Abstract book

12th November - 10:30 - 12:00
13th November – 15:00 – 16:30
## Session Summary

**12\textsuperscript{th} November, 10:30-12:00**

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Title: Do age adjusted D-dimers work in an acute hospital setting?
Author: Sabrina Hasnaoui, The Royal Wolverhampton Hospital

Aim:
D-dimer levels increase with age. The ADJUST PE study showed the reference range for elderly patients can be safely adjusted to reduce unnecessary investigations, but these changes have not yet been approved by test manufacturers.

This audit explored whether an age adjusted D-dimer reference range could reduce the need for imaging without missing any venous thrombotic events in Musgrove Park Hospital.

Methods:
A retrospective 12 month sample of 574 patients, aged 50-100 with a D-dimer result between 0.5-1 ugFEU/ml were analysed. The D-dimer assay used was the Siemens INNOVANCE® D-Dimer Assay. The D-dimer range was adjusted using the algorithm age/100 (ugFEU/ml) generating the new threshold for a negative result. Patients with a new negative D-dimer were reviewed to see if they had further investigation for pulmonary embolism (PE) or deep vein thrombosis (DVT).

Outcome:
Of 574 patients 298 had a negative age adjusted D-dimer, and 111 had further investigation. Of these, one patient had a negative VQ scan. 79 of 80 patients had a negative CTPA (positive CTPA patient had a ‘likely’ pretest probability of having a PE, i.e high Wells score, therefore the D-dimer was inappropriately applied). 29 out of 30 patients had a negative Doppler scan, the one patient had a possible calf DVT.

Conclusion:
Our results support the use of age adjusted D-dimer. No PE’s were missed when applying negative age adjusted D-dimer with Wells score. There was one missed below knee DVT of uncertain significance (not seen on follow-up scan). Although a retrospective study, a large sample (111) was used for INNOVANCE® Assay. These findings could support the use of age adjusted D-dimer, reducing imaging costs, increasing resource availability and reducing risks and complications from imaging.

Author: Alison Eastaugh, The Royal Wolverhampton Hospital

Introduction:
Acute Medical Units (AMU) are exceptionally busy departments, undertaking daily procedures such as: lumbar punctures, ascitic drains, ascitic taps, arterial blood gases and venepunctures.

Preparation time needs to be minimised to improve patient flow through the unit and reduce delays in essential treatment.

We identified that, on our AMU, the organisation and storage of the equipment required for these procedures was unsystematic. Moreover, many members of the on-call team are doctors not based within AMU, and are therefore unfamiliar with the organisation of the clinical equipment. This resulted in junior doctors wasting valuable time, searching through unlabeled drawers, cupboards and even having to go to different wards to source the correct equipment.

Aim:
We hypothesised that having a specific procedure trolley with all the necessary equipment required for each procedure, located in an easily accessible area and clearly identified would reduce delays, and ensure the correct equipment was used.

Method:
The time taken by junior doctors to locate the specific equipment for each procedure was measured at baseline, and repeated three weeks after the procedure trolley was introduced.

Results:
The time taken to locate all of the required equipment was significantly reduced. Prior to the introduction of the procedure trolley, the time taken ranged from 2 min 20 seconds to 12 min 35 seconds (mean 5 minutes 56 seconds) (N=30). Following the introduction of procedure trolley this was considerably reduced to a range of 28 seconds to 1 minute 20 seconds (mean 54 seconds) (N=30): a reduction in the mean of 5 minutes 2 seconds (P=0.019).

Conclusion:
An organised procedure trolley with equipment for all common procedures performed within the AMU, significantly reduces the time taken to perform such procedures and improves both patient care and flow through the unit.
Title: Testing Times: Improving HIV testing at Charing Cross Hospital
Authors: Anastasia Theodosiou, Sarah Young, Southampton General Hospital

Aim:
According to the British HIV Association (BHIVA), all acute medical admissions should be tested for HIV in areas with HIV prevalence greater than 2/1000 (1). Although the local prevalence for Charing Cross Hospital is 8/1000 (2), routine testing of all acute medical admissions was not being done. Our project aimed to improve HIV testing at Charing Cross Hospital, in line with the BHIVA national guidelines.

Method:
We audited 94 acute medical admissions against the BHIVA guidelines, including HIV testing and documentation of HIV risk factors (country of origin, injecting drug use, sexual history), and presence of HIV indicator illnesses or symptoms of primary HIV. For comparison, we audited testing for hepatitis C and legionella.

Outcome:
Only 10.7% of acute admissions were tested for HIV, including only 15.8% of patients presenting with an HIV indicator illness. Testing rates were similar for legionella (9.5%) and hepatitis C (8.3%), despite HIV incidence being 20 times greater than that for legionella. Risk factor documentation was poor, with sexual and injecting drug history missing from 96% of notes. We disseminated our findings Trust-wide at the Medical Meeting and Grand Round, and we liaised with the Virology, HIV, Infectious Diseases and Acute Medicine departments to secure approval for HIV testing in all acute medical admissions. We developed a new Trust guideline on testing, and used posters and emails to encourage testing. Following these interventions, HIV testing tripled to 30.3% of 188 patients.

Conclusion:
This project highlighted learning points regarding HIV prevalence and risk factors, and issues surrounding consent and causing offence. Crucially, there is compelling evidence that increased uptake of HIV testing leads to reduction in HIV transmission rates and earlier diagnosis, with significantly better patient outcomes and cost savings to the NHS (3).

Title: Development of a device to reduce IV line tear-out and improve patient comfort
Author: Andy Levy, University of Bristol and University Hospitals Bristol NHS Foundation Trust

Aim:
Many patients in hospital receive intravenous fluids. Intravenous cannula placement and replacement is painful and anxiety about cannula loss can limit how patients mobilize and sleep: critical drug administration may be delayed and staff are repeatedly diverted from other duties. Our aim was to develop a device to reduce the risks of cannula pull-out, and in so doing increase patient comfort and reduce overall costs.

Method:
The concept was to design a device that would protect cannulae from sudden movement by securing administration tubing on the forearm without concealing it, yet allow the tubing to be replaced without detaching the anchoring device from the skin. Several designs were considered and a number were prototyped and evaluated over several years for overall simplicity and appeal, economical manufacture (one shot-moulding), translucency (to allow skin health to be continually monitored), smoothness and absence of exposed adhesive surface (to minimise dirt collection and infection risk).

Outcome:
Tube anchor is a single piece moulding with a high precision throat that guides administration tubing into its cylindrical channel and even though it’s soft, prevents it dropping out. It sticks directly to the skin of the forearm and secures administration tubing between the fluid bag and cannula. Placement should ensure that the tubing does not kink and that the risk of the cannula being displaced by an inadvertent or sudden movement of the wearer is minimised.

Conclusion:
The journey from medical device concept to bedside is lengthy, complex and expensive. It has been possible nevertheless for a clinician to develop a new clinical device and bring it to market. Behaviours are difficult to change, however, and microporous tape is very familiar and perhaps allows a degree of self-expression that would be reduced by a ready-made solution.
Title: Audit Location - Diana Princess of Wales Hospital, NLAG NHS Trust  
Author: Dr Christopher Woods, Clinical Trials Units, Castle Hill Hospital, HEYH Trust

Aim:
To investigate and improve compliance with antibiotic prescribing standards on discharge prescriptions. Nice Quality Standard [QS61](1) requires a clinical indication and duration for antibiotic prescriptions. GMC Guidance advises(2) "consider including clinical indications" when prescribing. Local trust policy requires antibiotics to be prescribed with an indication and duration.

Method:
Audit 1 (April 2015) - Audit of all electronic discharge prescriptions generated during a one month period on two adjacent wards, where the junior doctors worked equally on both wards. A number of talks were held about antibiotic prescribing on discharge and signs were put up, both in the doctors office, and in all areas where discharge letters were commonly prepared. Audit 2 (June 2015) - Re-audit of the same department, with the same clinical teams working, using the same methods as 'Audit 1' to assess change.

Results:
288 discharges in April, 36% prescribed antibiotics. Of these, 100% included a duration, 6% included an indication. 235 discharges in June, 33%

Conclusion:
523 discharge prescriptions were reviewed in total. The inclusion of an indication was frequently not recorded on discharge prescriptions for antibiotics. It was sometimes, but not always, clear from the discharge letter what the indication was likely to be. This presents difficulties for primary care or acute care teams when patients subsequently represent. Some improvement was possible with simple and rapidly delivered means, but improvement was only minor. Duration was always included. It is likely due to duration being a compulsory field on the electronic discharge system, whereas, indication can be included only in an 'other information' free text space. We now propose amending the electronic form to require an indication and re-auditing.

Title: Improving pre-emptive prescribing to relieve patient symptoms occurring out-of-hours  
Authors: Herbert, F; Williams, R and Orme, A; University Hospitals Bristol NHS Foundation Trust, Bristol, UK

Introduction:
Junior doctors are commonly asked to prescribe simple medications for symptom relief for patients out-of-hours¹, for example, analgesia, anti-emetics and laxatives. Unfortunately due to time constraints and other pressures upon on-call staff, there may be delays before the medications are prescribed, leaving patients uncomfortable.

Objectives:
A quality improvement project was conducted at a large university teaching hospital with the aim of finding measures to improve pre-emptive prescribing for patients.

Methods:
Baseline data was gathered over three busy wards to calculate the total of new prescriptions for analgesia, anti-emetics and laxatives made over the course of a weekend. Data collection was undertaken on four occasions, with two interventions made. Intervention 1 was undertaken between sample 1 and 2, and was a teaching session for Foundation Year 1 doctors. Intervention 2 was undertaken between sample 2 and 3, and was an email to surgical doctors about the project. Repeat data was collected several months following sample 3 to determine whether effects on prescribing were transient. Ethical approval was not required, as confirmed by the NHS Trust Audit Department.

Result:
There were 24 new prescriptions, a percentage increase of 14.9%. Following the first intervention, this decreased to 10.2%, and by the second intervention the rate was 4.9%. Data collected several months later confirmed that the interventions remained successful and pre-emptive prescribing by doctors was continued.

Conclusion:
Overall, our interventions have shown that the number of new prescriptions required out-of-hours can be reduced by education of junior doctors. This effect appears to last for at least 2 months following intervention.
Title: Management of acute upper gastrointestinal bleeding at Wirral University Teaching Hospital (WUTH)
Authors: Dr S. Hewitt, Dr I. R. Davies & Dr A. Thurasingam (Armore Park Hospital)

Aim:
To assess the management of acute upper gastrointestinal bleeding (UGIB) at WUTH and its compliance with NICE clinical guideline 141 following introduction of an online endoscopy request service and extension of the endoscopy duty list.

