CONTENTS

Wednesday afternoon

**Poster 1** Audit of Barrett’s oesophagus surveillance in a district general hospital

**Poster 2** Audit on antibiotics prescribing trends after period of increased incidence of c.difficile

**Poster 3** Outcome of Urgent Lower Gastrointestinal Tract Endoscopy

**Poster 4** The Loop (Bridle): Phase 1- Increasing Awareness

**Poster 5** An audit on ECG examination: “Are ECG’s being reviewed and signed by clinicians?”

**Poster 6** A systematic review of quality improvement projects to improve fluid balance monitoring

**Poster 7** The suitability of dobutamine stress echo as the first-line investigation for patients with chest pain of recent onset in DGH

**Poster 8** Ambulatory Care Rheumatology: Preventing admissions, minimizing costs and supporting the Medical Take

**Poster 9** Audit on Chemical Sedation of Medical Patients with Delirium

**Poster 10**

**Poster 11** Is intravenous fluid therapy teaching needed in hospitals?

**Poster 12** The chest radiograph and acute asthma in adults: Are too many chest radiographs being requested unnecessarily?

**Poster 13** Use of Non Invasive Ventilation in the management of Acute Hypercapnic Respiratory Failure in a District General Hospital

**Poster 14** Anaemia Recognition Audit

**Poster 15** Increasing advanced care planning in Level 1 Pathway patients

**Poster 16** Respiratory End of Life Care/Admission Avoidance

**Poster 17** Impacts of the Virtual Ward initiative in rural Primary Care: A Qualitative study
**Poster 18** Communicating osteoporosis and falls assessments with GPs: an orthogeriatric initiative

**Poster 19** A checklist to safeguard pleural procedures
Audit of Barrett’s oesophagus surveillance in a district general hospital

Mina Soliman, Medical Student-fourth Year, St George University – London

Introduction and aim

Audit of Barrett’s oesophagus surveillance in a district general hospital

Barrett’s oesophagus is a recognised complication of gastro oesophageal reflux. It affects 10-15% of reflux patients and has a premalignant potential. Surveillance aims at discovering dysplasia and hence allows treatment and prevention of cancer. Guidelines 1,2,3&4 aim at optimising surveillance and dysplasia detection.

Methods

Database search of Infoflex v.5 reporting system between Junes 1st 2017 to May 31st 2018 revealed 164 Barrett’s reports. Of these, 78 patients were undergoing surveillance. In the surveillance group, there were 54 male and 24 female patients. The maximum age was 90 and the youngest patient was 41 with a median age of 65. For these 78 patients, information collected was compared against the above guidelines. The results are summarised in the table 1.

Discussion

The Prague classification describes the circumference and maximal extent of the Barrett’s segment. It is suggested as a way to standardize reporting. Reassuringly, 70/78 (89%) was described according to Prague classification. It was encouraging to see in terms of surveillance frequency 64/72 (88%) adhered to the guidelines and particularly in the three cases of dysplasia where all were correctly followed up. Inspection time is of emerging importance. One study demonstrated that an inspection time of 1 minute/cm of Barrett’s oesophagus lead to an increase in dysplasia detection 5. In only 2/78 (2%) of endoscopies was the time taken recorded. Given its importance this is an area that requires improvement.

Only 54/78 (69%) followed the Seattle protocol of biopsies. This involves taking quadratic biopsies every 2 cm. Following such a protocol improves the detection of dysplasia.

Conclusion

There is a significant variability in the execution and surveillance of Barrett’s oesophagus. Particular areas for improvement include: time spent inspecting the Barrett’s segment and the correct use of Seattle biopsy protocol.

References (100 words)


5. Gupta N, Gaddam S, Wani SB, Bansal A, Rastogi A, Sharma P. Longer Barretts Inspection Time (Bit) is Associated With a Higher Detection Rate of High Grade Dysplasia (HGD) and Early Esophageal Adenocarcinoma (EAC). Gastroenterology. 2011; 140(5).
Audit on antibiotics prescribing trends after period of increased incidence of c. difficile

Dr MIA Qureshi, Dr SMA Rizvi

Background

A period of increased incidence (“PII”) of C. difficile disease is defined as two or more new cases occurring >48 hours following admission to a ward. 4 cases were detected in Medical Short Stay/Medical High Care ward (MSSU/MHC) within a month in late 2017, although not meeting PII definition, still raised concerns to review practice at Worcestershire Royal Hospital (WRH).

