Annette’s case story: Safeguards in hyponatraemia monitoring

Annette attended A&E presenting with vomiting and confusion, and the doctors’ initial impression was that she might have gastritis or a peptic ulcer. She was admitted to hospital and given intravenous fluids, but the following morning she was found to have severely low sodium and potassium levels in her blood (hyponatraemia and hypokalaemia). This had to be corrected, but her fluid intake and the sodium levels were not properly monitored and, as a result, she suffered a brain injury called ‘central pontine myelinolysis’. She suffered neurological symptoms, such as speech problems and a tremor, that required her to be transferred to a neurorehabilitation unit. Thankfully, her symptoms did improve.

Annette brought a complaint against the Trust, claiming that had she been given the proper care and monitoring in the early stages of her treatment, she would not have suffered the consequences of the resulting brain injury. Her claim was successful and damages were paid.

Lessons learned
It was identified by the Trust that additional safeguards and guidelines had to be put in place to ensure that patients undergoing correction of sodium levels were properly monitored.

The Trust carried out an investigation and identified care and service delivery problems that can be avoided in future through some practical and achievable recommendations, including:

• New clinical guidelines for the management of hyponatraemia have been published on the Trust’s intranet.
• A new comment has been added to pathology lab reports, highlighting the dangers of hyponatraemia to clinicians and directing them to the new clinical guidelines mentioned above.
• A new pathology lab protocol has been put in place to inform the on-call medical registrar about patients with low sodium levels when the results come through. This is done via an automated electronic alert.
• A Consultant Endocrinologist at the Trust has conducted training sessions for staff on the management of patients with hyponatraemia. Slides relating to the learning arising out of this case are to be added to the annual training for Foundation doctors (FY1 and FY2) at the Trust.

Conclusion
While, fortunately, the symptoms Annette’s brain injury improved with rehabilitation, this incident demonstrated to the Trust the importance of proper monitoring for patients undergoing correction of sodium levels. The Trust have taken the need for corrective action seriously, and with new clinical guidelines, protocols, training and auditing they are ensuring that they are better equipped for the future.
## Prescribing Incidents

<table>
<thead>
<tr>
<th>125</th>
<th>Medication-related incidents reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Medication-related serious incident</td>
</tr>
<tr>
<td>0</td>
<td>Incidents causing moderate/severe harm</td>
</tr>
</tbody>
</table>

This information is compiled from the March incident summary and follow-up. For more information please see monthly emails from Helen Holdsworth or email helen.holdsworth@york.nhs.uk

### Recurring Issues

<table>
<thead>
<tr>
<th>Problem</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple anticoagulants prescribed, e.g. ticagrelor, fondaparinux, dalteparin and clopidogrel</td>
<td>Please ensure one anticoagulant is stopped before starting another and allow sufficient time when switching between two different anticoagulants. Guidance on switching is available on Staffroom and on posters</td>
</tr>
<tr>
<td>55% of gentamicin charts incorrect</td>
<td>Please ensure height AND weight are documented and use the tables to calculate the correct dose. If unsure please ask a colleague for a second check.</td>
</tr>
</tbody>
</table>

### Significant Incidents

- A patient was readmitted with AF as they had not been sent home with bisoprolol which had been started on their last admission. During that admission the prescriber had indicated bisoprolol was preadmission rather than new, meaning none was supplied on discharge. Please take care when selecting whether drugs are pre-admission, amended or new: this information is used to supply the drugs on discharge.

- A child was prescribed and given 2 doses of nitrofurantoin 128mg instead of 12.8mg. The dose was 750 micrograms/kg and the patient weighed 17kg. Please take care when doing calculations, be aware of usual dose ranges in children and ask a colleague to second check if you are unsure.

Sarah Pearson, Foundation Year One Doctor, Sarah.Pearson@york.nhs.uk

### New Theatre Care Pathway to be launched on June 1st

This new pathway will be introduced across all 3 acute hospital sites and combines many documents into one booklet, including: the theatre checklist, skin bundle, WHO Checklists, handover sheets, swab counts and more....

As well as removing loose sheets of paper from the theatre patient’s notes, the pathway also incorporates changes and improvements identified from Serious Incidents that have occurred across the Trust. The pathway includes new questions in the WHO Checklists and new documentation which will improve handovers.

Many will have attended the training during the April Clinical Governance sessions, if you did not attend, the pathway can be accessed via this link, please familiarise yourself with this before the 1st June.