Methods:
Data for all patients presenting with haematemesis or melena was collected prospectively over a 4 week period (2nd February to 2nd March 2015) using the online endoscopy request service and case notes. Risk stratification scores, endoscopy reports and laboratory results were accessed and contingency tables compiled to assess local compliance with NICE CG-141 improved following extension of endoscopy duty list and introduction of online request form.

Result:
A total 52 patients presented with UGIB at our centre during the time period. Of these, there were 50 non-variceal and 2 variceal bleeds. All patients had a pre-endoscopy risk assessment score documented, however, a post-endoscopy Full Rockall score was only calculated in 4.5%. Inappropriate prescription of pre-endoscopy proton pump inhibitor therapy occurred in 72.4% of cases. None of the patients requiring FFP or prothrombin complex received them prior to endoscopy. No inappropriate endotherapy was performed in 100% of cases. All variceal bleed received terlipressin but only 50% were prescribed prophylactic antibiotics. Only 26% of UGIB patients had an endoscopy within 24 hours of their hospital admission.

Conclusion:
The online endoscopy request form improved our risk assessment of UGIB patients. However, we remain non-compliant with pre-endoscopy management of these patients with respect to PPI and blood product prescription. Not all UGIB patients have an endoscopy within 24 hours of admission. We recommend that endoscopists consider extending the endoscopy duty list, encourage use of the UGIB pathway and for clerking doctors to request endoscopy immediately.

Title: Agents for Change: Can a novel education programme improve undergraduate engagement in NHS Management and Leadership?
Authors: J. Henry, R. Najim; M. Najim; R. Rabee; D Cox; S. Singh. Chelsea and Westminster Hospital NHS Trust, London

Introduction:
The NHS is facing increasing challenges and the need for doctors who can lead change has never been greater (1). Research shows that good NHS management affects patient care positively, while poor leadership can be catastrophic (1, 2, 3, 4). Importantly, patient outcomes and overall performance improves when doctors engage in leadership (5). However to do so effectively, medical professionals require leadership skills – at all levels. The Medical Leadership Competency Framework (MLCF) has laid out a structure for the development of these skills. Despite this, there is no overall consensus and little engagement at undergraduate level.

Aim:
Our aims were to evaluate the impact of a 3-tier undergraduate workshop programme, on students’ knowledge and attitude towards NHS management and leadership. This was complemented by the implementation of a supervised Quality Improvement Project (QIP).

Method:
42 medical students in their third year were enrolled onto 3 workshops delivered to cover a range of topics based on the MLCF. Knowledge improvement was assessed by a fifteen question single best answer test and attitudes assessed by a 25 question, five-point Likert scale, both conducted pre-and post-intervention. This was supplemented with qualitative data from focus groups.

Result:
37 (88%) students completed all three skills sessions. Focus groups demonstrated a general opinion towards a desire for further training in both skills and theory; a lack of clarity in how to act upon and deliver change was emenant. Average score on the knowledge test rose from 5.67 to 7.75 post-intervention, with an average increase of 2.08 (SD 2.58, p < 0.05). Likert scores demonstrated a significant change in attitude towards the positive in nearly all areas.

Conclusion:
Providing supplementary skills and knowledge based tuition to Quality Improvement Projects (or similar MCLF educational efforts) is effective, replicable by non-experts and acceptable to undergraduate medical students.
Title: Acute Neurology Service in a District General Hospital
Authors: Greenland J, Alawneh J. Bedford Hospital

Aim:
Guidelines recommend that first seizures are assessed by a neurologist within two weeks. [1-2] Additionally, there is a maximum two-week wait for suspected brain tumours. [3]

In Bedford Hospital there is a weekly emergency neurology appointment. The aim of this audit was to assess whether this slot is used appropriately and to develop service improvements.

Method:
Fifty patients assigned to emergency appointments were reviewed. The dates the patient was referred, the letter received and the letter triaged were recorded. The intervals between these were calculated. The referral diagnosis was also documented.

Result:
Of the fifty appointments, thirty-four were GP referrals and ten from internal hospital referrals. Seventy-six percent were new to the neurology service.

The mean time between the referral date and the clinic date was forty-six days. There was an average of five days until it was received, with a further two days until it was triaged. It was then another thirty-nine days until the appointment. (Figure 1)

Of the fifty appointments, nineteen (38%) were used for referrals requiring a two-week wait (first seizures and brain tumour). (Figure 2) The referrals for first seizures had a mean waiting time of thirty days, with the five referrals for suspected brain tumours being seen in an average of eight days.

![Referral diagnosis](image)

**Figure 2**

**Conclusion:**
In Bedford hospital the emergency neurology appointments are also being used for non-urgent reasons and follow-ups. Subsequently referrals for first seizures cannot be seen in the recommended two weeks. There is greater success at meeting the target for suspected tumours due to a separate centralised system for “two-week wait” appointments.

In response, a first seizure proforma has been implemented which has a direct fax to avoid internal hospital post. Additionally, there is now a further emergency clinic slot per week.
Title: The Management of Severe Sepsis at Tunbridge Wells Hospital, An audit and education programme
Authors: Peter Williams and Gaurav Agarwal, Tunbridge Wells Hospital

Aim:
Sepsis is a treatable condition which is suboptimally managed. Delays in early antibiotic administration can lead to 8% per hour increase in mortality. The 6 hour goal targeted approach has been linked with improved outcomes and a small NNT of only 4.6 to prevent a single death.1 We conducted a hospital wide interdepartmental audit at Tunbridge Wells Hospital, MTW NHS Trust, UK.

This audit assessed our performance against nationally held gold standards for recognition and treatment in the first 6 hours of sepsis, highlighting areas for improvement, which could be modified through education led by the MAU team, reinforced during induction and followed up with sessions in the weeks following.

Method:
Retrospective review of medical notes from randomly selected blood culture (non contaminant) positive patient March–April 2015 (N=15). Followed by multilevel interdepartmental consultant and SPR level led teaching program from April to May 2015.

Prospective review of medical notes for patient with suspected severe sepsis in the period June to August 2015 (N=15)

Result:
15 patients were audited in the retrospective arm (median age 73 years) and 15 in the prospective arm (median age 68 years). There were a higher proportion of males in the retrospective arm compared to the 1:1 balance in the prospective.

The intensive education program led to reduction in mortality from 20% to 13% over the audit period, as well as improvements in all measures for the sepsis 6. Those who died suffered delays in administration of antibiotics, lactate measurement and blood culture as well as delay or lack of use of central access and early ITU escalation which may have been significant.

Conclusion:
Simple serial educational programmes and local posters campaigns, reinforced via an MAU consultant led team, leads to improvement in awareness of sepsis, earlier goal directed therapy and most importantly improved outcomes for patients.
Title: Improving the standard of discharge summary with changes and innovation in computer software
Authors: Si Han Tan, Shin Yun Gooi, Dumfries and Galloway Royal Infirmary, NHS Dumfries and Galloway

Aim:
Immediate discharge summary is a document which contains essential information about the patient’s stay in hospital and follow-up plans.1-2 It is usually given to patients and is also sent to GPs on the day of discharge. Scottish Intercollegiate Guidelines Network (SIGN) released a guideline in 2012 to highlight the need for improvement in the content of discharge summary.1 We aim to assess the impact of changes and innovation in computer software used to produce discharge summary made on the quality and content of discharge summary.

Method:
A retrospective review of all discharge summaries from 2 wards of Western Infirmary, Glasgow in the first 2 weeks of May, 2015 was carried out and the same review was repeated for all discharges from 2 wards of Dumfries and Galloway Royal Infirmary (DGRI) in July 2015. We audited the 6 essential components highlighted in the SIGN guideline for all the discharge documents.1 A component of a discharge document is graded ‘expectation met’ if that component is clearly presented and documented. If a component is absent or unclear, it is graded ‘expectation not met’.

Result:
Distinctly different software is used in these two different hospitals. Some of the components in discharge summary are mandatory fields that must be completed when the software are used to produce discharge summary. If any of the mandatory components are not completed, the software will not allow the document to be printed off. These software have different mandatory components which are shown in Table 1.

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<tr>
<td>Diagnosis</td>
<td>54% (non-mandatory)</td>
<td>89% (mandatory)</td>
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<td>Presenting Complaint(s)</td>
<td>99% (non-mandatory)</td>
<td>95% (non-mandatory)</td>
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<td>Interventions</td>
<td>91% (non-mandatory)</td>
<td>95% (non-mandatory)</td>
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<td>Clinical Progress</td>
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<td>59% (non-mandatory)</td>
</tr>
<tr>
<td>Changes in medication</td>
<td>59% (non-mandatory)</td>
<td>87% (mandatory)</td>
</tr>
<tr>
<td>Follow-up</td>
<td>95% (mandatory)</td>
<td>86% (non-mandatory)</td>
</tr>
</tbody>
</table>

Table 1: Percentage of ‘expectation met’

Conclusion:
By comparing the results, we are able to show that mandatory fields appear to be more well-documented and recorded, whereas non-mandatory components often suffer from poor documentation and even occasional lack of input. This audit provides evidence that changes and innovation in software is a feasible way to improve standard of discharge summary.
Title: Venous Thromboembolism (VTE) assessment in Breast Cancer and Cancer patients in Queen’s Centre Castle Hill Hospital
Author: Muhammad Belal Soobadar, Arrowe Park Hospital

Aim:
The audit project named Venous Thromboembolism (VTE) assessment in Breast Cancer and Cancer patient in Queen’s Centre Castle Hill Hospital was done to ensure that the VTE risk assessment was done according to Nice Guidelines. I also focused to check if VTE risk reassessment was done 24 hours post admission as well as reassessment of full blood count 5 days post admission. The overall aim was to reduce complications leading to poor VTE assessment in cancer patients who are prone to having VTE complications.

Method:
20 patients were randomly selected and a total of 10 questions for risk assessment used. Each question if answered is given a score of 1 and if not a score of 0 and overall score for the question calculated as (A X 1) X 5 where A is the number of that question answered out of the 20 patient and the overall audit score was (Sum of all scores) X 5.

Result:
Breast Cancer patient audit score was 62.5% and Cancer patient score was 64%. It was noted that that areas that score poorly were VTE reassessment after 24 hours and reassessment of FBC 5 days. On re-audit the Breast Cancer patient score rose to 64.5% a while cancer patient score rose to 72%. The reminders on ward and handover had given results.

Conclusion:
The increase in score for cancer patient of 8% and increase in score for breast cancer patient of 2% meant better outcome and care for patients. Cancer patients are prone to venous thromboembolism complication and good VTE assessment can reduce complication and improve patient safety and save cost linked to complication.