Aims/objectives

To provide feedback on antibiotic prescribing on a MHC/MSSU at WRH & whether we comply with prescribing standards set by NICE, CQUIN & our local trust.

Methods

A “snapshot audit” was carried out & re-audited (Jan & July 2018). 25 inpatients were selected in ascending bed order in carefully chosen times to avoid transfers in each audit. Data collected was based on paper records with observations recorded over a spreadsheet. Initial audit results were not impressive and shown lack of compliance with antibiotics prescribing guidelines. Following action plan was implemented after 1st audit;

- Education of doctors & nursing staff
- Poster application in ward showing when to switch IV antibiotics to oral
- Use of trust smart phone application (Micro guide)
- Review of sensitivity reports by microbiologist
- Liaison with stake holders to improve antibiotic stewardship

Results

<table>
<thead>
<tr>
<th>Standards</th>
<th>1st Audit</th>
<th>Re-Audit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergy box completed</td>
<td>96%</td>
<td>100%</td>
</tr>
<tr>
<td>Duration of antibiotics specified</td>
<td>88%</td>
<td>92%</td>
</tr>
<tr>
<td>Indication written on drug chart</td>
<td>84%</td>
<td>100%</td>
</tr>
<tr>
<td>Indication on chart correlated with notes</td>
<td>50%</td>
<td>96%</td>
</tr>
<tr>
<td>Antibiotics review carried out</td>
<td>5.6%</td>
<td>84%</td>
</tr>
<tr>
<td>Adherence to trust guidelines</td>
<td>56%</td>
<td>92%</td>
</tr>
<tr>
<td>Microbiologist input followed</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Significant improvement was demonstrated, both on antibiotics prescription and allergy.
status documentation, and the feedback from the use of Microguide from junior doctors was excellent. We also plan to educate on antibiotics prescription all new staff and establish the use of Microguide as part of the standard patient care.

References (100 words)

Introduction

We are presenting a study which was done to access how many patients who were referred for suspected cancer on 2 weeks pathway, after having colonoscopy were diagnosed with colorectal malignancy.

Methods

Study comprised of two audit cycles in which we reviewed 100 patients who had urgent colonoscopy done for suspected cancer between January 2017 to December 2017. Our aim was to access did the urgent procedures followed indications mentioned in NICE guidance for suspected cancer, how many had colorectal cancer diagnosed and could something be done to reduce waiting time for non-urgent colonoscopy.

Results

1- Group aged less than 50 years and rectal bleeding with unexplained either
   1- Change in bowel habit: 2 procedure OR
   2- Iron deficiency anaemia – 1 procedure OR
   3- Weight loss – 1 procedure

   No malignancy found.

2- Group aged 50 years and above with rectal bleeding – 21 total procedures, 3 had malignancy

3- Group aged 60 years and above with either
   1- Iron deficiency anaemia – 12 procedures done, 3 patients had malignancy OR
   2- Change in bowel habit – 26 procedures done, 1 had malignancy

4- Group with new rectal or abdominal mass – 2 procedures done and both had malignancy.

5- Group aged 40 years and above with unexplained weight loss and abdominal pain – 15 procedures done, 4 had malignancy

   20 patients had urgent procedure but their indication didn’t fulfil NICE suspected cancer guidance. None of them showed malignancy.

Improvements

Audit results were discussed with endoscopy lead who validates all the procedures. Due to complexity an A4 size paper was prepared listing all the indications as mentioned by NICE which was placed in validation box for consultant to review when validating. Endoscopy booking office was provided with a copy to recheck after validation when booking patients.
2nd cycle

Percentage of cancers found - 1st cycle 10% and 2nd cycle 13%. Number of procedures which didn't fulfil the urgent criteria by NICE decreased from 20% to 3%. Waiting time for non-urgent procedure dropped from 20 days to 10 days.

Conclusion

Our Project successfully reduced number of urgent procedures which didn't follow NICE guidance and this helped to reduce local waiting time for colonoscopy which improves quality of care.

References (100 words)
1 – NICE Gastrointestinal tract (lower) cancers - recognition and referral
Last revised in September 2015
The Loop (Bridle): Phase 1- Increasing Awareness

Dr Shyam Kelavkar Core Medical Trainee, Southend University Hospital and NHS Foundation Trust

Introduction

Nasogastric Tube (NG) placement is carried out by both doctors and nursing staff. Often NG’s are misplaced\(^1,2\) or require re-siting. As a result, patients may have multiple insertion attempts and multiple post-insertion x-rays thereby causing delay in reaching nutritional requirements\(^2\) and also referral for unnecessary PEG placements\(^3\). Loops (Bridles) are easily placed and can be used to secure NG tubes. We wanted to increase the level of awareness in appropriate use of the Loop.

