | 3 | 0 | 3 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| **3 South Surgical Sum of Elective Admissions** | | | **4** | **0** | **4** |
| **3 South Surgical Sum of Non-Elective Admissions** | | | **29** | **0** | **29** |
| Accident And Eme | General Surgery | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 1 | 0 | 1 |
| | Accident And Emer | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 22 | 0 | 22 |
| **Accident And Emergency Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Accident And Emergency Sum of Non-Elective Admissions** | | | **23** | **0** | **23** |

CAH Information Department, SHSCT. Ext 2945/2988/2876.

| Ward on Admiss | Specialty on Adn | Data | CAH | DHH | TOTAL |
|---|---|---|---|---|---|
| Cah Orthopaedic V | Orthopaedics | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| **Cah Orthopaedic Ward Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Cah Orthopaedic Ward Sum of Non-Elective Admissions** | | | **0** | **0** | **0** |
| Cah Trauma Ward | Orthopaedics | Sum of Elective Admissions | 1 | 0 | 1 |
| | | Sum of Non-Elective Admissions | 1 | 0 | 1 |
| **Cah Trauma Ward Sum of Elective Admissions** | | | **1** | **0** | **1** |
| **Cah Trauma Ward Sum of Non-Elective Admissions** | | | **1** | **0** | **1** |
| Clinical Decision U | Accident And Emer | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 8 | 0 | 8 |
| **Clinical Decision Unit Short S Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Clinical Decision Unit Short S Sum of Non-Elective Admissions** | | | **8** | **0** | **8** |
| Coronary Care | Cardiology Medicin | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 2 | 2 |
| | General Medicine | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 1 | 1 |
| **Coronary Care Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Coronary Care Sum of Non-Elective Admissions** | | | **0** | **3** | **3** |
| Daisy Hill Theatre | Ear Nose And Thro | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| | Dental Surgery | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| **Daisy Hill Theatre Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Daisy Hill Theatre Sum of Non-Elective Admissions** | | | **0** | **0** | **0** |
| Day Procedure Un | General Surgery | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| | General Medicine | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| | Oral Surgery | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| | Haematuria | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| **Day Procedure Unit Sum of Elective Admissions** | | | **0** | **0** | **0** |

DHSSPS

| Ward on Admiss | Specialty on Adn | Data | CAH | DHH | TOTAL |
|---|---|---|---|---|---|
| **Day Procedure Unit Sum of Non-Elective Admissions** | | | **0** | **0** | **0** |
| Day Surgery Unit | Gastro-Enterology | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| | General Surgery | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| | General Surgery Sc | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| | Gynaecology | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| | Dermatology | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| | Urology | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| | Oral Surgery | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| **Day Surgery Unit Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Day Surgery Unit Sum of Non-Elective Admissions** | | | **0** | **0** | **0** |
| Female Medical | General Medicine | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 41 | 41 |
| **Female Medical Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Female Medical Sum of Non-Elective Admissions** | | | **0** | **41** | **41** |
| Female Surgical | General Surgery | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 51 | 51 |
| | Ear Nose And Thro | Sum of Elective Admissions | 0 | 1 | 1 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| | Gynaecology | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 4 | 4 |
| **Female Surgical Sum of Elective Admissions** | | | **0** | **1** | **1** |
| **Female Surgical Sum of Non-Elective Admissions** | | | **0** | **55** | **55** |
| General Medicine - | General Medicine | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 3 | 3 |
| **General Medicine - L6 Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **General Medicine - L6 Sum of Non-Elective Admissions** | | | **0** | **3** | **3** |

| Ward on Admiss | Specialty on Adr | Data | CAH | DHH | TOTAL |
|---|---|---|---|---|---|
| Intensive Care Uni | General Surgery | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 1 | 0 | 1 |
| | Intensive Care | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 3 | 0 | 3 |
| **Intensive Care Unit Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Intensive Care Unit Sum of Non-Elective Admissions** | | | **4** | **0** | **4** |
| Labour Ward | Obstetrics | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 4 | 0 | 4 |
| **Labour Ward Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Labour Ward Sum of Non-Elective Admissions** | | | **4** | **0** | **4** |
| Main Theatre | General Surgery | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 1 | 0 | 1 |
| | Community Dentist | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| | Paediatric Dentistr | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| | Dental Surgery | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| **Main Theatre Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Main Theatre Sum of Non-Elective Admissions** | | | **1** | **0** | **1** |
| Male Medical | General Medicine | Sum of Elective Admissions | 0 | 1 | 1 |
| | | Sum of Non-Elective Admissions | 0 | 13 | 13 |
| **Male Medical Sum of Elective Admissions** | | | **0** | **1** | **1** |
| **Male Medical Sum of Non-Elective Admissions** | | | **0** | **13** | **13** |
| Male Surgical | General Surgery | Sum of Elective Admissions | 0 | 1 | 1 |
| | | Sum of Non-Elective Admissions | 0 | 49 | 49 |
| | Ear Nose And Thro | Sum of Elective Admissions | 0 | 1 | 1 |
| | | Sum of Non-Elective Admissions | 0 | 0 | 0 |
| **Male Surgical Sum of Elective Admissions** | | | **0** | **2** | **2** |
| **Male Surgical Sum of Non-Elective Admissions** | | | **0** | **49** | **49** |
| Maternity | Obstetrics | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 0 | 12 | 12 |
| **Maternity Sum of Elective Admissions** | | | **0** | **0** | **0** |

DHSSPS

| Ward on Admiss | Specialty on Adr | Data | CAH | DHH | TOTAL |
|---|---|---|---|---|---|
| **Maternity Sum of Non-Elective Admissions** | | | **0** | **12** | **12** |
| Medical Assessmer | General Medicine | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 110 | 0 | 110 |
| **Medical Assessment Unit Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Medical Assessment Unit Sum of Non-Elective Admissions** | | | **110** | **0** | **110** |
| Midwife Led Unit - | Obstetrics | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 1 | 0 | 1 |
| **Midwife Led Unit - 2 East Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Midwife Led Unit - 2 East Sum of Non-Elective Admissions** | | | **1** | **0** | **1** |
| Protected Elective | Gynaecology | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 3 | 0 | 3 |
| **Protected Elective Unit, Cah Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Protected Elective Unit, Cah Sum of Non-Elective Admissions** | | | **3** | **0** | **3** |
| Ward 1 East | Obstetrics | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 6 | 0 | 6 |
| **Ward 1 East Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Ward 1 East Sum of Non-Elective Admissions** | | | **6** | **0** | **6** |
| Ward 1 North | Cardiology Medicin | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 3 | 0 | 3 |
| **Ward 1 North Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Ward 1 North Sum of Non-Elective Admissions** | | | **3** | **0** | **3** |
| Ward 2 North | Haematology | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 1 | 0 | 1 |
| **Ward 2 North Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Ward 2 North Sum of Non-Elective Admissions** | | | **1** | **0** | **1** |
| Ward 2 West | Obstetrics | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 2 | 0 | 2 |
| **Ward 2 West Sum of Elective Admissions** | | | **0** | **0** | **0** |
| **Ward 2 West Sum of Non-Elective Admissions** | | | **2** | **0** | **2** |
| Ward 4 North | General Surgery | Sum of Elective Admissions | 1 | 0 | 1 |
| | | Sum of Non-Elective Admissions | 38 | 0 | 38 |
| | Urology | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 1 | 0 | 1 |

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330-133-036

| Ward on Admiss | Specialty on Adn | Data | CAH | DHH | TOTAL |
|---|---|---|---|---|---|
| Ward 4 North Sum of Elective Admissions | | | 1 | 0 | 1 |
| Ward 4 North Sum of Non-Elective Admissions | | | 39 | 0 | 39 |
| Ward 4 South | General Surgery | Sum of Elective Admissions | 1 | 0 | 1 |
| | | Sum of Non-Elective Admissions | 46 | 0 | 46 |
| | Urology | Sum of Elective Admissions | 0 | 0 | 0 |
| | | Sum of Non-Elective Admissions | 1 | 0 | 1 |
| Ward 4 South Sum of Elective Admissions | | | 1 | 0 | 1 |
| Ward 4 South Sum of Non-Elective Admissions | | | 47 | 0 | 47 |
| Total Sum of Elective Admissions | | | 104 | 4 | 108 |
| Total Sum of Non-Elective Admissions | | | 324 | 176 | 500 |

Data source : Discharged Inpatients, Business Objects, run date 19/03/08.