Title: OPEN ACCESS, RADIOLOGY BASED, DAY-CASE PARACENTESIS SERVICE
Authors: Dr Stephen D’Souza, Mrs Mary Donnelly, Lancashire Teaching Hospitals Foundation Trust

Aim:
Following an audit of the existing paracentesis service for malignant ascities, a number of issues were identified. In a cohort of 46 patients over a 6 month time frame, 21 patients were admitted solely for temporary ascitic drainage. Their average length of stay was 49 hours (range 6-118 hours). Other issues identified included poor technique, relatively high procedural failure rate and low patient satisfaction. As a result we piloted a new one-stop pathway based in the interventional radiology day-unit.

Method:
Following the introduction of the pilot daycase service, we re-audited procedural parameters and patient satisfaction.

Result:
We present the results of our ongoing procedural audit and patient satisfaction survey, which demonstrates significant improvements in patient experience, outcome and length of stay.

Over 60% of patient underwent paracentesis within 3 days of referral. All patients were treated on a day-case basis, with 97.5% being treated within 60mins of arrival in the department. There were no immediate complications or emergency admission. Average volume drained was 4.5l (range 2-9l) with no requirement for albumin.

Patient experience was scored as very good (7.5%) or excellent (92.5%). After the initial clinical referral from an Oncologist, patients can refer themselves, based on their clinical symptoms, weight gain and girth measurement.

Conclusion:
As a result of our successful pilot we have introduced a rapid access service for recurrent malignant ascities. The scope of the service has now been extended to include any in-patient or out-patient paracentesis requirements for all-cause ascities. Initially the service was consultant led but with increasing demand and a view to cost effectiveness, we are now introducing a practitioner-led service.

Not only has this facilitated rapid access to experienced practitioners performing ultrasound guided paracentesis, it has also allowed patient access to advice and reassurance.
Title: Audit assessing adherence to recommended standards for recording decisions about cardiopulmonary resuscitation

Author: Eames, N, Kingston Hospital, Kingston

Background:
New standards indicate that if a DNAR form is put in place this decision should be communicated to patient and family. Clinical experience suggests that these guidelines are often not followed due to lack of awareness of best practice, or due to other pressures on clinical time.

Objectives:
An audit was carried out with the aim of assessing and improving compliance with current guidance on completion of DNAR forms.

Methods:
A cross-sectional sample of DNAR forms was collected from inpatient wards (excluding community DNARs). Documentation of communication with patients and families was recorded and analysed. The percentage of forms not complying with best practice was calculated. The initial audit identified that forms were not being completed correctly, nor were they being reviewed. Intervention took place on a target ward; staff were educated and a routine review of DNAR forms instigated. The re-audit of the target ward showed an improvement in initial form compliance but a failure to review was noted.

Table 1. Results illustrating the reduction in non-compliant DNAR forms on target ward following intervention

<table>
<thead>
<tr>
<th></th>
<th>Target Ward</th>
<th>Other Wards</th>
<th>Tot.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Box 3 empty</td>
<td>6</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>(communication with patient)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Box 4 empty</td>
<td>3</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>(communication with family)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both Box 3 and Box 4 empty</td>
<td>1</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Tot. non-compliant forms</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Tot. number of forms</td>
<td>16</td>
<td>40</td>
<td>56</td>
</tr>
<tr>
<td>% of forms that are non-compliant</td>
<td>63</td>
<td>50</td>
<td>54</td>
</tr>
</tbody>
</table>

Results:
Around half of DNAR forms were found to have gaps in documentation (see Table 1 for details). Documented reasons for not communicating with patients related mainly to lack of capacity, whilst not talking to families was largely due to absence when the form was signed. Intervention resulted in improved rates of documentation, probably due to staff awareness. Reviewing of forms did not improve.

Conclusions:
Documentation of DNAR decisions is in general very poor; communication of the decision often does not take place due to potentially temporary conditions such as lack of capacity and absence of family. These errors are not rectified, possibly because of a lack of subsequent review. Improvement was shown with staff education, and could also be brought about by successful introduction of a routine check for form completion.
Title: Quality Care in The Royal Albert Edward Infirmary Emergency Department, Wigan, Greater Manchester


Aim:
To assess the impact of Initial Senior Assessment and Treatment (ISAT) on the delivery of high quality care in a large DGH

Method:

- A retrospective audit of waiting times for triage, senior assessment, investigation, treatment and disposal from the Emergency Department.
- A review of 200 Adult patients seen over a 2 month-period (1st May 2015-30th June 2015). 100 patients randomly allocated to “ISAT” and 100 patients to “Standard care”
- ISAT patients seen by a dedicated team comprising a Senior ED doctor (Consultant/Middle grade), a Nurse, a Health care assistant and a Phlebotomist. Patients were seen in designated ED cubicles

Result:
ISAT patients: 58 male and 42 female; Mean age 72 years
Standard care: 62 male and 38 female; Mean age 76 years

A reduction in all the outcome measures was noted in the ISAT patients. (All times in minutes)

- Time to triage: 4 Vs 6
- Time initial clinician assessment: 4 Vs 70
- Time to investigations (cannulation, routine blood tests, ECG, BM, Plain X-rays CT scan and FAST scan): 5 Vs 80
- Time to treatment (Analgesia, IV fluids, nebulisers, antibiotics etc): 6 Vs 65
- Time to discharge, admission or transfer from the ED: 100 Vs 170

Conclusion:

- Initial Senior Assessment and Treatment (ISAT) clearly leads to an early diagnosis, management and discharge from the Emergency Department
- ISAT improves the length of time spent by patients in the ED
- Improves the overall quality of care provided in the ED
- It provides an opportunity for teaching and training of Junior doctors and nurses
Title: Improved patient flow through transformation of a general medical assessment ward into an acute elderly assessment ward – our local experience
Author: Darren Aw, Queen’s Medical Centre

Aim:
The Geriatric department of an East Midlands teaching hospital took over ownership of a 30 bedded medical assessment ward in September 2014. The aim was to focus the admission of frail elderly patients to this ward, and improve operationalisation of the ward by providing clear clinical leadership and standardising ward processes so that patients could be assessed and discharged earlier during their admission, or transferred to specialist areas for further care earlier in their admission pathway.

Method:
A clinical lead and dedicated project manager were established in September 2014, and the standardised operating procedure (SOP) for the ward was revamped. The impact of these changes was monitored in October 2014 and in June 2015.

Notable changes to the SOP and existing ward processes included:

- Providing all day geriatrician presence
- Introduction of safety huddles
- Morning and afternoon board rounds
- “One stop” ward rounds
- Prioritisation sheets
- Optimised IT resources

Outcome:
Length of stay (LOS) was reduced from 32 to 25 hours. Peak time of discharge was shifted from 6pm to 2pm, and peak transfer time was shifted from 8pm to 2pm. Morning and afternoon board round consistency increased (from 18% to 80% and from 24% to 60% respectively). Prioritised ward rounds increased from 18% to 100%. The time from medical review to nursing handover was reduced from 60 minutes to real time due to the automated “tagging” handover system.

Conclusion:
Providing clear clinical leadership on an assessment ward, along with changes in ward processes via a dedicated project manager has brought about a reduction in LOS and subsequent discharge or transfer of patients to specialist areas of care earlier in their admission pathway. This would free up our beds earlier in the day, and thus improve the flow of patients from the emergency department.

Title: More for less - Gastroenterology Ward based Day Case Ring Fenced Bed Pilot
Authors: O’Flynn L, Eaden JA, Burch NE, Vinnamala, Department of Gastroenterology. University Hospitals Coventry and Warwickshire NHS Trust, Coventry. CV2 2DX.

Background:
The audit commission in 1990 identified that many interventions can be performed as day case procedures. Increasingly complex procedures in wider ranges of patients with outcomes equivalent to inpatient admissions and lower cost to the NHS are being performed routinely as day cases. Increasing NHS capacity for elective day case admissions (34.8% of total finished consultant episodes) has reduced patient waiting times and has saved the NHS £2 billion. We piloted ring fencing one gastroenterology bed for day case procedures to incorporate these high standards but overcome the deficiencies of traditional day units such as workforce and training issues.

Aim:
In order to improve quality of patient care, reduce length of stay (LOS), avoid cancellation due to emergency pressures, facilitate seamless booking and commission cost-effective healthcare, a ward based Day Case Ring Fenced Bed for elective admissions such as paracenteses, liver biopsies, iron and magnesium infusions was implemented.

Method:
Two audits were conducted simultaneously; a retrospective audit evaluating elective gastroenterology admissions from 2011 to 2015; and a prospective audit of the 8 week pilot of the ring fenced bed (July-August 2015). The retrospective audit data was obtained from e-discharges for patients. In the prospective audit, data was collected from a dedicated audit proforma filled for every patient regarding LOS and supplemented with data from e-discharges. Staff and patient satisfaction questionnaires were used to collect data on the booking process, implementation and training.

Results:
Data analysis from the two audits demonstrated a significant decrease in average LOS from 3 days to 8 hours with high levels of patient (mean 9.47/10) and staff (mean 7.86/9) satisfaction.

Conclusion:
Provision of a ward based ring fenced bed can improve patient care within available resources through streamlining the booking process and providing adequate training whilst maintaining high levels of staff and patient satisfaction.
Title: Single versus recurrent hypoglycaemia episodes during hospital admissions: risk factors and patient outcome
Authors: Eva Patel, Dafydd Morgan, Kenneth Chan, Ilnaz Akbarian, Amy Mallorie, Ambreen Muhammad, Cristina Psomadakis, Shamala Rajalingam and Ranjna Garg*

Introduction:
Hypoglycemia frequently occur during hospital admissions. It is important to recognize and manage patients at risk of recurrent episodes to minimize adverse outcome.

Aim:
We sought to investigate: 1) Prevalence of hypoglycemic episodes 2) Risk factors for recurrent hypoglycaemic episodes 3) Impact on length of hospital stay (LOS)

Method:
Retrospective observational study of consecutive centrally recorded capillary blood glucose of all patients admitted over a two-weeks period. Data collected: Patient demographics, co-morbidities, baseline blood results, hypoglycaemic treatments, LOS. Analysis: Variables were analysed using Chi-square test. Continuous variables were analysed with linear regression.

Results:
1458 capillary blood glucose (CBG) tests performed over a two-weeks period, identifying 148 hypoglycaemic episodes CBG < 4 mmol/l. 65.8% occurred in medical ward, 6.8% in surgical and 7.4% in emergency department. Hypoglycaemic events occurred in a total of 54 patients (mean age 69.3 ± 15.3 years). 35 patients had single hypoglycaemia episodes (SHE) and 19 patients had recurrent hypoglycaemic episodes (RHE). Predictors of recurrent hypoglycaemic episodes include low baseline CBG (mean CBG for SHE = 3.5 mmol/l, RHE = 2.9 mmol/l, p = 0.012). RHE was not associated with age, nil by mouth status, baseline renal function, and co-morbidities including baseline renal function, stroke/ischaemic heart disease/hypercholesterolaemia/pre-existing diabetes. There was a trend of associations with patients on oral hypoglycaemics (p = 0.078) but not with insulin (p = 0.50) nor sliding scale (p = 0.42), because the CBG is monitored more closely with the latter. RHE was also associated with longer length of stay (18.2 ± 15 vs. 9.4 ± 10.5 days, p = 0.016).