Method

Anonymous questionnaire were collected from Foundation Year 2 (FY2), Core Medical Trainees (CMT), Medical Registrars (SpR), Nutrition Nurses and Hospital Out of Hours (HOOH) Nurses which assessed their knowledge and competence in using Bridle NG tube. Annually three training sessions was set up as a result (led by Speech and Language Team, Enteral UK Representative, ITU Registrar and Geriatric Registrar).

Results

More than 80% of each category: HOOH, Nutrition Nurses and SpR’s were aware. This was satisfactory. 38% of SpR’s were competent in doing Bridle. 12% had seen Bridles, but never done it themselves. 50% never seen a bridle being done. 100% Nutrition nurses have observed Bridles being inserted but none have done it themselves. 0% of HOOH nurses have observed or inserted Bridle NG Tubes. 0% of CMT’s and FY2’s had awareness of Bridles and none of them have observed or inserted them. Post teaching, awareness had increased to 75% (CMT) and 38% (FY2s) after two sessions and 75% (CMT) and 100% (FY2’s) after the last session. (Fig 1)

Conclusion: (Fig 2)

We have identified a gap in the knowledge regarding loop (bridle) NG and have significantly improved awareness to >90% overall, but more work will be done to improve competency (aim >60%). To maintain sustainability, teaching program has been set up with three annual sessions and surveys will be sent yearly after two sessions to re-assess awareness.

Fig 1: Pre and Post-intervention awareness among Junior Doctors (Core Medical Trainees and Foundation Year 2)
Fig 2: Conclusion:

Post Intervention Awareness (June 2018)
References (100 words)


Poster 5
An audit on ECG examination: “Are ECG’s being reviewed and signed by clinicians?”

Dr Yakup Kilic, Doctor/SHO, The Royal London Hospital

Aim:

- This QIP was commenced initially from nurses that were complaining of ECG’s not being signed by clinicians. An incident occurred where a diagnosis was missed.
- To identify the proportion of ECG’s that have been reviewed by clinical staff with documentation to confirm this.
- To assess if any patients were discharged with a potentially abnormal ECG not reviewed by clinical staff and if there was a negative outcome associated with this.

Method:

Clinical records of 100 sequential adult patients presenting to the emergency department in January 2018 who had an ECG performed were reviewed. The clinical record was checked to see if the ECG had a doctor’s signature, name or if the ECG was mentioned in the patient’s history.

- Introducing ECG Stamps that include; the nurse who performed the examination, the name of doctor, time of ECG and the repeat time
- ECG interpretation teaching
- Introduction of CERNER (A&E computer documentation software) to improve documentation

Results and Conclusion:

- ECG stamps have dramatically dropped the rate of ECG’s not being signed from 24% to 10%.
- The outcome of the ECG is also being documented at a rate of 100% this could be due to introduction of CERNER
- The amount of people discharged with abnormal ECG has also reduced to 3%
- 97% of ECG’s are being repeated at the time signed by the doctor
- We also looked at who signed the ECG, if abnormalities were acted up on and if the patient was put on a cardiac monitor

Significant drop in the number of ECG’s not being signed meant that the likelihood of abnormal findings being missed is lower. This is good news for patient safety, as ECG stamps mean less mistakes are being made and abnormalities are acted up on. ECG teaching has also improved doctor’s confidence in correct interpretation.
References (100 words)

Nil
A systematic review of quality improvement projects to improve fluid balance monitoring

Emma Alexander, Medical Student, King’s College Hospital

Emma C Alexander¹
Carl Williams¹
Yidong Pan¹
Chiara Ilesley
James Harrison¹
Nia Bevan¹

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Purpose

Fluid balance refers to the net total of the input and output of fluids to the body. Monitoring of fluid balance is a key task in any setting with acutely unwell patients in order to avert negative sequelae associated with imbalances. We identified deficiencies in fluid balance monitoring at our local hospital and therefore aimed to undertake a systematic review of quality improvement projects to improve fluid balance monitoring.