CAH Information Department, SHSCT. Ext 2945/2988/2876.

Appendix A.I

Medical Directorate,
[redacted]

Lead Anaesthetist,
Daisy Hill Hospital/Craigavon Area Hospital.

20th February, 2008.

Dear Colleague,

**Re: Hyponatraemia in Children**

As you know the Trust has been taking all the necessary steps to prevent any incidents of iatrogenic Hyponatraemia in children.

One of the issues which was highlighted during the process of implementation was the prescribing of IV Fluids to children in the post-operative period.

My understanding from my communications with Dr Martina Hogan, Consultant Paediatrician, Craigavon Area Hospital and Dr Jayne Wright, Consultant Anaesthetist in Daisy Hill Hospital was that the responsibility of the Anaesthetist in prescribing fluids only applied while the child was in theatre ie the responsibility of fluid prescription after leaving theatre falls on the Surgical/Medical Paediatric staff.

I would be most grateful if you would confirm that you are in agreement with the above understanding.

Please advise me as well whether any steps need to be taken to ensure there is no breakdown in communication between the Anaesthetist and Paediatric staff after the patient is transferred back from theatre.

Appendix AD

Medical Directorate,
[redacted]

Sister B McGibben,
Ward Manager,
Children's Ward,
Daisy Hill Hospital.

20th February, 2008.

Dear Sister McGibben,

**Re: Prevention of Hyponatraemia in Children**

You will be aware that the issue of Prevention of Hyponatraemia in Children is very important. I am sure you are familiar with the Guidelines produced by the Department of Health in July 2007 on the *Paediatric Parenteral Fluid Therapy (1month-16years).*

Paediatric staffs in Daisy Hill Hospital were charged with the responsibility of providing Awareness/Training of these Guidelines to the Nursing staff in Paediatrics and A&E. It will be extremely difficult to accommodate everyone, therefore, I am proposing that we will have several large sessions of training in the Boardroom in the Nurses Home to allow as many as possible to attend. In addition, we will have 2-3 smaller sessions to enable the night staff to attend these training sessions. The session will take about a half-hour and we would aim to run two sessions at a time. I'll be keen to know the most appropriate time for your staff.

I am not sure if Mr Carroll has already spoken with you about this, however I must stress the importance of attending at these sessions. We will keep a record of attendance and this will be part of our response to the NPSA Recommendations.

I am also aware that some of your staff might have attended courses at The Beeches about Fluid Therapy. However, this is different and they still need to attend these sessions. The nurses who attended this training with the medical staff don't have to attend again; the list of names is with my secretary.

I would be grateful if you would provide me with a list of names of your staff,

Appendix AE

## Brennan, Anne

**From:** Carroll, Ronan [redacted]
**Sent:** 27 February 2008 08:37
**To:** gerry.johnston[redacted]
**Cc:** McVey, Anne; Patricia, Watt; Burrell, Gail; Brennan, Anne; Maguire, Geraldine; Hamilton, Grace; basam.aljarad[redacted] Nicholl, Valerie
**Subject:** Consultancy Days

Hi Gerry,

The Trust requires consultancy days for training on Blood Transfusion & the Management of Hyponatraemia. The training for both items needs to be across both acute sites i.e. CAH & DHH.

With regard to Blood transfusion it needs to be bimonthly in DHH & each month CAH. Jane Wright had been providing these.

With regard to Hyponatraemia, this training needs to be rolled out to all adult nurses caring for children between 13-16. The adult nurses need to understand the algorhythm and the paeds fluid balance chart. Paeds area e.g. Paeds & A&E within the hospital are being facilitated through training provided by resident staff grades.

The hyponatraemia training needs to be a deliberate concerted blitz, as RQIA are undertaking a peer review shortly.

I will ask Gail to forward on the necessary consultancy request forms for completion.

I will give u a ring either today or tomorrow

Many Thanks

Ronan

Ronan Carroll

Assistant Director

Cancer & Clinical Services

Southern Health & Social Care Trust

[redacted]

Information Act 2000.

Appendix AF

Southern Health and Social Care Trust

# Southern Health & Social Care Trust

## Interim Guidance With Effect from 1 February 2008

## Action to be taken by Southern HSC Staff when a Serious Adverse Incident Occurs

# CONTENTS



Appendices

## 1 INTRODUCTION

This document outlines the interim arrangements to be applied by all staff in the Southern Trust (w.e.f. 1 February 2008) when a Serious Adverse Incident (SAI) occurs. The arrangements contained in this document will remain in operation until the full establishment of new Southern Trust governance structures and the associated risk management arrangements. The interim arrangements contained in this document should be read in conjunction with the Southern Trust Interim Procedures for the Management of Adverse Incidents (February 2008, Appendix 6), and the SHSSB *Actions to be taken by SHSSB Staff when a Serious Adverse Incident is Reported to the SHSSB (September 2007).* (Appendix 5).

The actions contained in this document take cognisance of the DHSSPS Circular HSC (SQSD) 19/2007 (March 2007), which further highlights the need for all Trust SAI's to be copied to their commissioning Board using the appropriate form (Appendix 3).

## 2 DEFINITIONS

### 2.1 Adverse Incident

An event, circumstance or departure from acceptable standards of practice that could have or did lead to unintended or unexpected harm, loss or damage to people, property, environment or reputation.

### 2.2 Serious Adverse Incident

The definition of a Serious Adverse Incident (SAI) is the same as that for adverse incident but with the added dimensions that the incident is likely to:

- Be serious enough to warrant regional action to improve safety or care within the broader HPSS;
- Be of major concern; and/or
- Require an independent review.

Such incidents may, for example:

- Involve a large number of patients/clients;
- Include poor clinical or management judgement;
- Involve failed services or piece of equipment;
- Contribute to the death of a patient or client under unusual circumstances; or
- A possibility or perception that any of these might have occurred.

AND the incident could have or did result in:

- Potential/serious harm to a patient/client, service user or the public e.g. disease outbreaks, clinical error;
- Serious implications for the patient/client, or staff safety; or
- Allegations/serious compromises in the proper delivery of health and social care services.

ALL SUICIDES SHOULD BE RECORDED AS SERIOUS ADVERSE INCIDENTS

## 3 ACTION TO BE TAKEN WHEN A SERIOUS ADVERSE INCIDENT OCCURS

3.1 When an adverse incident occurs, which is also defined as a Serious Adverse Incident (see definitions Section 2), staff should report the incident via Southern Trust Interim Procedures for the Management of Adverse Incidents.

3.2 The SAI should be reported to the relevant Programme of Care Director/designated Assistant Director.*

3.3 The SAI should be reported to the appropriate Patient/Client Liaison, Safety and Risk Manager (Older People & Primary Care, Mental Health & Disability, Children and Young People) or the Risk Manager, Acute Services (see Appendix 1 SAI Contact List).

3.4 The appropriate contact for notification of the SAI should complete the SAI reporting form (Appendix 3), in conjunction with the relevant Programme of Care Director/designated Assistant Director.

3.5 The appropriate contact for notification of SAI, in consultation with the Programme of Care Director/designated Assistant Director should, report the SAI (using the SAI reporting form Appendix 3) to the Chief Executive of the Southern Trust, Chief Executive SHSSB, DHSSPS, Senior Manager-Patient&Client Safety, Medical Directorate and Head of Communications.

3.6 The Programme of Care Director/designated Assistant Director should ensure that an appropriate investigation is undertaken and the investigation reported in line with the *Template/Guidance for Incident/Investigation Review Reports* – Appendix 4. It should be noted that incident investigations may vary depending upon the type of incident and the degree of severity. Therefore the template may be adapted in order to suit both the specialist nature of the incident and the specific requirements of the Trust.

3.7 The Programme of Care Director/designated Assistant Director to ensure completion of the investigation report within 12 weeks (except in exceptional circumstances e.g. in cases where disciplinary action is pending or cases involving criminal activity), and send the completed report to the Chief Executive Southern Trust for approval and sign-off.