Conclusion:
Hypoglycaemic events are common in hospital. Very lower initial capillary glucose level(<3 mmol/l) and use of oral hypoglycaemia agent is associated with an increased risk for recurrent hypoglycaemic episodes and associated with increased length of hospital stay.

Title: Simple interventions improving sepsis treatment
Authors: Dr Anthony Hall, Tauranga Hospital, New Zealand

Aim:
Sepsis is one of the commonest presentations to hospital and is associated with a high morbidity and mortality. We aimed to improve the treatment of those admitted with severe sepsis and septic shock by implementing a “sepsis 6 sticker” in the emergency department and admissions unit.

Method:
A total of 589 admissions were retrospectively screened daily over 14 consecutive days from 6th July 2015. All those that met internationally defined criteria for severe sepsis or septic shock within 6 hours of triage were included in the audit. An identical audit was conducted in July 2014 prior to the sepsis interventions.

Results:
30 out of 589 patients met criteria (27 out of 624 in 2014). In comparison to the 2014 audit all parameters for sepsis treatment had improved. There was a statistically significant 66 minute average reduction in time to antibiotics (p = 0.007). 93% had blood cultures taken prior to antibiotics vs 78% (p = 0.09). 80% had a blood culture, lactate, fluid bolus (if indicated) and antibiotics within 3 hours as per Surviving Sepsis Campaign targets (vs 33% in 2014). Average time to serum lactate (-26 minutes), blood cultures (-57 minutes) and fluid bolus (-27 minutes) all improved but without statistical significance due to the small study numbers. Length of stay was unaffected (8.5 vs 9.8 days). One year mortality of the 2014 cohort was 37%.

Conclusion:
Our simple “sepsis 6 sticker” intervention along with staff education significantly improved the treatment of patients admitted with severe sepsis and septic shock. Further changes are being made and a repeat audit planned for 2016.
Title: The Post-take paradox: a point of view from the Emergency Department  
Authors: Mir Ahmad1; Michael Imana1; Akin Idowu2, Queen’s Hospital, Romford

Aim:  
It is true that demand at the NHS front door is at an all-time high. It is also true that resources are stretched; clearly, action needs to be taken to remedy this situation. However, before we succumb to the reflex arc that we are all prone to, a detailed analysis is required to identify the areas of concern. This short, observational study intends to look into the acute medical admission rates of a large acute care Trust from the perspective of Emergency Department (ED) attendances. The goals were to map out correlation and trends so that potential areas of weakness were highlighted.

Method:  
Hospital data for ED attendances, referrals made and patients admitted over the course of twelve months were obtained from the Information Department. Linear regression was used to obtain correlation between all three data sets. Statistical Process Charts (P-charts) were then constructed to analyse the trend ratios for the three.

Results:  
It is clear that there is a strong positive correlation between patients referred from the ED to hospital admissions. However, the ED attendances had very little correlation with the referrals and admissions (Fig 1). Although there were increases in the referral and admission ratios against ED attendances during winter, the admission to referral rate actually dropped well below the norm. Furthermore, at the height of summer, ratios for referrals and admission against ED attendances dropped below the norm, but admission to referral ratio soared (Fig 2).

Conclusion:  
It is evident that in winter referrals and admissions for acute medical needs increase and the acuity decreases in the summer. For a more in depth understanding, the period should be increased to cover at least a few years, and replicated in other Trusts. The increased ratio for admissions versus referrals, despite decreasing against ED attendances, may be explained by appropriate referrals being made.

Title: Acute Bacterial Peritonitis Secondary to a Renal Abscess  

Aims:  
Retroperitoneal pathology is rarely considered in the differential diagnosis of a patient presenting with peritonitis. However, we present the case of a young female presenting with peritonitis, secondary to a renal abscess. To our knowledge only 3 similar cases have been reported (1 renal abscess and 2 perinephric abscesses).

Method:  
A previously well 32 year old female was admitted with fever, vomiting and abdominal pain. She was peritonitic with raised inflammatory markers (WCC 21.2, CRP 319.3). Blood cultures confirmed E.coli septicaemia. CT imaging revealed a right renal abscess, extensive retroperitoneal oedema and an unusual degree of fluid within the peritoneal cavity.

A literature review was completed using the Pubmed database and key words included “peritonitis” “renal abscess” and “perinephric abscess.” The search produced 90 articles which were analysed by 2 independent reviewers.

Results:  
8 articles met the inclusion/exclusion criteria, of which only 3 were accessible. 1 was an associated renal and 2 were perinpehric abscesses (1 of which was diagnosed on autopsy). The renal abscess was diagnosed using CT imaging and surgical intervention was required.

Our patient had a ruptured renal abscess involving the anterior pararenal fascia with intraperitoneal discharge. Though the opinion of the general surgical team was sought, the patient was successfully treated conservatively with triple antibiotic therapy.

Discussion:  
Renal and perinephric abscesses usually form walled off cavities and rarely cause an acute abdomen. There are only a small number of reported cases of peritonitis associated with renal or perinephric abscesses. Definitive management remains unclear, though early imaging and surgical opinion is clearly important.

Renal abscesses should be considered in the differential of young peritonitic female patients. Our patient was successfully managed conservatively, and surgical intervention was considered but avoided.
Title: Hypercalcemia due to hypervitaminosis D
Authors: SK Thippeswamy; K Lakshimipathy; S Zachariah; J Clark; B Field

Introduction:

- Mean serum 25(OH)D levels in U.K is 29.
- U.K surveys have shown that more than 50% of the adult population have insufficient levels of vitamin D and that 16% have severe deficiency during winter and spring.
- 53% of U.S population use dietary supplements (between 2003-2006), 43% used calcium (2003-2006) and 37% used vitamin D (2005-2006).

Case:

47 year male presented in May 2015 with vomiting, hiccoughs and constipation for 2 weeks and was self-medicating on these supplements:

- Vitamin D 1.8 million units/day, repeated 4 times over 3 weeks in November 2014 and continued with 40,000 units/day till admission
- Vitamin A
- Vitamin C, 2-4 tablets/day, each having 100 mg elemental calcium
- Magnesium tablets 600mg/day
- Calcium tablets 400mg/day
- Vitamin E
- Vitamin K 400 mcg/day
- Garlic extract
- Grape seed and
- Lion’s mane mushroom extract

Investigation:

<table>
<thead>
<tr>
<th>Bloods</th>
<th>13.07.2015</th>
<th>24.07.2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum Sodium (136-145)</td>
<td>116</td>
<td>140</td>
</tr>
<tr>
<td>Serum potassium (3.5-5.1)</td>
<td>3.5</td>
<td>4.0</td>
</tr>
<tr>
<td>Serum urea (2.1-7.1)</td>
<td>23</td>
<td>9.3</td>
</tr>
<tr>
<td>Serum creatinine (62-106)</td>
<td>815</td>
<td>239</td>
</tr>
<tr>
<td>eGFR</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>Serum Corrected calcium (2.15-2.55)</td>
<td>3.05</td>
<td>2.22</td>
</tr>
<tr>
<td>Serum phosphate (0.87-1.45)</td>
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</tr>
<tr>
<td>Serum protein (64-83)</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Serum albumin (35-52)</td>
<td>37</td>
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</tr>
<tr>
<td>Serum bilirubin (0-21)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>ALP (40-129)</td>
<td>358</td>
<td></td>
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<tr>
<td>ALT (0-41)</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>Serum osmolality (280-290)</td>
<td>269</td>
<td></td>
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<tr>
<td>Serum Cortisol (193-690)</td>
<td>1366</td>
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<tr>
<td>Parathyroid hormone (1.6-6.9)</td>
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<tr>
<td>Vitamin D</td>
<td>910</td>
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<tr>
<td>Creatinine kinase (0-170)</td>
<td>97</td>
<td></td>
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<tr>
<td>ESR (1-15)</td>
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<td></td>
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<tr>
<td>Serum angiotensin converting enzyme (8-52)</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Serum protein electrophoresis no Para protein band</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti-Streptolysin O titre</td>
<td>&lt;200 IU/ml</td>
<td></td>
</tr>
<tr>
<td>Anti-nuclear antibody</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>Cytoplasmic ANCA</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>Perinuclear ANCA</td>
<td>negative</td>
<td></td>
</tr>
</tbody>
</table>

Urinalysis:

- PH-9.0; leucocytes-3+; protein-1+; blood:2+

Ultrasound renal:

Mild diffuse renal parenchymal hyper echogenicity in both kidneys with normal cortico-medullary differentiation.

Chest X-ray: Normal

Discussion:

- The patient’s symptoms and biochemistry improved with fluid resuscitation.
- There are less than 10 case reports about hypervitaminosis D in the literature
- There are few reports of treatment with steroids, calcitonin, bisphosphonates.
- Vitamin D has a wide therapeutic index and the toxic doses range from 50,000 IU to 100,000 IU a day for a few weeks leading to serum levels > 250(ng/ml).
- Studies have shown that the prevalence of the use multivitamin, calcium and Vitamin D supplements is increasing.
- The Institute of Medicine of the USA has advised a recommended daily allowance of calcium of 800-1000 mg/day and 600 – 4000 IU of vitamin D a day.
Title: Comparison of international guidelines on primary spontaneous pneumothorax  
Authors: Yoon Ja, Sivakumar Pa, Ahmed La, O’Kane K, Guy’s and St Thomas’ NHS Foundation Trust, London

Introduction: 
Key guidelines in the management of primary spontaneous pneumothorax (PSP) include the 2010 British Thoracic Society (BTS) Pleural Disease guideline1 and 2001 American College of Chest Physicians (ACCP) Consensus Statement2. Recommended management is dependant on size classification,

Objectives: 
To compare size classification of PSP cases, according to BTS and ACCP guidelines, and to evaluate guideline compliance.

Method: 
A retrospective evaluation of PSP presenting to St Thomas’ Hospital, London, between February 2013 and December 2014. Data was recorded from review of chest X-rays and patient records. No ethics approval was required as this was an audit.