Once you have used the pathway, if you have any comments please email Amanda.vipond@york.nhs.uk, as an effectiveness review will be undertaken at the end of July.
**Naso-gastric Tube (NGT) placement checking**

A training package is available on the learning hub to take all doctors through safe x-ray interpretation of naso-gastric tubes and the correct method to utilise when checking an x-ray. This training only needs to be completed once, doctors will then be able to self-certify that they are competent and will be able to add this to their learning portfolio. This is mandatory for all Foundation Year One Doctors.

To access the training please follow this link to the Learning HUB; [http://learninghub.ydh.yha.com/course/view.php?id=1441](http://learninghub.ydh.yha.com/course/view.php?id=1441).

If you have any queries please contact Dr Peter Wanklyn, Consultant Stroke Physician.

The NG X-Ray to the left shows an NG in the right lung, this is not safe to feed. N.B. incorrect placement and subsequent use of NG tubes is on the never events list.

---

**Treatment dose low molecular weight heparin**

As a Trust weight based dalteparin is the used first line for the treatment of VTE and enoxaparin is used for patients with renal impairment.

**The dose of enoxaparin for patients with renal impairment** is included on the green ‘Inpatient anticoagulation dosing with LMWH’ chart.

**The licensed doses of enoxaparin for patients without renal impairment** are as follows:

- VTE treatment in uncomplicated patients with low risk of recurrence: 1.5mg/kg once daily
- VTE treatment in patients with risk factors eg obesity, cancer, recurrent VTE: 1mg/kg twice daily

Reported as a datix last month was a patient with sensitivity to dalteparin who was prescribed treatment dose enoxaparin, the green chart was used to prescribe the dose so the patient was given 1mg/kg once daily. The patient had a large saddle PE and cancer so should have had 1mg/kg twice daily. It was over a week before the dosing error was spotted, fortunately there was no harm to the patient.

**Learning**

If a patient requires treatment dose enoxaparin due to an allergy or sensitivity please be aware of the correct licensed dose.

EPMA will be updated with the following information to stop this happening with electronic prescribing.

---

Jayne Knights, Pharmacist, [Jayne.Knights@York.NHS.UK](mailto:Jayne.Knights@York.NHS.UK)
NHS Resolution was formed in April 2017 with the aim of delivering fair resolution and learning from harm to improve safety.

This has involved bringing together 3 functions:

**NHS Litigation Authority (NHS LA)** – providing indemnity schemes for the NHS in England and resolving claims for compensation fairly.

**National Clinical Assessment Services (NCAS)** – resolving concerns about the performance of individual practitioners.

**Family Health Services Appeal Unit (FHSAU)** – ensuring the prompt and fair resolution of appeals and disputes between primary care contractors and NHS England.

NHS Resolution is a developing organisation – visit their website for more information and resources – [www.resolution.nhs.uk](http://www.resolution.nhs.uk)

The IGNAZ App – for junior doctors

The IGNAZ smartphone app has been developed within the Trust to provide junior doctors with access to the latest key clinical information from Staff Room in an easy and simple way. The app is available to download on Staff Room: [http://staffroom.ydh.yha.com/Learning-Development-and-Professional-Registration/postgraduate-education/the-ignaz-app-for-junior-doctors](http://staffroom.ydh.yha.com/Learning-Development-and-Professional-Registration/postgraduate-education/the-ignaz-app-for-junior-doctors) or if you would like to suggest any clinical content please contact Jocelyn.matthews@york.nhs.uk

Group Representation

We are working to **empower** and **support** junior doctors to attend and **contribute** to Trust level meetings. Junior doctors and groups will benefit! The following groups are looking for junior representation:

- EPMA (Electronic Prescribing)
- HIPCG (Infection Prevention)
- Point of Care Testing Committee
- Deteriorating Patient Group
- Patient Experience Steering Group
- VTE Committee

Contact PatientSafetyMatters@york.nhs.uk for more information or if you would like to get involved.

Editorial Team

William Lea (Improvement Fellow, Deputy Chief Editor), Ruwani Rupesinghe (Chief Registrar), Laura Bamford (Dental Core Trainee), Liz Jackson (Patient Safety), Helen Holdsworth (Pharmacy), Sarah Pearson (FY1 Doctor), Donald Richardson (Quality Improvement, Chief Editor)

Email PatientSafetyMatters@york.nhs.uk if you have any comments or would like to contribute. Check out [www.yorkhospitals.nhs.uk/patientsafetymatters](http://www.yorkhospitals.nhs.uk/patientsafetymatters) for more information