3.8 Chief Executive Southern Trust to confirm sign-off of report with relevant Programme of Care Director/designated Assistant Director. Programme of Care Director/designated Assistant Director to issue the report to the Chief Executive SHSSB and DHSSPS. Where completion of the investigation report is not possible within 12 wks the Programme of Care Director/designated Assistant Director should agree an alternative completion date with the Chief Executive Southern Trust, Chief Executive SHSSB and DHSSPS.

3.9 Appropriate Trust contact for SAI to follow up with relevant Programme of Care Director/designated Assistant Director that the investigation has been undertaken and reported in line with the reporting guidance and 12 week timescale.

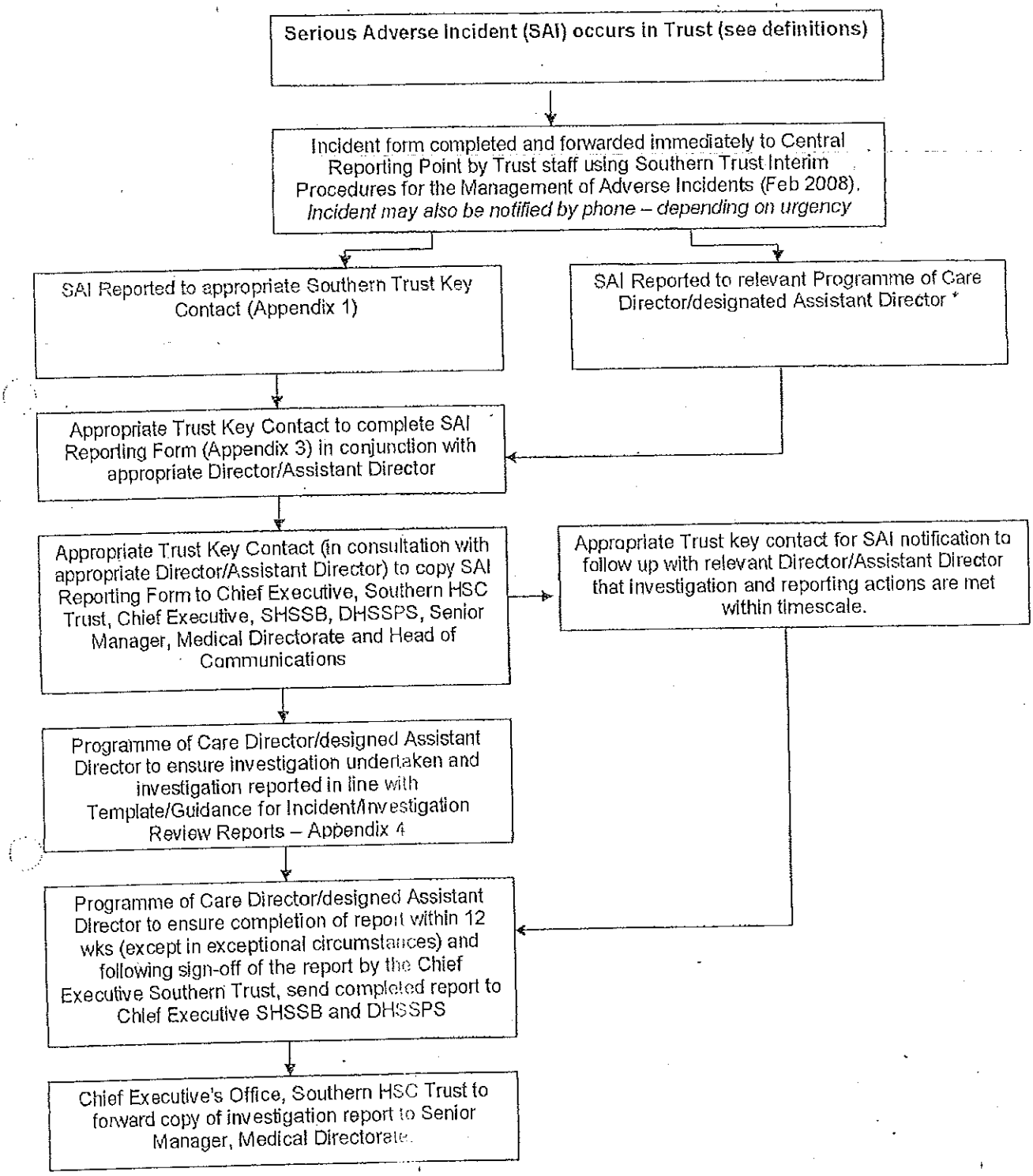
3.10 The Chief Executive's Office, Southern Trust should copy the completed investigation report to the Senior Manager, Medical Directorate.

3.11 For other incidents, notifiable under statutory regulations e.g. Children's Order, these should continue be reported via the appropriate Southern Trust contact (Appendix 1), ensuring that such incidents are also reported to the Chief Executive of SHSSB and the relevant Programme Director/designated Assistant Director of the Southern Trust.

* In instances were the SAI is notified to a Director/designated Assistant Director out of hours, the Director/designated Assistant Director should ensure that the appropriate Southern Trust contact has also been informed.

| Directorate | | Contact Details |
|---|---|---|
| Acute Services | Beatrice Moonan | [redacted] |
| Older People & Primary Care | Mrs Caroline Beattie | [redacted] |
| Children & Young People | Mrs Jacky Kingsmill-Winter | [redacted] |
| Mental Health & Disability | Mr Tony Black | [redacted] |

## Appendix 2 - Actions to be Taken when a Serious Adverse Incident occurs in the Southern HSC Trust




* In instances were the SAI is notified to a Director/designated Assistant Director out of hours, the Director/designated Assistant Director should ensure that the appropriate Southern Trust Key Contact has also been informed.

APPENDIX 3 - SERIOUS ADVERSE INCIDENT REPORT

1. Organisation:
Incident Identifier No.

2. Date and brief summary of incident:

3. Why incident considered serious: Briefly, explain why this SAI meets the criteria:
a) warrants regional action to improve safety or care within the broader HPSS;

b) is of public concern; or

c) requires an independent review.

4. Immediate action taken:

Classification of incident as initially assessed by organisation: Catastrophic / Major / Moderate / Minor / Insignificant

5. Is any regional action recommended? Y/N (if 'Yes', full details should be submitted):

Are there any aspects of this incident which could contribute to learning on a regional basis?

6. Is an Independent Review being considered? Y/N (if 'Yes', full details should be submitted):

7. Has any employment-related action been taken as a result of this incident, such as:
a. suspension from duties? Y/N
b. a referral been made to POCVA? Y/N
c. a referral to the relevant Professional Regulatory Body, NCAS or PSNI? Y/N (if 'Yes', specify which organisation)

| 8. Other Organisations informed: | Date informed | Other (please specify) Y/N |
|---|---|---|
| HSS Board | Y/N | |
| HM Coroner | Y/N | |
| Mental Health Commission | Y/N | |
| NIHSE | Y/N | |
| PSNI | Y/N | |
| RQIA | Y/N | Date informed: |

9. I confirm that the designated senior manager and/or Chief Executive has/have been advised of this SAI and is/are content that it should be reported to the Department. (delete as appropriate)
Report submitted by:
(name and contact details of reporting officer)
Date:

# Health and Social Care
# Regional Template and Guidance for Incident Investigation/Review Reports

September 2007

Working for a Healthier People

This work has been commissioned by the DHSSPS Safety in Health and Social Care Steering Group as part of the action plan contained within "Safety First: A Framework for Sustainable Improvement in the HPSS" (under 5.1.2 Agreeing Common systems for Data Collection, Analysis and Management of Adverse Events). The following work forms part of an on-going process to develop clarity and consistency in conducting investigations and reviews. This is an important aspect of the safety agenda.

This template and guidance notes should be used, in as far as possible, for drafting all HSC incident investigation/review reports. It is intended as a guide in order to standardise all such reports across the HSC including both internal and external reports. It should assist in ensuring the completeness and readability of such reports. The headings and report content should follow as far as possible the order that they appear within the template. Composition of reports to a standardised format will facilitate the collation and dissemination of any regional learning.