Results: 
88 episodes of PSP in 72 patients were identified (median age 25, IQR 22-33), Table 1. Greatest disparities in size classification in the cohorts managed conservatively or with aspiration only (43% and 48% respectively). BTS guidelines followed in 69% overall. Low adherence in aspiration and chest drain groups (61% and 54% respectively). All cases not adherent to BTS guidelines in aspiration group had ‘large’ PSP according to ACCP. In 13 cases, initial aspiration was omitted in favour of chest drain insertion, contrary to BTS guidelines.

| Table 1 |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| **Treatment**              | **Total**               | **Classified as ‘large’ (%)** | **Disparity in classification (%)** | **BTS guidelines followed (%)** | **ACCP guidelines followed (%)** |
|                             | **BTS**          | **ACCP**         |                               |                               |                               |
| Whole group                 | 88               | 40 (45)          | 68 (77)                      | 30 (34)                      | 61 (69)                      | 28 (32)    |
| Conservative               | 28               | 0 (0)            | 12 (43)                      | 12 (43)                      | 27 (96)                      | 16 (57)    |

Needle aspiration only 23 10 (43) 23 (100)  
Intercostal chest drain 37 30 (81) 33 (89)  
*ACCP does not recommend aspiration in guidelines

Conclusion: 
There is poor agreement in size classification between BTS and ACCP guidelines, resulting in conflicting recommendations for management of PSP. International consensus in PSP guidelines is needed.
Title: Effect of Electronic Medical Records on Compliance of Venous Thromboembolism Prophylaxis - an Audit Cycle
Authors: Dr Hyne, S Dr Kodavali, K Dr Lakkappa, B Northamptonshire Healthcare NHS Foundation Trust (NHFT), Wellingborough

Introduction:
It is estimated that 25,000 people die every year in the UK from preventable hospital acquired venous thromboembolism (VTE). Accurate prescription of VTE prophylaxis remains an ongoing problem in medical wards.\(^1\) Accurate prescription of VTE prophylaxis remains an ongoing problem in medical wards.\(^2\)

All patients admitted to this hospital are assessed for VTE risk and prescribed Low Molecular Weight Heparin (LMWH) based on weight and Estimated Glomerular Filtration Rate (eGFR) in accordance with National Institute for Health and Care Excellence (NICE). This hospital commenced using electronic medical records (EMR) at the end of 2014. This audit is timed to capture the effect of introduction of EMR and its embedment into daily practice.

This audit shows the effect of service innovation and the time taken for it to embed.

Objectives:
To assess whether VTE risk assessment and prescription is completed to NICE standard and also to assess the effect of implementation of the EMR.

Method:
Data was collected from all the patients in two sub-acute wards on three separate occasions. The first set of data was from Paper based records. The second set from initial phase of change over to EMR and the final set a year later.

Results table:

<table>
<thead>
<tr>
<th></th>
<th>Paper</th>
<th>EMR</th>
<th>EMR - Post Embedment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients</td>
<td>43</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>VTE screening</td>
<td>95%</td>
<td>87%</td>
<td>100%</td>
</tr>
<tr>
<td>Contraindication identified</td>
<td>25%</td>
<td>72%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Discussion:
The table shows that VTE risk assessment and prescription improved with subsequent audits. It also suggests that the prescribers needed time to adopt and comply with the new EMR. The introduction of EMR helped in identifying all the relevant clinical variables before the prescription of VTE prophylaxis. This led to correct dosing of LMWH thus reducing prescription errors. It is clear that electronic recording is helpful in improving the VTE prophylaxis.
Title: Too Much for Too little? A Retrospective Audit on Temporal Artery Biopsies
Authors: Okonkwo N, Selvam L.A.

Background:
Temporal artery biopsies (TAB) are often performed in suspected cases of sight-threatening arteritis. The results of which often do little to change clinical management. While the American College of Rheumatology (ACR) formed a clinical classification criterion in 1990 for diagnosing GCA to ensure early steroid therapy was commenced, they acknowledge TAB should aim in establishing a definitive diagnosis.

Aim:
The audit aimed to assess if TABs were performed in accordance with the national ACR guideline and whether their results altered course of treatment in suspected GCA.

Method:
A retrospective audit of all patients undergoing TAB at a single DGH between 2010 and 2014, identified from the histopathology database. Main outcome measures included clinical profile and biochemical criteria associated with positive histology; proportion of negative histology patients who were commenced on steroid therapy; Length of TAB relationship between ACR score and TAB result.

Results:
Forty TABs were performed (male:female 1:2, mean age =70.23 years). Three (7.5%) biopsies were histologically positive and 37 (92.5%) were negative. One biopsy was non-arterial. 62.5% of TABs were performed within the recommended one week of suspected diagnosis. Only 46% of TABs were >1cm. Preoperative steroid therapy was commenced in 80% of patients and a negative histology changed management in 32%. 67.5% had sufficient clinical features to classify GCA and not warrant TAB. Histologically positive TAB patients had higher average age, higher ESR, longer biopsy length and shorter time interval between diagnosis and procedure compared to histologically negative TABs.

Conclusion:
Raised ESR and higher age may be the most useful diagnostic adjunct of GCA. Many histologically negative TAB individuals were nevertheless clinically diagnosed and managed as GCA. Sub-optimal specimen length may be contributing to lack of diagnostic accuracy. Alternative techniques may be warranted in the near future.
Title: Should we be discussing DNAR wishes at the time of Hospital admission?
Author: Daniela Gradil, Chesterfield Royal Hospital

Background:
In 2012 the National Confidential Enquiry into Patient Outcomes and Death published the Time to Intervene 1 report. This recommended that: in order to improve patient care and prevent inappropriate and traumatic CPR, “CPR status should be considered and clearly documented for all acute admissions, at the time of admission or at the time of first Consultant review”. The Janet Tracey Case2 in 2011 lead to development of the Joint statement3, which supports patient involvement in these decisions.

Aim:
Explore patients’ views on these recommendations, assess if these are being implemented on our acute medical admissions and re-assess compliance following raising awareness of the recommendations.

Method:
47 acute medical patients were asked “Do you feel DNAR should be discussed with all our patients when they are admitted to hospital?”. These results were then compared to our current practice on the Medical Admissions Ward. A poster with the results and recommendations was then presented to the MAU Doctors and followed by re-auditing of the number of DNAR discussions documented on admission after the intervention.

Results:
83% of patients felt DNAR should be discussed on admission. None of these were offered DNAR discussion, including patients with cancer, heart failure, COPD and poor pre-morbid status. DNAR was only discussed with 25% of the total number of unwell patients with multiple co-morbidities. Following intervention, a 19% increase of DNAR discussions was noted on admission. However, a large proportion of patients with cancer, heart failure, COPD, elderly or poor WHO performance status still not offered DNAR discussion.

Conclusion:
Despite patients being in agreement with the proposed recommendations, these are still not being fully implemented.
Title: Referral Line: A Quality Improvement Project for Managing Flow of Patients Referred by GPs to Specialties Through the Emergency Department

Author: Hicks D, Gupta S, Fletcher N, Seddon, Department of Emergency Medicine, Whipps Cross University Hospital, Barts Health NHS Trust, London, UK

Introduction:
Patient flow through the Emergency Department (ED) at Whipps Cross University Hospital (WXUH) was criticised in a 2015 report by the Care Quality Commission (CQC).1 Of the 8000 patients seen in the ED each month, approximately 10% are referred by GPs direct to specialty teams. Previously, acceptance of GP referrals was at the discretion of the junior doctor on call for the specialty team. Referral Line is a novel initiative designed to improve GP access to specialties by ensuring all referrals are automatically accepted at the point of contact by the Medical Director of the Trust.

Aim:
To determine the impact of Referral Line on GP access to specialties and patient flow in the ED compared to the pre-existing GP referral system (Bed Bureau).

Method:
Retrospective analysis of patients referred by GPs to specialties between 1st May and 30th June 2015. Data that was analysed included the referral source, the specialty being referred to, ED input for each patient, and patient outcomes. Data was collected and compared for patients referred via Bed Bureau (1st - 31st May) and via Referral Line (1st - 30th June).

Results:
Only 121 of 669 referrals (18%) made to Bed Bureau were accepted by the nominated specialty. Despite all GP referrals to Referral Line being automatically accepted, 222 of 663 patients (33%) were still seen in the ED. Of these, 102 (46%) were ultimately referred by the ED to the same specialty the GP had initially referred to.

Conclusion:
Referral Line improved GP access to specialties compared to Bed Bureau, but the ED input required for these patients was still significant, impacting on patient flow. Recommendations included improved communication from the ED to make specialties aware of expected referrals, and the introduction of clinical areas separate from the ED for specialty teams to receive and assess expected referrals.
Title: Delays in chest x-rays in acute admission in elderly medicine

Author: Dr. Jennifer Rossdale, Queen Elizabeth Hospital, Woolwich

Aims:
In acute admissions for pneumonia, heart failure and AECOPD a chest radiograph is a crucial tool in diagnosis and management. BTS guidelines recommend CXR within 4 hours for pneumonia. We wanted to quantify and address a delay to CXR, especially for GP direct admissions and out of hours. We also hoped to raise awareness of relevant guidelines

Method:
Data was gathered from the notes and audit trails of patients admitted under Elderly Medicine for those three diagnoses during January 2015. We also noted pre- and post-CXR diagnosis and whether antibiotics were started or changed post-CXR.

Outcomes:

<table>
<thead>
<tr>
<th></th>
<th>Average minutes</th>
<th>Maximum number of minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total delay from arrival to CXR</td>
<td>261</td>
<td>3269</td>
</tr>
<tr>
<td>- A&amp;E</td>
<td>134</td>
<td>1210</td>
</tr>
<tr>
<td>- GP</td>
<td>562</td>
<td>3269</td>
</tr>
<tr>
<td>Delay to request from arrival</td>
<td>105</td>
<td>1140</td>
</tr>
<tr>
<td>- A&amp;E</td>
<td>78</td>
<td>1140</td>
</tr>
<tr>
<td>- GP</td>
<td>169</td>
<td>510</td>
</tr>
<tr>
<td>Delay from request to CXR</td>
<td>182</td>
<td>2915</td>
</tr>
<tr>
<td>- A&amp;E</td>
<td>99</td>
<td>1485</td>
</tr>
<tr>
<td>- GP</td>
<td>382</td>
<td>2915</td>
</tr>
<tr>
<td>Delay to report</td>
<td>1932</td>
<td>11221</td>
</tr>
</tbody>
</table>

- Delay from arrival to CXR was over 4 times as long for patients referred by their GP
- Majority of patients had an x-ray within the recommended 4 hours - but there were significant outliers (18% of patients fell outside the 4 hour window)
- Delays were longer out of hours and overnight
- 48% of CXRs affected diagnosis
- 61% of CXRs changed/triggered antibiotics
- Some of this delay is due to delay to request, however a significant delay comes between request and CXR

Conclusion:
Patients admitted via their GP experienced significant delay to CXR when compared with those admitted from A&E. We have introduced measures by which GP patients who are query CAP/CCF/ECOPD can have a CXR on arrival. There is also a protocol which should trigger a CXR within 3 hours in these suspected diagnoses.
Title: A Bump On The Head – To Scan or Not To Scan?
Author: Mohd Faiz Mohd Fauzi, Scunthorpe General Hospital

Background:
NICE has updated its guideline in determining which patient should get a CT head following a head injury and also recommended a reporting time. This is an audit to assess compliance of this guidance in the Emergency Department (ED) at Scunthorpe General Hospital.