Methodology

We searched Medline, EMBASE, Cochrane Library and CINAHL using synonyms for ‘fluid balance’ and ‘quality improvement’ from 1990 onwards. We hand-searched the references of shortlisted studies and relevant systematic reviews. Results were independently screened for inclusion by two reviewers, followed by screening of full texts. Data were extracted using piloted worksheets. Quality appraisal of full texts made use of the Risk of Bias in Non-Randomised Studies of Interventions tool (ROBINS-I).

Results

From 1,470 initial results, we identified 17 relevant studies, including 10 conference abstracts and seven full papers. For the seven full papers, ROBINS-I overall bias scores were: one critical, one serious, three moderate, two low. In total 14 studies were in the UK, one in Denmark, one in Hong Kong, one in Malawi. 15 interventions were classified as organisational, 11 as educational, one as regulatory, and none as financial. 14 of the interventions reported positive outcomes regarding fluid balance monitoring completion and accuracy, although the majority were not assessed for statistical significance. Barriers to successful implementation included: staff changeover (3 studies), lack of knowledge (1 study), cost (1 study), top-down implementation (1 study), competing projects (1 study) and lack of time (1 study).

Conclusion

Quality improvement projects have demonstrated efficacy in order to improve fluid balance, but need to be implemented in the right way. To promote patient safety, key barriers such as staff changeover should be minimised or accounted for.
References (100 words)

N/A
Poster 7

The suitability of dobutamine stress echo as the first-line investigation for patients with chest pain of recent onset in DGH
Gan, F. W. Papamichail, N. Queen Elizabeth Hospital, Woolwich, London

Fang Wen Gan Foundation Year 2 trainee Queen Elizabeth Hospital, Woolwich, London

Background
The NICE guidelines on ‘chest pain of recent onset’ was updated in November 2016, with a notable change being the use of computed tomography coronary angiogram (CTCA) as the first-line investigation. Dobutamine stress echocardiogram (DSE) remains the most frequently employed mode of investigation to allow timely assessment of patients at Queen Elizabeth Hospital (QEH), Woolwich, a district general hospital (DGH), due to the limitation of locally available technology and expertise.

Aim
An audit was performed to assess the positive and negative predictive values and complications of DSE locally to determine its suitability as the first-line non-invasive investigation.

Methods
All patients who underwent a DSE at QEH during a 6-month period (July to December 2017) were followed up for 6 months to assess their MACE, including cardiac events, need for revascularisation and mortality.

Results
Patient details
199 patients with a mean age of 64.19 years (SD=10.58), 122 males and 77 females:

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Number of patients (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>113 (56.8%)</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>52 (26.1%)</td>
</tr>
<tr>
<td>Smoking</td>
<td>45 (22.6%)</td>
</tr>
<tr>
<td>Hypercholesterolaemia</td>
<td>98 (49.2%)</td>
</tr>
<tr>
<td>Positive family history</td>
<td>45 (22.6%)</td>
</tr>
</tbody>
</table>

Outcomes
The DSE studies had a negative predictive value of 99.4% (155 negative studies, one adverse outcome) and a positive predictive value of 94.4% (36 positive studies, one patient lost to follow up; one declined further investigations) for MACE.
Complications

<table>
<thead>
<tr>
<th>Arrhythmias</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrial fibrillation/flutter/VT</td>
<td>10 (5.0%)</td>
</tr>
<tr>
<td>Ventricular ectopics</td>
<td>3 (1.5%)</td>
</tr>
<tr>
<td>Non-sustained VT</td>
<td>1 (0.5%)</td>
</tr>
<tr>
<td>Vasovagal episodes</td>
<td>10 (5.0%)</td>
</tr>
<tr>
<td>Hypertensive response (SBP &gt; 230mmHg)</td>
<td>1 (0.5%)</td>
</tr>
<tr>
<td>Chest pains not leading to MACE</td>
<td>2 (0.01%)</td>
</tr>
</tbody>
</table>

Conclusions

There were no significant complications from the DSE performed, with good positive and negative predictive values. The results were encouraging of the continual use of DSE as the first-line non-invasive investigation until CTCA becomes readily available.

References (100 words)

Poster 8
Ambulatory Care Rheumatology: Preventing admissions, minimizing costs and supporting the Medical Take

Dr Matthew Colquhoun, Doctor, Harefield Hospital

Aim
With recent rising pressure on NHS services and finances it behoves those delivering care to consider novel ways of delivering medical treatment to minimize costs, improve service efficiency and prevent admissions. To achieve these aims, an ambulatory care (AEC) rheumatology service designed to provide urgent assessment was set up at St. Mary’s Hospital, Paddington. The team consists of a specialist rheumatology registrar and core medical trainee with consultant support. This study examines the effect of this service.