All investigations/reviews within the HSC should follow the principles contained within the National Patient Safety Agency (NPSA) Policy documents on "Being Open – Communicating Patient Safety Incidents with Patients and their Carers". http://www.npsa.nhs.uk/site/media/documents/1456_Beingopenpolicy1_11.pdf

It is also suggested that users of this template read the guidance document "A Practical Guide to Conducting Patient Service Reviews or Look Back Exercises" – Regional Governance Network – February 2007. http://www.dhsspsni.gov.uk/microsoft_word_-_hss__sqsd__18-07_patient_service_review_guidelines_-_final_feb07.pdf

This template was designed primarily for incident investigation/review however it may also be used to examine complaints and claims.

The suggested template can be found in the following pages.

Template Title Page

Date of Incident/Event

Organisation's Unique Case Identifier (for tracking purposes)

Introduction
The introduction should outline the purpose of the report and include details of the commissioning Executive or Trust Committee.

Team Membership
List names and designation of the members of the Investigation team. Investigation teams should be multidisciplinary and should have an independent Chair. The degree of independence of the membership of the team needs careful consideration and depends on the severity / sensitivity of the incident. However, best practice would indicate that investigation / review teams should incorporate at least one informed professional from another area of practice, best practice would also indicate that the chair of the team should be appointed from outside the area of practice. In the case of more high impact incidents (i.e. categorised as catastrophic or major) inclusion of lay / patient / service user or carer representation should be considered. There may be specific guidance for certain categories of adverse incidents, such as, the Mental Health Commission guidance http://www.dhsspsni.gov.uk/mhc_guidance_on_monitoring_untoward_events.pdf

Terms of Reference of Investigation/Review Team
The following is a sample list of statements of purpose that should be included in the terms of reference:

- To undertake an initial investigation/review of the incident
- To consider any other relevant factors raised by the incident
- To agree the remit of the investigation/review
- To review the outcome of the investigation/review, agreeing recommendations, actions and lessons learned.
- To ensure sensitivity to the needs of the patient/ service user/ carer/ family member, where appropriate
- Methodology to be used should be agreed at the outset and kept under regular review throughout the course of the investigation.
- Clear documentation should be made of the time-line for completion of the work.

This list is not exhaustive

Summary of Incident/Case
Write a summary of the incident including consequences. The following can provide a useful focus but please note this section is not solely a chronology of events:

- Brief factual description of the adverse incident
- People, equipment and circumstances involved
- Any intervention / immediate action taken to reduce consequences
- Chronology of events
- Relevant past history
- Outcome / consequences / action taken

This list is not exhaustive

Methodology for Investigation
This section should provide an outline of the methods used to gather information within the investigation process. The NPSA's "Seven Steps to Patient Safety" is a useful guide for deciding on methodology.

- Review of patient/ service user records (if relevant)
- Review of staff/witness statements (if available)
- Interviews with relevant staff concerned e.g.
- Organisation-wide
- Directorate Team
- Ward/Team Managers and front line staff
- Other staff involved
- Other professionals (including Primary Care)
- Specific reports requested from and provided by staff
- Engagement with patients/service users / carers / family members
- Review of Trust and local departmental policies and procedures
- Review of documentation e.g. consent form(s), risk assessments, care plan(s), training records, service/maintenance records, including specific reports requested from and provided by staff etc.

This list is not exhaustive

Analysis

This section should clearly outline how the information has been analysed so that it is clear how conclusions have been arrived at from the raw data, events and treatment/care provided.

Analysis can include the use of root cause and other analysis techniques such as fault tree analysis, etc. The section below is a useful guide particularly when root cause techniques are used. It is based on the NPSA's 'Seven Steps to Patient Safety" and "Root Cause Analysis Toolkit".

(i) Care Delivery Problems (CDP) and/or Service Delivery Problems (SDP) Identified

CDP is a problem related to the direct provision of care, usually actions or omissions by staff (active failures) or absence of guidance to enable action to take place (latent failure) e.g. failure to monitor, observe or act; incorrect (with hindsight) decision, NOT seeking help when necessary.

SDP are acts and omissions identified during the analysis of incident not associated with direct care provision. They are generally associated with decisions, procedures and systems that are part of the whole process of service delivery e.g. failure to undertake risk assessment, equipment failure.

(ii) Contributory Factors

Record the influencing factors that have been identified as root causes or fundamental issues.

- Individual Factors
- Team and Social Factors
- Communication Factors
- Task Factors
- Education and Training Factors
- Equipment and Resource Factors
- Working Condition Factors
- Organisational and Management Factors
- Patient / Client Factors

This list is not exhaustive

As a framework for organising the contributory factors investigated and recorded the table in the NPSA's 'Seven Steps to Patient Safety" document (and associated Root Cause Analysis Toolkit) is useful. www.npsa.nhs.uk/health/resources/7steps

Where appropriate and where possible careful consideration should be made to facilitate the involvement of patients/service users / carers / family members within this process.

Conclusions

Following analysis identified above, list issues that need to be addressed. Include discussion of good practice identified as well as actions to be taken. Where appropriate include details of any ongoing engagement / contact with family members or carers.

Involvement with Patients/Service Users/ Carers and Family Members

Where possible and appropriate careful consideration should be made to facilitate the involvement of patients/service users / carers / family members.

Recommendations

List the improvement strategies or recommendations for addressing the issues above. Recommendations should be grouped into the following headings and cross-referenced to the relevant conclusions. Recommendations should be graded to take account of the strengths and weaknesses of the proposed improvement strategies/actions.

- Local recommendations
- Regional recommendations
- National recommendations

Learning

In this final section it is important that any learning is clearly identified. Reports should indicate to whom learning should be communicated and copied to the Committee with responsibility for governance.

A Protocol for the Investigation and Analysis of Clinical Incidents. Clinical Risk Unit, University College London and ALARM (September 1999).

A Practical Guide to Conducting Patient Service Reviews or Look Back Exercises – Regional Governance Network – February 2007
http://www.dhsspsni.gov.uk/microsoft_word_-_hss__sqsd__18-07_patient_service_review_guidelines_-_final_feb07.pdf

Being Open. Communicating Patient Safety Incidents with Patients and their Carers. The National Patient Safety Agency, 2005.
http://www.npsa.nhs.uk/site/media/documents/1456_Beingopenpolicy1_11.pdf

Circular HSS (PPM) 06/2004 -Reporting and Follow-up on Serious Adverse Incidents: Interim Guidance

Circular HSS (PPM) 05/2005 – Reporting of Serious Adverse Incidents

Circular HSS (PPM) 2/2006 – Reporting and Follow-up on Serious Adverse Incidents.

Circular HSS (MD) 12/2006 – Guidance Document – How to classify Incidents and Risk

SAI Reporting Template from 1st April 2007 (PDF 20 KB) - Reporting and Follow-up on Serious Adverse Incidents
http://www.dhsspsni.gov.uk/index/phealth/sqs/sqsd-circulars.htm

Confidentiality: Protecting and Providing Information. General Medical Council 2004

Decision making tool to reduce unnecessary suspensions and support a safety culture – The National Patient Safety Agency
www.npsa.NHS.uk/idt

Dineen, M 2002, Six Steps to Root Cause Analysis, Consequence UK Ltd. Oxford.

Doing Less Harm; Improving the Safety and Quality of Care through Reporting, Analysing and Learning from Adverse Incidents, Department of Health and The National Patient Safety Agency, 2001

Mental Health Commission for Northern Ireland: Monitoring of Untoward Events by the Mental Health Commission (Revised Guidance) S6/2006 April 2006.

Managing risk and minimising mistakes in services to children and families, (SCIE: Children and Families' Services Report 6) 2005, http://www.scie.org.uk/publications/children.asp

Memorandum of Understanding Investigating patient or client safety incidents (Unexpected death or serious untoward harm) DHSSPS, PSNI, Coroners Service and HSENI, February 2006

Protocol for Joint Investigation of Alleged and Suspected Cases of Abuse of Vulnerable Adults DHSSPS & PSNI 2003

Protocol for Joint Investigation by Social Workers and Police Officers of Alleged and Suspected Cases of Child Abuse – NI September 2004

Root Cause Analysis: Simplified Tools and Techniques, Anderson B, Fagerhaug T Quality Press, Milwaukee, 2000.