Aim:
- To examine whether patients who received a CT head after a head injury fit the criteria as per NICE Guideline.
- To evaluate time taken for a CT head for a head injury to be reported.

Standards:
All adult patients who received a CT head following a head injury should meet the current NICE criteria (100%). All CT head for a head injury must be reported within 1 hour (100%).

Method:
A retrospective audit of CT head requests was done from ED between 01/06/2015 until 30/06/2015 for adults who presented with a head injury. Data was collected from requests forms and online radiology system. Each requests were then assessed against the updated NICE Guideline criteria. The time taken for each scan to be reported was also recorded.

Results:
Seventy-two CT head scans were done for adults who presented with a head injury for the month of June 2015. Out of these, only 54 patients (75%) met the criteria for a CT head. Only 2 cases were reported outside the recommended time, where one of them revealed a significant acute abnormality.

Conclusion:
This audit underlines room for improvements in deciding which patient requires a CT head to avoid wasting valuable resources and unnecessary radiation exposure. Further departmental education and a better communication between ED and radiology department are essential. Re-audit to measure future performance.

Title: Extended Glasgow Blatchford score to discharge patients early from acute admission– low risk or missed pathologies.
Author: Chatten K, Banerjee A, Ang Y, Salford Royal Foundation Trust, Stott Lane M68HD

Aim:
The Glasgow Blatchford score (GBS) predicts the outcome of patients presenting with acute UGI haemorrhage. A GBS of zero identifies low-risk patients in whom out-patient management is recommended(1).

Our aim was to assess whether extending the GBS could allow for early discharge whilst maintaining patient safety. We also analysed whether pathologies can be missed by discharging patients and its potential impact on patient safety.

Method:
This was a retrospective analysis of UGI bleed data captured by our coding department from 01/10/2013-30/09/2014. GBS was calculated and gastroscopy report obtained from electronic patient record. Data was also collated for patients who didn’t need endoscopic intervention but had a positive diagnosis.

Results:
199 patients were identified from hospital admission data who presented with diagnosis of either haematemesis or malaena. The negative predictive value (NPV) for excluding the need for endoscopic intervention with GBS score up to 1 was 100%. Extending the score to 3 dropped the NPV to 97.87%. The NPV of GBS in excluding any diagnosis at 0 was 48.65% and by extending to 3, 41.49%. Further analysis of data reveals that 18.6% (37/199) patients scored 0, 51% of these were discharged. However for all scores 20.6% (41/199) patients were actually discharged. Extending the score would increase potential discharges to 47.2% (94/199).

Conclusion:
Our study concludes that the GBS can be extended to 3 for safe outpatient management, increasing potential discharges to 47.2%. With an average time to endoscopy of 24-48 hours (score 0-3) this has potential for a reduction of 53-106 inpatient bed days/year whilst maintaining patient safety(2). Nevertheless, to avoid missing pathologies by extending the score and discharging patients it is important to organize urgent outpatient gastroscopy(3)(4) as extending the score excludes the need of intervention but does not exclude a positive finding which might need medical treatment.
Title: The impact of an automatic acceptance policy on the Emergency Access 4h standard and admission rates to specialties

Author: Edward Norris-Cervetto (Helen Witney and Francoise Ticehurst), Emergency Department, Wexham Park Hospital, Slough

Aim:
Reduce the amount of time and stress involved in ED doctors and specialties negotiating each admission over the phone without increasing admission rates.

Method:
Frimley Park NHS Trust took over Wexham Park Hospital in Autumn 2014 and implemented the “Frimley Admissions Policy” for Emergency Department referrals. Under this new policy, the senior doctor in the Emergency Department decides all admissions to hospital specialties using agreed referral pathways. ED doctors simply inform specialties of their decision and specialties must then see the patient physically before specialty seniors can continue to admit, discharge or refer to another specialty themselves. We compared a 23 week period (April – Sept) in 2014 and 2015 to see the effect of the new admission policy on admission rates and the 4h target.

Results:
Prior to the new policy, the 4h (95%) target was only met 7/23 weeks (average 91.5%). A year later and despite a 5% greater attendance rate, the target was met 18/23 weeks (average 96.7%). Admission rates remained identical before (29.7 ± 1.6 %) and after (29.7 ± 1.1 %) the new policy. At a human factors level, the new policy has also resulted in the busy medical registrar being bleeped far less often (admissions are added automatically to their electronic list), specialty juniors no longer fearing being told off for “accepting” a certain patient (the decision is taken by the ED) and ED doctors no longer wasting time having to “persuade” specialties to accept a patient.

Conclusion:
The Frimley Admission Policy has contributed to improved 4h target performance, reduced the time spent by doctors negotiating admissions and seen no increase in admission rates despite increased attendances to the Emergency Department. We recommend this model is adopted more widely throughout the UK.
Title: A Panic Attack that turned out to be a deadly condition  
Authors: Ahmad Maatouk, Acute Medicine Registrar, Sheffield Teaching Hospitals, BEN KUMAR, Respiratory Consultant, Doncaster Royal Infirmary

Aim:  
The importance of point of care ultrasound as an additional skill for acute medicine physicians.

Clinical Features/Method:  
58 yr lady attended A&E with agitation and panic symptoms. She attended A&E the night before, was found “somewhat anxious”, she described strange sensation in both ears, but denies any headache or LOC.

Her observations were normal. While in A&E, she had two episodes of projectile vomiting, therefore CT head was arranged to rule out any intracranial pathology, this showed normal findings. She was discharged home with the diagnosis of Panic attack.

She attended A&E next day with further 2 episodes of vomiting, agitation, frighten from dying, and anxious, normal observations, except a recorded low Bp: 78/55 by the paramedics. ABG showed blood sugar 15.4, PH: 7.0. She was diagnosed as DKA and treated as per protocol.

I have reviewed her in Resus, clinical examination was unremarkable but a radio-radial delay. Also noted Ketones 0.7 and lactate 8.9.

A bedside focused echo was performed to assess the aortic root, the subxiphoid view showed moderate pericardial effusion, this was enough to arrange a CT aortogram to rule out aortic dissection.

Outcomes/Results:  
CT Aortogram showed Type A Aortic dissection and 14 mm pericardial effusion. Patient was transferred to theatre where she had a 12 hours operation.

Unfortunately she died in theatre, it was an extensive dissection that involved the whole aorta.

Conclusion:  
POC ultrasound is an essential additional skill that all physicians should have, it is primarily used to answer focused clinical questions at the bedside and direct appropriate therapy. It is not meant to replace any of the other diagnostic methods like CT scan, echo or ultrasound.
Title: The Fontan Challenge – A case of sepsis in a patient with a uni-ventricular heart and congenital asplenia
Author: Dr Amy Kokkinos, Hinchingbrooke Hospital

A 36 year old gentleman presented with sudden onset, severe, epigastric pain, diarrhoea and fever. He had a background of complex congenital heart disease and had undergone a number of surgeries to create a Fontan circulation. His other past medical history included regular episodes of sinus ventricular tachycardia and congenital asplenia. The patient deteriorated rapidly soon after arrival in A&E and developed a petechial rash and haematemesis. Investigations did not reveal any source of infection but did reveal asplenia and situs inversus.

He was commenced on antibiotics, received platelet transfusions, cryoprecipitate and vitamin K. Despite treatment he continued to deteriorate requiring intubation, ventilation and admission to intensive care. Despite aggressive management in intensive care the patient continued to deteriorate; he became increasingly dependent on inotropes and high ventilator settings. Unfortunately, the patient passed away and the post mortem cause of death was reported as pneumococcal septicemia from no identifiable source.

Learning Points:
A widely recognised complication of congenital or surgical asplenia is sepsis. In children with asplenia, pneumococcal septicaemia has been identified as the causative organism in over half of patients who develop a severe infection.(1) Therefore, when assessing an acutely unwell patient with asplenia it is important to consider pneumococcal disease as a differential diagnosis.

The first successful Fontan procedure was reported 40 years ago.(2) The number of patients with Fontan circulation living into their adulthood has increased and this can be attributed to improved selection criteria, advances in surgical technique and a greater understanding of the post-operative complications. A growing number of adult patients with Fontan circulation will be presenting with acute illness.(3) With this in mind, it is important that awareness of this procedure is increased.

Title: Multiple pulmonary emboli in low risk patient with negative D-dimer. A case report
Author: Ashraf Kamour, North Manchester General Hospital

Introduction:
D-dimer assay has shown to have a negative predictive value up to 94% in suspected cases of venous thromboembolism (VTE) (1). Using the Well’s scoring system to help guide clinical probability, when applied to low risk patients a negative D-dimer assay raises the negative predictive value to 99% (2, 3). Well established in routine clinical practice as a cost effective way of excluding VTE in such patients, this mantra is rarely questioned. We present a case which raises doubt over our reliance on D-dimer assay in low risk patients

The case:
A 52-year-old man presented with collapse and haemodynamic instability. Preceding this was a three-day history of progressive dyspnoea and productive cough. An arterial blood gas demonstrated severe hypoxaemia, raised inflammatory markers in blood test, with no convincing evidence of lung pathology on chest radiograph. Electrocardiogram showed right bundle branch block and T wave inversion in leads V1 to V3. Troponin I was markedly raised. The patient was initially treated for severe community acquired pneumonia and non-ST elevation myocardial infarction. On next day review, the chest radiograph did not seem to correlate well with the ongoing high oxygen requirements. In view of this, and the initial presentation, the question of pulmonary embolism was raised, and despite of a normal D-dimer assay (using turbidimetric immunoassay) in context of a Well’s score of zero, a computerised tomography pulmonary angiogram was performed which demonstrated large bilateral segmental pulmonary emboli.

Conclusion:
This case illustrate that negative D-dimer in patient with low clinical probability does not completely exclude VTE. Further research is required to examine the incidence and the causes of false negative D-dimer assay in this cohort of patients. Meanwhile physicians should not substitute clinical judgment, and to proceed to a more definitive diagnostic test if suspicion remain high.
Friday PM: P14

Title: An important complication of chest drain insertion.
Authors: Gildeh N, Tayler-Gray J, Lohani S., Darent Valley Hospital, Dartford

A 17yr old male student, AM, presented with a 4 day history of chest pains, breathlessness and dry cough. His symptoms started at rest but worsened with his usual activities. His brother brought him to A&E when he noticed he was unable to walk around a shopping centre. On arrival, oxygen saturations were 93% on air and a chest x-ray (figure 1) showed a significant right sided spontaneous pneumothorax. He was a smoker of 10 cigarettes per day but had no previous history of pneumothorax or lung disease.