Methods
This retrospective study examined all referrals seen in ambulatory care by rheumatology over a year. Data collected included number of consultations, number of individual patients, demographics, presenting complaint, diagnosis, referral source and percentage of patients requiring admission.

Results
207 individual consultations were carried out in the period, with 133 individual patients. Patients were seen on average 1.65 times in AEC. The average age was 57. Referral sources included GP referral (11%), Eye Hospital (15%), Rheumatology (31%) and AEC (29%). Common diagnoses were flare of arthritis (26%), giant cell arteritis (GCA) (18%), GCA mimics including primary/secondary headaches and CVD, (16%) and flare of connective tissue disease (7%). There were 4 admissions from 207 patient reviews (1.9%).

Conclusion
A remarkably low admission rate for patients assessed by the ambulatory rheumatology team was demonstrated (1.9%). The medical take was supported in avoiding assessment of 133 patients. Patients benefited from early specialist management assessment resulting in correct diagnosis and management. Clinic overbooking for acute rheumatology was reduced with 41 patients referred from rheumatology seen urgently in AEC and 74 patients seen for follow up. Finally, implicit cost savings were significant. Daily inpatient costs for GCA are estimated as being £1155 pounds in Norway and £3786 in the US. AEC prevented all but one admission for GCA and GCA mimics (n=45) (2.2%).
Audit on Chemical Sedation of Medical Patients with Delirium

Hannah Stacey and Lauren Steel, Medical Registrars, Broomfield Hospital, Mid Essex Hospitals NHS Trust

Introduction

There have been concerns about patients with delirium receiving inappropriate chemical sedation. This prompted us to complete an audit with Dr Thyparambil (Elderly Care Medicine Consultant).

Aim

To determine whether prescriptions of chemical sedation for medical patients with delirium adhered to guidelines. Our priority was to detect the risk of patients receiving over-sedation as a result of incorrect prescriptions.

Secondary endpoints:

- Abbreviated Mental Test Score (AMTS) documented
- Mental capacity assessment as part of the Mental Capacity Act (MCA) and application for The Deprivation of Liberty Safeguards (DOLS)
- Abbey Pain Scale used
- Reversible causes of delirium addressed
- Analgesia prescribed
- Laxatives prescribed
- Treatable causes of delirium addressed – pain, urinary retention, infection, constipation

Method

Retrospective audit completed over the time period March-May 2018
Inclusion criteria: adult medical patients who had a prescription of chemical sedation for delirium

Sample size: 30 patients, 40 drug prescriptions

Results

Less than a quarter of prescriptions were compliant with guidelines. This was often because the frequency of the medication was incorrect. Nearly a third of prescriptions could have led to patients receiving over-sedation.

- The majority of patients had MCA completed, but just over half had application for DOLS
- Documentation of AMTS was poor
- Analgesia was prescribed for all patients, and the majority of the time it was administered before sedation, however the Abbey Pain Scale was used in less than half of the patients
- Treatable causes of delirium were considered in just over half of patients, but less than half of patients had laxatives prescribed
Conclusion

There is scope to improve our performance in the management of patients with delirium, particularly with regards to chemical sedation prescription. Our proposed changes are widespread staff education about delirium and increasing awareness of the delirium pathway guidelines.

References (100 words)

Postal 10

Heenal Raichura, Registrar in Acute & General Medicine, Queen Elizabeth Hospital, Woolwich

Introduction

The “Guidance on Safe Medical Staffing “(RCP, July 2018) describes staffing levels needed to ensure safe, timely patient care (3). Timeliness of care provision is indicative of appropriate medical staffing levels (4), which can be reflected in patient numbers handed over between day and night admission teams. Our medical admissions team recently saw a reduction of five and a half “junior doctor clerking hours”.

Aims & Objectives

To identify whether reductions in medical staffing levels impacted on patient numbers handed over between shifts.

Methods

Data from medical admissions lists in December 2016 – February 2017 were compared against December 2017 – February 2018 to examine variables related to medical referrals. Unpaired T-testing was applied for statistical analysis. Medical staffing levels and “clerking hours” were compared against RCP recommendations.

Results

Comparing 2017 and 2018, there was a highly significant (p<0.005) increase of 8.2% in medical referrals. Furthermore, an increase of 19.2% (p<0.05) in patients handed over from the day to night team was observed.