Seven Steps to Patient Safety A guide for NHS staff SSG/2003/01. - The National Patient Safety Agency, April 2004 (including the RCA tool kit)
www.npsa.nhs.uk/health/resources/7steps

Managing risk and minimising mistakes in services to children and families, (SCIE: Children and Families' Services Report 6) 2005, http://www.scie.org.uk/publications/children.asp

Milne R and Bull R (2000) Investigative Interviewing, Psychology and Practice, Wiley J and Sons, Chichester, 1999

Taylor-Adams S.E et al, Long Version of the CRU/ALARM Protocol: Successful Systems Event Analysis (2002)

Appendix AG

# Southern Health and Social Services Board

APPENDIX 5

# External Serious Adverse Incident Reporting Procedure

Updated September 2007

Action to be taken by SHSSB Staff when a Trust Serious Adverse Incident is reported to SHSSB

CONTENTS

## Action to be taken by SHSSB Staff

1. When an SAI Report (see Appendix 1) is received by the Chief Executive's office at SHSSB, it is logged and forwarded to the Governance Department. The Governance Department will log the SAI onto the Datix system and forward a copy to the lead Director and Designated Investigating Officer (DIO), (see Appendix 2 – list of SHSSB Designated Investigating Officers).

   The Governance department will place an electronic SAI Datix Record Template, (see Appendix 3) into the relevant SAI folder in the G-Drive Common folder.

   The Governance Department forwards a hard copy of SAI cover sheet and incident documentation to the relevant Director and DIO which can then be matched to the electronic form.

   *Where an SAI has been received informally by a member of Board staff, they will contact the Chief Executive's office to ensure the incident is formally recorded. The Governance Department will in turn contact the Trust's designated reporting officer to ensure the incident is formally reported.*

2. The DIO will, in the first instance, decide whether the reported incident requires any immediate intervention by SHSSB. If immediate intervention is required (e.g. in cases of serious infection outbreaks), the DIO will liaise with appropriate Trust staff directly, and will advise the Governance Department electronically so as to update the Datix system. If immediate intervention is not required, the DIO will:

   a. write to the reporting Trust requesting that the internal investigation be completed within twelve weeks of the date of the incident being discovered and for a written report to be provided to the DIO at SHSSB. The Trust should use the HSC Regional Template and Guidance for Incident Review Reports (see Appendix 5) when compiling this report. It should be noted that incident investigations may vary depending on the type of incident and the degree of severity. Therefore it is not intended that the template be used without adaptation in order to suit both the specialist nature of the incident and to suit the specific requirements of each individual Trust.

   b. in the case of incidents being reported in respect of a delegated statutory function or as part of a cluster or trend of incidents, contact the Trust informally to agree whether a full internal investigation is required.

   Governance Department to be updated electronically.

3. It is acknowledged that in some instances, it may not be possible for the investigation to be completed within the twelve week deadline, e.g. in cases where disciplinary action is pending, or in cases involving suspected criminal activity, etc. In such instances, the Trust should indicate that this is the case. If no such indication is received, and the Trust's internal investigation report is not received within twelve weeks of the date of the incident, the DIO will send a reminder to the relevant Trust officer. Governance Department to be updated electronically.

4. If the report, or an explanation for the delay, is still not received fourteen weeks after the date of the incident, the SHSSB Chief Executive will write to the Trust Chief Executive seeking reasons for the delay and asking when the report will be provided. If the reasons provided are not adequate, or the timescale for provision of the report is unreasonable, the SHSSB Chief Executive will correspond further with the Trust Chief Executive and a deadline for submission

of the report will be agreed and monitored by both the Trust and SHSSB to ensure that it is met. Governance Department to be updated electronically.

5. Once the investigation report has been received, the lead officer will consider the report and decide whether additional comment is required from other professional officers at SHSSB (i.e. in cases where the SAI was multi-disciplinary in nature). The Governance Department will be updated electronically.

6. If additional comment is required, the DIO will provide copies to relevant professional officers asking them to consider the report and provide comments to him/her within a specified timescale.

7. Following this, if the DIO considers that adequate assurance has been provided by the Trust, he/she will complete the electronic update and forward a hard copy signed by themselves and the relevant director, to the Governance Department. The Governance Department will forward to the Cx for signature and closure on the DATIX system.

8. If the DIO does not consider that adequate assurance has been provided by the Trust, he/she will write to the Trust with details of queries raised and may request that further action is taken by the Trust. Governance Department to be electronically updated.

9. Once the Trust's response is received by the DIO, a copy will be disseminated to relevant professional officers for comment.

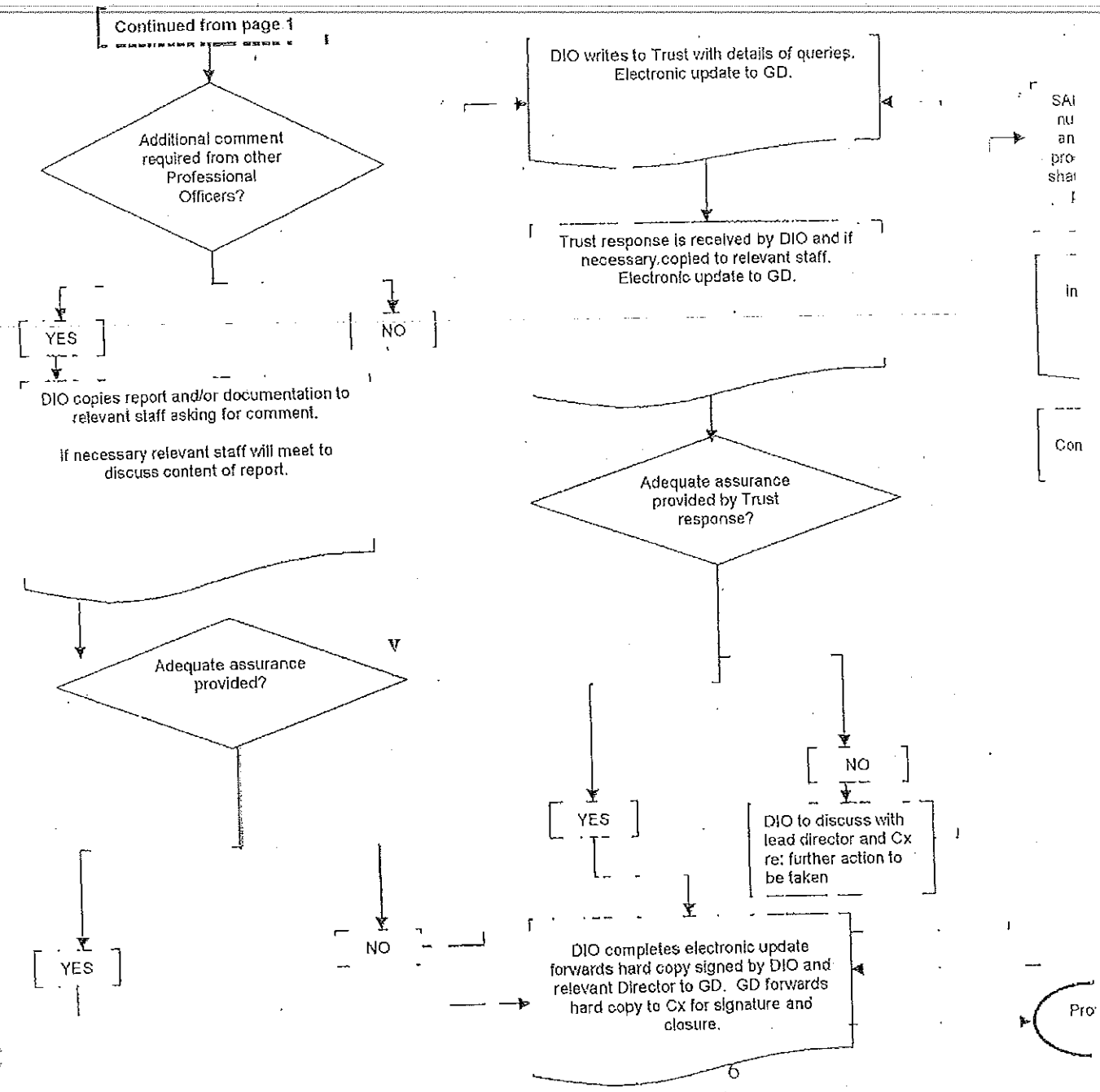
10. If, after comment from other professional officers, DIO considers that adequate assurance has been provided by the Trust, he/she will complete the electronic update and forward a hard copy signed by themselves and the relevant Director, to the Governance Department. The Governance Department will forward to the Cx for signature and closure on the DATIX system.