A 12 french chest drain was inserted with no complications. 45 minutes later AM became acutely breathless, distressed and coughed up frothy sputum. His oxygen saturations dropped to 80% on air. A repeat chest x-ray (figure 2) showed right sided pulmonary oedema. A diagnosis of re-expansion pulmonary oedema was made and morphine, furosemide, high flow oxygen were given and intensive care called. However, over the course of 2-3 hours the symptoms settled. He was transferred to the respiratory ward where he remained until his chest drain stopped bubbling and his chest x-ray showed resolution of the pneumothorax and oedema (2 days). The drain was removed and he was discharged with advice and outpatient follow up.

Re-expansion pulmonary oedema is an uncommon (<1%) but potentially fatal (up to 20%) complication that can occur after chest drain insertion for pneumothorax or pleural effusion (1). Pathogenesis is unclear although several mechanisms have been implicated (2). Risk can increase significantly with the size of pneumothorax and the length of time present (3). Treatment is usually supportive with morphine, high flow oxygen and when severe CPAP and mechanical ventilation. There is no significant evidence for diuretic use currently. The disease is usually self-limiting and will usually resolve in 5-7 days.

Figure 1:  
Figure 2:

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Friday PM: P15

Title: Encephalitis versus temporal lobe stroke, how to differentiate?
Authors: Dr Nihal Abosaif, Dr Joseph Timothy, Dr Ilam Khan, University hospital of Coventry and Warwickshire, Acute Medicine Department, and Stroke Department.

Abstract:
A 59-year old woman with a background of hypertension, type 2 DM, epilepsy, obesity, previous pancreatitis, hypercholesterolaemia and heavy smoker (30 pack years) presented with sudden onset of delirious state. Patient had dinner the day before then became very agitated, hallucinating and moving all limbs except for decreased mobility of the right arm which had a hemibasalms like movements that extended to the right leg. GCS was 13/15, BP was 180/100 mmHg, pulse was 120 per minute, temperature was 37.5°C and respiratory rate was 24 per minute. Her oxygen saturation was 96% on room air.

Clinical examination was difficult because of agitation and inability to follow the instructions for neurological examination. Patient was treated first as a case of encephalitis by giving her intravenous acyclovir then her condition deteriorated further after one hour of admission and developed right sided weakness and unequal pupils. She had both receptive and expressive dysphasia. A CT-scan of her head was done on admission didn’t show evidence of new infarction or intracerebral bleed.

She was then sedated to have MRI brain which showed high T2 signal change in the left temporal lobe with restricted diffusion. There was an increased density in the left MCA which could represent thrombosis.

Her carotid Doppler showed narrowing of >90% in her left carotid artery. She had carotid endarterectomy one month following discharge.

Conclusion:
Temporal lobe stroke can be quite difficult to diagnose because of other associated symptoms of confusion, agitation, dysphasia which can mimic encephalitis patients. The acuity of symptoms can be a differentiating symptom as well as focal neurology signs are not common in encephalitis. The most likely differentiating scan is the MRI brain with DWI and spinal fluid analysis for viral markers.
Title: Caustic soda ingestion – a characteristic clinical sign
Authors: Dr Gurdeep Dulay & Dr Jasbir Dulay, University Hospital Southampton

Case presentation:
We present the case of a 28 year old gentleman with a background of schizophrenia and bipolar disorder who deliberately ingested caustic soda with a view to ending his life. He self-presented to the emergency with severe oropharyngeal ulceration and profound dysphagia. Strongly discoloured markings were noted on this gentleman’s clothing (photographs taken) which assisted in identifying the substance which was ingested. Fortunately, this patient made a reasonable recovery and was discharged home on high dose proton-pump inhibitor after 3 days.

Caustic soda ingestion – an overview
Caustic soda ingestion is an uncommon presentation to most emergency department and acute medicine departments in the UK. Caustic soda ingestion can cause extensive transmural damage to the oropharynx, oesophagus and stomach. Further potential sequelae include; perforation, mediastinitis and death.1,2

Management is dependent upon the severity of injury. An OGD, repeat abdominal and chest x-rays as well as close observation in an intensive care setting may be required. Emetics, neutralising agents and nasogastric tubes are contraindicated due to the potential possibility of propagating injury and causing perforation.3

Learning points:
Given the potentially catastrophic sequelae of caustic soda ingestion; we believe that identification of the characteristically discoloured patches on clothing is a valuable clinical sign which aids in indentifying the ingested agent. Recognising this sign is of paramount importance if the patient is unable to communicate due to either a language barrier or gross oropharyngeal ulceration.

We carried out a survey of 24 doctors (sub-consultant level, in acute medicine and emergency medicine) across 2 hospital trusts and found only 17% were able to identify one or more life-threatening complications of caustic soda ingestion.

We propose that the presence of these discoloured patches on clothing is highly suggestive of caustic soda ingestion. Identifying this sign allows early implementation of a focused management plan. Consequently, serious complications can be avoided.
Title: Case report: The importance of fully analysing the ABG in a breathless patient – a case of methaemaglobinaemia

Authors: Solway L, Disney BR, Bassford C, Abosaif N, Petterson T, University Hospitals Coventry and Warwickshire NHS Trust, Coventry, CV2 2DX, UK.

A 51-year-old female was referred with 2-day history of breathlessness and oxygen saturations of 75% at the GP surgery. She had a history of hidradenitis suppurativa for which she received dapsone. On arrival, she was drowsy, confused and collapsed. On assessment she was cyanotic with saturations of 80% on 15L via a non-rebreath mask, tachypnoeic (respiratory rate 30), tachycardic (heart rate 115) but normotensive (140/80mmHg) with agitation and a GCS of 7 (E1V1M5) which improved to 15 with oxygen therapy. An initial working diagnosis was one of pulmonary embolism. However, careful review of the arterial blood gas (ABG) demonstrated a methaemoglobin (MetHb) level of 36.6% (normal range 1-2%). The patient received methylene blue (MB) and her hypoxia and cyanosis resolved and repeat ABG showing MetHb levels had reduced to 9.6%. The patient had an uncomplicated recovery.

Methaemoglobinemia can be congenital or acquired and occurs when MetHb is >1.0%. Methaemoglobin is haemoglobin bound to oxidized iron which cannot bind to oxygen. Early symptoms (MetHb 3-50%) include skin discolouration, light-headedness, headache, tachycardia, fatigue, dyspnea, and lethargy. At higher levels, respiratory depression, arrhythmias, profound acidosis, coma, shock, seizures, and death may occur (usually when levels >70%).

Clinical suspicion of methaemoglobinemia should occur if hypoxia does not resolve with increased fraction of inspired oxygen, normal paO2 on ABG despite clinical cyanosis.

Acquired causes are commonly due to drugs; Dapsone, topical and injected local anaesthetics and nitrates have been implicated.

Treatment is with MB (1-2mg/kg over 5 minutes) but this is contraindicated in G6PD deficiency due to precipitation of acute haemolysis, in this case treatment would be with exchange transfusion (or when methylene blue is ineffective). MB causes rapid reduction if MetHB levels. Infusion can be repeated at 1 hour if levels remain above 20%.

This case highlights the need to remain vigilant when reviewing ABG results.
Title: Head Versus Heart: A Case Report
Author: Anwar, M. Jakupaj, A. Naziat, A., Luton and Dunstable University Hospital

A 29 year old women 3 weeks post-partum was admitted after suffering from 3 collapses associated with dizziness and feeling of increased pressure in her head. On 2 occasions this led to witnessed blackouts where she fell and began to ‘shake her whole body’, both her husband and paramedics reported this as a seizure.

A CT head was requested in the emergency department to look for an organic cause of her seizures. However, the scan was normal as was all initial blood tests. The patient was referred to the medical team and transferred to the Acute Medical Unit for overnight neurological observations. On medical review a routine ECG was noted to have a prolonged QT interval which was confirmed with serial ECGs showing a QTc of up to 645ms. At that point the patient was placed on a cardiac monitor.

The following morning after cardiology review the patient suffered from a cardiac arrest secondary to a polymorphic ventricular tachycardia that self-terminated within 1 minute. She was given magnesium and initiated on a B-blocker. A further cardiac arrest occurred later that night. This time a polymorphic ventricular tachycardia degenerated to ventricular fibrillation and required DC cardioversion. The patient was urgently transferred for a dual chamber implantable cardioverter-defibrillator and now is awaiting genetic screening for long QT syndrome.

Long QT syndrome occurs secondary to abnormally prolonged ventricular repolarisation leaving the heart vulnerable to ventricular arrhythmias that can present as syncope, cardiac arrest and sudden death. Patients are at increased risk of symptoms during the post-partum period and may present with signs characteristic of neurological disorders secondary to brain hypoxia. This case demonstrates the lifesaving capacity of appropriate initial investigations and cardiac monitoring in the Acute Medical Unit.

Title: Dr Shyam Sundar Seshadri, Dr Rebecca Chapman, Dr Tay Naeem

We present a case of adrenal insufficiency brought on by bilateral adrenal haemorrhage following warfarin therapy for a recent diagnosis of pulmonary thromboembolism. The patient in question was a 70 year old female who had had a total right knee replacement for osteoarthrosis 2 weeks preceding her present admission. In spite of methodical adherence to prophylactic low molecular weight heparin she presented with a sudden onset of shortness of breath with associated chest pain which was then diagnosed by CTPA to be pulmonary embolism involving an isolated right upper lobe pulmonary artery for which she was duly commenced on warfarin. Four days post warfarin initiation she presented with a sudden onset of excruciating upper back pain followed by 3 collapses at home with syncope prompting her husband to call out for the ambulance. In the emergency department she was noted to be anaemic with haemoglobin of 69g/l and an urgent CT scan of her abdomen revealed evidence of large retroperitoneal bleed with additional adrenal haemorrhage more on the right side. Biochemistry also revealed a new hyponatremia though with normal potassium with hypotension. She was resuscitated with blood transfusion but continued to exhibit persistent hyponatremia with now also a new symptom of extreme lethargy and tiredness prompting the short synacthen test which revealed poor adrenal reserve with a baseline cortisol of 106nmol/l with a 30 minute response of only 122 nmol/l. She has since being commenced on hydrocortisone with a follow up endocrine appointment. The importance of reviewing patient symptoms with the biochemistry cannot be understated given the complexity of her presenting symptoms and the need to keep an open mind to a potentially life threatening endocrine disorder which can be easily treated, such treatment being lifesaving cannot be over emphasised.
Title: Rare presentation of Type A aortic dissection with painless paraplegia
Authors: Ravi Menon, Colchester Hospital

Case:
76 year old man was admitted with fall and weakness of both legs. He complained of transient paraesthesia followed by weakness in both legs, urinary retention and constipation. He had hypertension and osteoarthritis in the past. He had hypotonia with grade 2 power and absent reflexes in the lower limbs. Upper limb and cranial nerve examination were normal. Touch, proprioception, pain and temperature were normal. MRI of spine was normal. The next day, hypertonia developed and contrast CT showed dissection of the aorta commencing at the aortic valve level and extending down to the mid external iliac arteries with brachio-cephalic, superior mesenteric and renal arteries involved but with good renal perfusion and no bowel infarction. Echocardiogram showed a dissection flap in the ascending aortal with mild aortic regurgitation.