11. If the DIO is still unsatisfied with the Trust's response he/she will discuss this with the lead Director and/or the Board Cx to agree further appropriate action and will continue to contact the Trust until a satisfactory response is received. Governance Department to be electronically updated during each contact with Trust. When a satisfactory response is received, the DIO will complete the electronic update and forward a hard copy signed by themselves and the relevant Director, to the Governance Department. The Governance Department will forward to the Cx for signature and closure on the DATIX system.

12. The Serious Adverse Incident Review Group will meet on a quarterly basis to discuss the following: (see Appendix 4 – terms of reference)

    a. Number of reports received during quarter
    b. Breakdown of programmes
    c. Issues arising
    d. Any implications in respect of procedure
    e. Any learning to be brought to Regional SAI Review Group

13. Following the meeting of the above group, the Governance Co-ordinator will provide a brief anonymised report to the SHSSB's Governance Committee. Any queries raised by the Chairperson of the Governance Committee will be responded to by the Chair of the SAI Review Group.


Continued from page 1
Additional comment required from other Professional Officers?
YES
NO
DIO copies report and/or documentation to relevant staff asking for comment.
If necessary relevant staff will meet to discuss content of report.
DIO writes to Trust with details of queries. Electronic update to GD.
Trust response is received by DIO and if necessary copied to relevant staff. Electronic update to GD.
Adequate assurance provided by Trust response?
Adequate assurance provided?
YES
NO
YES
NO
DIO to discuss with lead director and Cx re: further action to be taken
DIO completes electronic update forwards hard copy signed by DIO and relevant Director to GD. GD forwards hard copy to Cx for signature and closure.

Stage 3

Comments from DIO re Investigation Report:

| | Yes | No |
|---|---|---|
| Are additional comments required from other SHSSB Professional Officers | ☐ | ☐ |

DIO Comments:

| | Yes | No |
|---|---|---|
| Is adequate assurance provided? | ☐ | ☐ |

If No DIO will continue to contact Trust until he/she receives response required.

Dates Trust contacted and comments from DIO: _____

_____

_____

_____

_____

_____

| | Yes | No |
|---|---|---|
| Has satisfactory response been received from Trust | ☐ | ☐ |

Lessons Learnt:

DIO Recommendations to Chief Executive:

DIO Signature: _____ Date: _____

| | Yes | No |
|---|---|---|
| Director advised of proposed recommendations: | ☐ | ☐ |

Director Signature: _____ Date: _____

Reviewed by Chief Executive: Signed: _____

Date: _____

# SOUTHERN HEALTH & SOCIAL SERVICES BOARD

## SERIOUS ADVERSE INCIDENT REVIEW GROUP

TERMS OF REFERENCE

### 1. NAME OF GROUP

The Group will be known as the Serious Adverse Incident Review Group.

### 2. MEMBERSHIP OF GROUP

Core membership of the Group will consist of the following Officers:-

- Director of Social Services (Chair)
- Governance Co-ordinator
- Governance Lead in Public Health Directorate
- ADSS (Child and Family Care)
- ADSS (Learning Disability)
- Consultant in Public Health (Mental Health)
- ADSS (Elderly / Physical Disability)
- Consultant in Public Health Medicine(Acute Hospital Care)
- Consultant in Public Health Medicine (Maternal and Child Health)
- Senior Nurse Commissioner

If a member is unable to attend a meeting, they should provide a briefing note on any issues they wish to bring to the attention of the Group.

From time to time, it may be necessary to invite other Board staff with specialist knowledge or expertise to comment on investigation reports and attend meetings of the Group.

### 3. FREQUENCY OF MEETINGS

Quarterly

### 4. Reports To:

The Group shall report and be accountable to the Governance Committee. The minutes of committee meetings shall be formally recorded and submitted to the Governance Committee

Appendix AG(2)

Department of
Health, Social Services
and Public Safety

An Roinn
Sláinte, Seirbhísí Sóisialta
agus Sábháilteachta Poiblí

www.dhsspsni.gov.uk

Appendix 5

# Health and Social Care Regional Template and Guidance for Incident Investigation/Review Reports

September 2007

Working for a Healthier People

# Introduction

This work has been commissioned by the DHSSPS Safety in Health and Social Care Steering Group as part of the action plan contained within "*Safety First: A Framework for Sustainable Improvement in the HPSS*" (under 5.1.2 Agreeing Common systems for Data Collection, Analysis and Management of Adverse Events). The following work forms part of an on-going process to develop clarity and consistency in conducting investigations and reviews. This is an important aspect of the safety agenda.

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http://www.npsa.nhs.uk/site/media/documents/1456_Beingopenpolicy1_11.pdf

It is also suggested that users of this template read the guidance document "*A Practical Guide to Conducting Patient Service Reviews or Look Back Exercises*" – Regional Governance Network – February 2007. http://www.dhsspsni.gov.uk/microsoft_word_-_hss__sqsd__18-07_patient_service_review_guidelines_-_final_feb07.pdf

This template was designed primarily for incident investigation/review however it may also be used to examine complaints and claims.

The suggested template can be found in the following pages.

# Template Title Page

## Date of Incident/Event

Organisation's Unique Case Identifier (for tracking purposes)

## Introduction

*The introduction should outline the purpose of the report and include details of the commissioning Executive or Trust Committee.*

## Team Membership

*List names and designation of the members of the Investigation team. Investigation teams should be multidisciplinary and should have an independent Chair. The degree of independence of the membership of the team needs careful consideration and depends on the severity / sensitivity of the incident. However, best practice would indicate that investigation / review teams should incorporate at least one informed professional from another area of practice, best practice would also indicate that the chair of the team should be appointed from outside the area of practice. In the case of more high impact incidents (i.e. categorised as catastrophic or major) inclusion of lay / patient / service user or carer representation should be considered. There may be specific guidance for certain categories of adverse incidents, such as, the Mental Health Commission guidance*
*http://www.dhsspsni.gov.uk/mhc_guidance_on_monitoring_untoward_events.pdf*

## Terms of Reference of Investigation/Review Team

*The following is a sample list of statements of purpose that should be included in the terms of reference:*

- To undertake an initial investigation/review of the incident
- To consider any other relevant factors raised by the incident
- To agree the remit of the investigation/review
- To review the outcome of the investigation/review, agreeing recommendations, actions and lessons learned.
- To ensure sensitivity to the needs of the patient/ service user/ carer/ family member, where appropriate

Methodology to be used should be agreed at the outset and kept under regular review throughout the course of the investigation.

Clear documentation should be made of the time-line for completion of the work.

*This list is not exhaustive*

## Summary of Incident/Case

*Write a summary of the incident including consequences. The following can provide a useful focus but please note this section is not solely a chronology of events*

- Brief factual description of the adverse incident
- People, equipment and circumstances involved
- Any intervention / immediate action taken to reduce consequences

- Chronology of events
- Relevant past history
- Outcome / consequences / action taken

*This list is not exhaustive*

## Methodology for Investigation

*This section should provide an outline of the methods used to gather information within the investigation process. The NPSA's "Seven Steps to Patient Safety" is a useful guide for deciding on methodology.*

- Review of patient/ service user records (if relevant)

- Review of staff/witness statements (if available)

- Interviews with relevant staff concerned e.g.
  - Organisation-wide
  - Directorate Team
  - Ward/Team Managers and front line staff
  - Other staff involved
  - Other professionals (including Primary Care)

- Specific reports requested from and provided by staff

- Engagement with patients/service users / carers / family members

- Review of Trust and local departmental policies and procedures

- Review of documentation e.g. consent form(s), risk assessments, care plan(s), training records, service/maintenance records, including specific reports requested from and provided by staff etc.

This list is not exhaustive

## Analysis

*This section should clearly outline how the information has been analysed so that it is clear how conclusions have been arrived at from the raw data, events and treatment/care provided.*

*Analysis can include the use of root cause and other analysis techniques such as fault tree analysis, etc. The section below is a useful guide particularly when root cause techniques are used. It is based on the NPSA's "Seven Steps to Patient Safety" and "Root Cause Analysis Toolkit".*

**(i) Care Delivery Problems (CDP) and/or Service Delivery Problems (SDP) Identified**

*CDP is a problem related to the direct provision of care, usually actions or omissions by staff (active failures) or absence of guidance to enable action to take place (latent failure) e.g. failure to monitor, observe or act; incorrect (with hindsight) decision, NOT seeking help when necessary.*

*SDP are acts and omissions identified during the analysis of incident not associated with direct care provision. They are generally associated with decisions, procedures and systems that are part of the whole process of service delivery e.g. failure to undertake risk assessment, equipment failure.*

**(ii) Contributory Factors**

*Record the influencing factors that have been identified as root causes or fundamental issues.*

- Individual Factors
- Team and Social Factors
- Communication Factors
- Task Factors
- Education and Training Factors
- Equipment and Resource Factors
- Working Condition Factors
- Organisational and Management Factors
- Patient / Client Factors

*This list is not exhaustive*

*As a framework for organising the contributory factors investigated and recorded the table in the NPSA's "Seven Steps to Patient Safety" document (and associated Root Cause Analysis Toolkit) is useful.*
www.npsa.nhs.uk/health/resources/7steps

*Where appropriate and where possible careful consideration should be made to facilitate the involvement of patients/service users / carers / family members within this process.*

## Conclusions

*Following analysis identified above, list issues that need to be addressed. Include discussion of good practice identified as well as actions to be taken. Where appropriate include details of any ongoing engagement / contact with family members or carers.*

## Involvement with Patients/Service Users/ Carers and Family Members

*Where possible and appropriate careful consideration should be made to facilitate the involvement of patients/service users / carers / family members.*

## Recommendations

*List the improvement strategies or recommendations for addressing the issues above. Recommendations should be grouped into the following headings and cross-referenced to the relevant conclusions. Recommendations should be graded to take account of the strengths and weaknesses of the proposed improvement strategies/actions.*

- Local recommendations
- Regional recommendations
- National recommendations

## Learning

*In this final section it is important that any learning is clearly identified. Reports should indicate to whom learning should be communicated and copied to the Committee with responsibility for governance.*

# Further Reading


A Protocol for the Investigation and Analysis of Clinical Incidents. Clinical Risk Unit, University College London and ALARM (September 1999).

A Practical Guide to Conducting Patient Service Reviews or Look Back Exercises – Regional Governance Network – February 2007
http://www.dhsspsni.gov.uk/microsoft_word_-_hss__sqsd__18-07_patient_service_review_guidelines_-_final_feb07.pdf

Being Open. Communicating Patient Safety Incidents with Patients and their Carers. The National Patient Safety Agency, 2005.
http://www.npsa.nhs.uk/site/media/documents/1456_Beingopenpolicy1_11.pdf

Circular HSS (PPM) 06/2004 -Reporting and Follow-up on Serious Adverse Incidents: Interim Guidance

Circular HSS (PPM) 05/2005 – Reporting of Serious Adverse Incidents

Circular HSS (PPM) 2/2006 – Reporting and Follow-up on Serious Adverse Incidents.

Circular HSS (MD) 12/2006 – Guidance Document – How to classify Incidents and Risk

SAI Reporting Template from 1st April 2007 (PDF 20 KB) - Reporting and Follow-up on Serious Adverse Incidents
http://www.dhsspsni.gov.uk/index/phealth/sqs/sqsd-circulars.htm

Confidentiality: Protecting and Providing Information. General Medical Council 2004

Decision making tool to reduce unnecessary suspensions and support a safety culture – The National Patient Safety Agency
www.npsa.NHS.uk/idt

Dineen, M 2002, Six Steps to Root Cause Analysis, *Consequence UK Ltd.* Oxford.

Doing Less Harm; Improving the Safety and Quality of Care through Reporting, Analysing and Learning from Adverse Incidents, Department of Health and The National Patient Safety Agency, 2001

Mental Health Commission for Northern Ireland: Monitoring of Untoward Events by the Mental Health Commission (Revised Guidance) S6/2006 April 2006.

Managing risk and minimising mistakes in services to children and families, (SCIE: Children and Families' Services Report 6) 200[illegible] http://www.scie.org.uk/publications/children.asp

Protocol for Joint Investigation of Alleged and Suspected Cases of Abuse of Vulnerable Adults DHSSPS & PSNI 2003

Protocol for Joint Investigation by Social Workers and Police Officers of Alleged and Suspected Cases of Child Abuse – NI September 2004

Root Cause Analysis: Simplified Tools and Techniques, Anderson B, Fagerhaug T Quality Press, Milwaukee, 2000.

Seven Steps to Patient Safety A guide for NHS staff SSG/2003/01 - The National Patient Safety Agency, April 2004 (including the RCA tool kit)
www.npsa.nhs.uk/health/resources/7steps

Managing risk and minimising mistakes in services to children and families, (SCIE: Children and Families' Services Report 6) 2005, http://www.scie.org.uk/publications/children.asp

Milne R and Bull R (2000) Investigative Interviewing, Psychology and Practice, Wiley J and Sons, Chichester, 1999

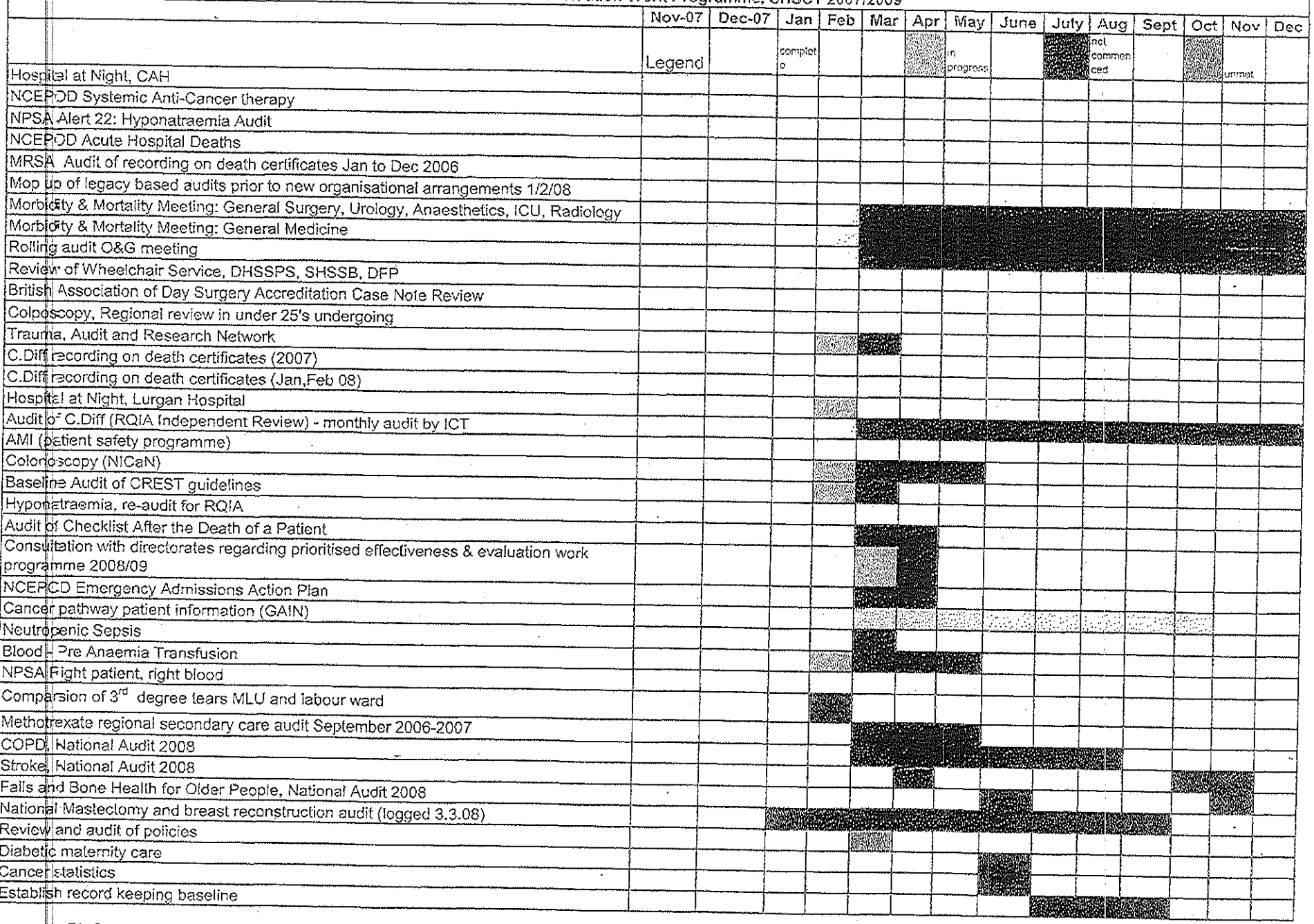
Taylor-Adams S.E et al, *Long Version of the CRU/ALARM Protocol: Successful Systems Event Analysis* (2002)