He was transferred to the tertiary centre where he had repair of the aortic valve and replacement of the ascending aorta. Post-operative neurological examination still showed grade 3 power in the lower limbs with poor anal tone and hypertonia and intact sensations.

Discussion:
The absence of chest/abdominal pain and presentation as primary painless paraplegia is unusual for aortic dissection. The presentation with paraparesis, flaccidity and absent reflexes with intact sensations and sensory symptoms lead to initial diagnosis of possible GBS, but rapid development of rigidity prompted a search for vascular aetiology.

ASA involvement at the thoracic level produces paraparesis with sparing of the posterior column. In our patient the spinothalamic tracts were also spared. The cause of paraparesis here was most likely the interruption of radicular supply to the anterior spinal artery. In a review only 1% of patients with type A dissection presented with spinal cord ischaemia1. Few other case reports mention presentation as painless paraparesis2-4.

Learning points:
Painless paraplegia is a rare presentation of acute aortic dissection in middle-aged or elderly people with risk factors such as hypertension.

Title: Case Report: Varicella Meningitis Causing an Unusual CSF Result
Authors: Richard Kirkdale, Queens Medical Centre

Discussed is the case of a 24 year old male who presented with a flu-like illness, gradual-onset headache and localised rash. He had a modest rise in inflammatory markers, but a relatively normal clinical examination gave no significant indicators of a source of infection. A central nervous system (CNS) infection was suspected and a lumbar puncture with cerebrospinal fluid (CSF) examination gave a mixed result. There was a significantly raised opening pressure and abnormal cloudy appearance of the CSF macroscopically. Microscopically there were elevated lymphocyte counts and protein levels, but low glucose – consistent with a viral meningitis. However, there were also elevated red cell counts and the presence of bilirubin suggestive of a subarachnoid haemorrhage. The CSF was positive for varicella zoster virus by PCR testing. The patient was investigated with a CT angiogram and no overt cause for the subarachnoid haemorrhage could be identified. He was treated with Aciclovir and made a good recovery. This case of varicella meningitis shows the importance of considering the CNS as a source of infection, even with relatively non-specific symptoms. The presence of a mixed picture of infection and haemorrhage on CSF examination is remarkable, with few previously documented cases. This can be in the context of secondary infection of patients with intracranial haemorrhage, albeit usually in fairly extensive bleeds. Haemorrhage secondary to bacterial, viral and fungal meningitis has been documented, as frank radiologically evident subarachnoid haemorrhage; however this case appears to demonstrate occult haemorrhage. The presumed pathogenesis of this bleeding is from increased friability of blood vessels caused by the primary infective process, leading to microscopic haemorrhage into the subarachnoid space. This case demonstrates an interesting pathological process and highlights the importance of considering the CNS as a source of non-specific infection in an acute care setting.
Title: An unexpected cause of haematemesis
Authors: Saira Batool, Blackpool Victoria Hospital

Summary:
A 72-year old man was admitted after a frank haematemesis. Five days previously he had been seen in clinic with dysphagia, anorexia, weight loss, and pain in the epigastrium and thoracic spine. Initial clinical examination, observations and blood tests were normal. The chest x-ray on admission is shown in figure 1. The same day he had more haematemesis resulting in a fall in haemoglobin from 125 g/L to 91 g/L and urgent gastroscopy was undertaken. The passage of the endoscope was impeded by a bulging of the posterior aspect of the mid-oesophagus which also exhibited a short mucosal tear. (Figure 2). It was thought that he had sustained a spontaneous oesophageal haematoma, possibly as a result of a Mallory Weiss tear. An urgent CT scan (Figure 3) showed a 7.2 x 5.2 x 5.7cm mid descending thoracic aortic aneurysm that was inflamed and compressing the oesophagus. What was seen on the gastroscopy was intramural haematoma, with a small tear, caused by the aneurysmal haemorrhage, inflammation and compression of the oesophagus.

Discussion:
Thoracic aortic aneurysms (TAAs) are relatively uncommon with an incidence of 10.4 per 100,000 population.[1] The aetiology is most often degenerative in nature, resulting from atherosclerotic weakening of the aortic wall.[2] Most TAAs are asymptomatic, symptoms of complications from thromboembolism; rupture, aortic regurgitation and compression can develop. When symptoms manifest the risk of rupture is very high. Typically symptoms are thoracic back and chest pain, which may radiate to the jaw, hoarseness of the voice and dyspnoea. Presentations with dysphagia have also been published.[3] Similar endoscopic appearance can be seen in patients with intramural oesophageal haematoma. [4]

This patient was displaying symptoms of a TAA. Awareness of the presentation is key and rapid CT scanning is essential to differentiate spontaneous intramural haematoma from TAA rupture, as gastroscopy findings can be similar. Our patient was transferred to a specialist centre and underwent a Thoracic Endovascular Aortic Repair. He recovered well post procedure.
Title: Gout presenting as sepsis  
Authors: Sarah Clarke, North Manchester General Hospital

A 68 year old man presented with a short history of back pain several weeks after the insertion and subsequent revision of a cardiac resynchronisation device for severe LV dysfunction. In addition to his cardiac disease he had a background of diabetes and had previously been treated for gout.

On examination he was noted to be in severe pain and febrile at 38°C. Cardiovascular examination demonstrated a systolic murmur. Musculoskeletal examination demonstrated midline tenderness from the mid thoracic down to the lumbar spine. The patient was noted to have a right knee effusion.

Initial bloodwork demonstrated a mild neutrophilia with raised CRP (130) and ESR (120). Intravenous piperacillin/tazobactam and vancomycin were started to cover potential infective endocarditis and discitis. He continued to spike temperatures up to 39 degrees despite 5 days of antibiotics.

CT thoracolumbar spine, CT thorax, abdomen and pelvis, USS abdomen and transoesophageal echocardiogram did not identify a source of infection. Blood and urine cultures were negative. Knee aspiration demonstrated a raised white cell count but no organisms. Intracellular and extracellular uric acid were noted.

Over the course of his admission he developed an asymmetrical polyarthritis which had not been evident on initial examination. A gouty tophus developed on his left little finger. A diagnosis of polyarticular gout was made and colchicine and prednisolone commenced. Within 4 days his symptoms had improved significantly and CRP normalised.

This case provided diagnostic challenge as the typical signs of gout were not evident at first presentation. Spinal involvement in gout is documented but not common. Several case reports describe patients with a similar presentation of fever and back pain1,2,3, in each case the presentation mimicked an infectious cause highlighting the diagnostic difficulties. Such case reports highlight the importance of pursuing non-infectious causes of fever.

Title: How we do feet in 2015  
Authors: KOLOVOU V./BLOOMFIELD L./ FIKRI R.

Introduction:  
The Foot service at Imperial College Healthcare NHS Trust (ICHT) was redesigned in 2014/2015 to accommodate for the vascular & diabetes service reconfiguration with a hub & spoke model. Multidisciplinary clinics are based at Saint Mary's Hospital with inpatient service across the 3 sites. AIMS: Monitor the outcome of the service reorganization. We present the implemented changes and results between April-August 2014(t1) and April-August 2015 (t2).

Methods:  
The service was redesigned after involving all the stakeholders. A new diabetes foot unit was built. All podiatrists were recontracted by ICHT. We compared data accumulated by the new IT system (Cerner) used across Imperial NHS Trust.

Results:  
A total number of 2210 patients were booked at St Mary’s Hospital multidisciplinary and podiatry clinics at (t2) compared to 1402 patients booked from April-August 2014 (t1), a total increase by 57.6%.

In 2014 868 patients at St Mary’s, 122 at Hammersmith and 120 at Charing Cross Hospital, in total 1110 were booked in the podiatry clinics.

In 2015 1485 patients were booked at the podiatry clinics at St Mary’s. There was an increase by 33.8% in patients seen in 2015.

The team runs daily podiatry clinics, twice weekly multidisciplinary clinics, weekly inpatient ward rounds and twice monthly joint vascular clinics. We noticed a significant reduction in the waiting times with an improved patient experience and better staff communication with weekly quality & safety meetings.

Conclusion:  
Service redesign is a clinical & managerial challenge in a tertiary referral multidisciplinary centre. Service monitoring tools & risk management is crucial together with a proactive leadership to maintain high quality care with good patient experience. Further audit & process mapping is imperative to identify bottlenecks in the service, impact on hospital admissions, & length of stay and patient experience across the 3 sites.
Title: Case report: Voltage gated potassium channel (VGKC) antibody associated mesolimbic encephalitis with fronto-temporal behavioural changes

Authors: Dr R Curtis, Foundation year 2, Heartlands Hospital, Heart of England Foundation Trust, Dr N Fergusson, Consultant Elderly care and General medicine

Consent for publication of the case granted by patient

Introduction:
Limbic encephalitis commonly presents as a triad of memory loss, seizures and psychiatric symptoms, with pathology usually located in the temporal lobes, hippocampi and occasionally in the limbic structures.

Case description:
A 57 year old gentleman presented with hyperglycaemia and acute confusion. The confusion began overnight and included short term and long term memory loss, inability to initiate tasks despite ability to complete complex tasks when prompted. Language and fluency were preserved and initial AMTS scored 3/10. Chronic hyponatraemia was noted with the lowest level measuring at 122mmol/L. Thyroid function was normal, HIV, Hepatitis B and C, ANA and ANCA, voltage gated calcium channels and myeloma screen were all negative. Lumbar puncture revealed only a slightly raised protein of 0.6. Initial MRI scans were compromised by patient movement but showed focal areas of high signal intensity in the deep white matter of both cerebral hemispheres interpreted as ischaemia from micro vascular atherosclerosis.

The confusion persisted over several months until a diagnosis of early onset dementia was made. VGKC antibodies later revealed a level of 2289. Immunosuppression was initiated with steroids and then intravenous immunoglobulin to which the patient responded well. MSE improved to 23/30, clock drawing was nearly perfect and his sodium levels normalised. Repeat MRI scans revealed bilateral oedema of the hippocampi and T2 weighted hyper densities in the frontal lobes, in keeping with inflammatory white matter change. CT thorax/abdomen/pelvis with endoscopy has ruled out an underlying neoplastic lesion.

Discussion:
This case highlights an unusual finding of frontal lobe changes in a patient with VGKC antibody associated mesolimbic encephalitis. Typical radiological changes in patients with similar presentations include only bilateral high signal T2 weighted changes in the hippocampi and anterior temporal lobes. Literature search on the subject reveals limited examples with similar findings making this case a unique learning opportunity.