Appendix AII

DHSSPS

330-133-074

## Effectiveness & Evaluation Work Programme, SHSCT 2007/2009




F:\NPSA Alert 22 Hyponatraemia 2007\SHSCT E&E Work Programme Nov 2007 - Mar 2009 (In progress)

| | Nov-07 | Dec-07 | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Legend | | complet e | | | | in progress | | | not commen ced | | | unmet | |
| Ongoing audit of compliance against record keeping standards | | | | | | | | | | | | | | |
| RQIA - Identification of audits to support RQIA | | | | | | | | | | | | | | |
| Retrospective audit of hyponatraemia in children 6 mthly updates Sep 08 & Mar 09 | | | | | | | | | | | | | | |
| Consent (DHSSPS) | | | | | | | | | | | | | | |
| Baseline Audit of NICE guidelines | | | | | | | | | | | | | | |
| Cardiac arrest | | | | | | | | | | | | | | |
| Fluid balance (Fiona Wright) | | | | | | | | | | | | | | |
| RQIA: Mental Health and Learning Disability 2008 | | | | | | | | | | | | | | |
| National Audit of ureteric stone management (BAUS guidelines) | | | | | | | | | | | | | | |

# PAEDIATRIC PARENTERAL FLUID THERAPY ( 1 month – 16 yrs )

## *Initial* management guideline

Sept 2007

DHSSPS

330-133-076

### *Monitoring & observations essential*

**ALL CHILDREN**

Admission Weight. U&E *(unless child is well & for elective surgery)*

**12 Hourly –**
Assess In / Output, plasma glucose

**Daily** – Clinical reassessment. U&E (more often if abnormal; 4-6 hourly if $Na^+$ < 130 mmol/L).

**ILL CHILDREN**
May need:
**Hourly** - HR, RR, BP, GCS. Fluid In/ Output (urine osmolarity if volume cannot be assessed)
**2-4 hourly** – glucose, U&E, +/- blood gas.

**Daily** – weight if possible

**Each shift**
Handover and review of fluid management plan.

**If plasma $Na^+$ < 130 mmol/L or > 160 mmol/L or plasma $Na^+$ changes > 5 mmol/L in 24 hours ask for senior advice**

**Is shock present?** — YES →

**ADMINISTER RAPID FLUID BOLUS**
**Give 20 ml/kg sodium chloride 0.9% IV or Intraosseous**
[10 ml/kg if history of haemorrhage or in diabetic ketoacidosis]
**Reassess. Repeat bolus if needed. Call for senior help.**
(Up to 60 ml/kg may be needed. Use blood after 40 ml/kg if patient has haemorrhaged)

NO ↓

**Can child be managed with oral fluids?** — YES →

**PRESCRIBE ORAL REHYDRATION SOLUTION**

DKA / burns: initiate departmental protocol. Renal / cardiac / hepatic - get senior advice.

**Is there a fluid deficit?** — YES →

**ESTIMATE DEFICIT**
**FLUID DEFICIT =** (% dehydration x kg x 10) as mls of:
**sodium chloride 0.9%**

*The volume of fluid to be prescribed is: fluid deficit MINUS volume of any fluid bolus received*

**Prescribe this residual volume of deficit separately from the maintenance prescription.**
Give over 24 hours (but over 48 hours if $Na^+$ < 135 or > 145 mmol/L)

**ONGOING LOSSES: calculate at least 4 hourly. Replace with an equal volume of:**
**sodium chloride 0.9%** (with or without pre-added potassium)

**Be prepared to change fluid type and volume according to clinical reassessment, electrolyte losses and test results**

NO ↓

**Prescribe Maintenance fluids** →

**PRESCRIBE INITIAL IV MAINTENANCE FLUID AND TIME FOR REASSESSMENT**

Patients particularly at risk of hyponatraemic complications:
peri-operative patients; patients with head injuries; gastric losses; CNS infection; severe sepsis; hypotension; intravascular volume depletion; bronchiolitis; gastroenteritis with dehydration; abnormal plasma sodium, particularly if less than 138 mmol/L but also when greater than 160 mmol/L; salt wasting syndromes.

**Fluid choices:** glucose containing fluid normally required if under 1 year old and may also be required by older children

**sodium chloride 0.9%** (with/ without pre-added glucose 5%)
*or*
**Hartmann's Solution**
*or*
**Solution Corporately Approved at Trust Level**

Other Patients:
**sodium chloride 0.45% with pre-added glucose 2.5% or 5%**

All Patients:
*Alter fluid rate according to clinical assessment. Change electrolyte and glucose content of infusion fluid according to test results.*
*COMMENCE ORAL FLUIDS & DISCONTINUE IV FLUIDS AS SOON AS POSSIBLE*

**CALCULATION OF 100% MAINTENANCE RATE**

| | | | |
|---|---|---|---|
| (a) for first 10 kg: | 100 ml/kg/ day | ≡ | 4ml/kg/hr |
| (b) for second 10 kg: | 50 ml/kg/ day | ≡ | 2ml/kg/hr |
| (c) for each kg over 20 kg: | 20 ml/kg/ day | ≡ | 1ml/kg/hr |

[for 100% daily maintenance add together (a) + (b) + (c)]

**MAXIMUM: in females 80 mls per hour; in males 100 mls per hour**
**If risk of hyponatraemia is high consider initially reducing maintenance volume to two thirds of maintenance**

**Hypokalaemia (< 3.5 mmol/L):** Check for initial deficit. Maintenance up to 40 mmol/L IV potassium usually needed after 24 hrs using pre-prepared potassium infusions as far as possible. Consult Trust Policy on IV strong potassium.
**Oral intake and Medications:** volumes of intake, medications & drug infusions must be considered in the fluid prescription.
**Hypoglycaemia (< 3 mmol/L). Medical Emergency: give 5 ml/kg bolus of glucose 10%.** Review maintenance fluid, consult with senior and recheck level after 15-30 mins. **INTRA-OPERATIVE PATIENTS:** consider monitoring plasma glucose.
**Symptomatic Hyponatraemia: check U&E if patient developes nausea, vomiting, headache, irritability, altered level of consciousness, seizures or apnoea. This is a Medical Emergency and must be corrected.**
**Commence infusion of sodium chloride 2.7% at 2 ml/kg/hour initially and get senior advice immediately.**

**Reporting triggers for potential adverse events related to the administration of intravenous fluids to children (1 month – 16th birthday).**

a. Choice of IV fluid

- Bolus fluid: use of a solution with sodium content less than 131mmol/L for treatment of shock
- Maintenance fluid: use of a solution with sodium content less than 131mmol/L in a peri-operative patient (24 hours before – 24 hours after surgery)
- Deficit fluid: use of a solution with sodium content less than 131mmol/L for correction

b. Biochemical abnormalities

- any episode of symptomatic hyponatraemia while in receipt of IV fluids
- any episode of hypoglycaemia (<3mmol/L) while in receipt of IV fluids
- any episode of severe acute hyponatraemia (i.e. sodium level dropping from 135mmol/L or above to less than 130mmol/L within 48 hrs of starting IV treatment)

c. Assessment

- Electrolytes not checked at least once per 24 hours in any patient receiving IV fluids exclusively
- Failure to record the calculations for fluid requirements in the case notes /on the prescription sheet
- Failure to note in the case notes/prescription sheet a serum sodium less than 130mmol/L
- Failure to document in the case notes the steps taken to correct a serum sodium less than 130mmol/L