In December 2016 – February 2017, to comply with RCP guidance, the following would have been required:
To comply with RCP guidance, the following would be required currently:

<table>
<thead>
<tr>
<th>Staff Level</th>
<th>December 2017 – February 2018</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Day Shift</td>
<td>Night Shift</td>
<td>Total 24-hour Period</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recommended Number</td>
<td>Actual Number</td>
<td>Recommended Number</td>
<td>Actual Number</td>
<td>Recommended Number</td>
</tr>
<tr>
<td>Consultant</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Registrar</td>
<td>2.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Junior Doctor</td>
<td>4</td>
<td>2.5</td>
<td>2.5</td>
<td>2</td>
<td>6.5</td>
</tr>
</tbody>
</table>

**Conclusions**

Increased medical referrals and reduction in “clerking hours” have contributed to a 19.2% increase (p<0.05) in patients handed over from day to night team. Higher patient numbers handed over translates into longer patient waiting times for medical review.

The medical admissions team does not meet the RCP’s recommended staffing levels for registrars and junior doctors. Increased “clerking hours” are recommended to ensure timely patient review. Introducing shift patterns that enable working hours to remain unchanged but allow adequate cover over busy periods may help meet peak demands, reduce patients handed over, and minimise waiting times. Further studies could evaluate waiting times for medical review and identify periods of greater delays.
References (100 words)


Poster 11

Is intravenous fluid therapy teaching needed in hospitals?

Ioana Onac, Specialty Registrar ST4, East Sussex Healthcare NHS Trust- Eastbourne District General Hospital

Aim

Many errors were identified routinely in fluid and electrolyte prescribing on the wards, even though one trust has clear instruction in the admission proforma. Poor standard of recording and monitoring fluid prescribing was also noted. Considering this, we undertook an audit between 2016-2018.

We analysed maintenance fluid prescription and theoretical knowledge of doctors prescribing maintenance and resuscitation fluids against NICE guideline standard.

Methods

We undertook a retrospective analysis in 2 district general hospitals of 152 case notes, over 3-month period, on acute medical wards. Our audit was performed against 5 standards of care: weight documented; correct amount of fluids, electrolytes and glucose prescribed over 24 hours, for nil by mouth patients. Junior doctor's knowledge was assessed with an original 10 item questionnaire, based on NICE guideline.

We disseminated the results in governance/audit meeting, provided formal teaching for all grades, and closed the cycle in one centre.

Results

<table>
<thead>
<tr>
<th>Standard of care</th>
<th>Audit</th>
<th>Re-audit-Centre 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Centre 1</td>
<td>Centre 2</td>
</tr>
<tr>
<td>Weight documented</td>
<td>48%</td>
<td>62%</td>
</tr>
<tr>
<td>Amount over 24h Fluids</td>
<td>62%</td>
<td>30%</td>
</tr>
<tr>
<td>Electrolytes</td>
<td>10%</td>
<td>7%</td>
</tr>
<tr>
<td>Glucose</td>
<td>19%</td>
<td>34%</td>
</tr>
</tbody>
</table>

Knowledge

<table>
<thead>
<tr>
<th>Resuscitation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fluid choice</td>
<td>97%</td>
</tr>
<tr>
<td>2. Volume/rate</td>
<td>57%</td>
</tr>
<tr>
<td>3. Volume before seeking senior help</td>
<td>47%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Centre 1</th>
<th>Centre 2</th>
<th>Centre 1</th>
<th>Centre 2</th>
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<tbody>
<tr>
<td>97%</td>
<td>84%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>57%</td>
<td>76%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>47%</td>
<td>56%</td>
<td>64%</td>
<td>64%</td>
<td>64%</td>
</tr>
<tr>
<td></td>
<td>mmol</td>
<td>In 1L</td>
<td></td>
<td></td>
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<tr>
<td>----------------</td>
<td>-------</td>
<td>-------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.HAS use in severe sepsis</td>
<td>44%</td>
<td>12%</td>
<td>54%</td>
<td></td>
</tr>
<tr>
<td>Maintenance/24h</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.Fluid volume</td>
<td>64%</td>
<td>68%</td>
<td>87%</td>
<td></td>
</tr>
<tr>
<td>6.Electrolytes</td>
<td>44%</td>
<td>48%</td>
<td>93%</td>
<td></td>
</tr>
<tr>
<td>7.Glucose</td>
<td>43%</td>
<td>48%</td>
<td>70%</td>
<td></td>
</tr>
<tr>
<td>8.Na</td>
<td>Hartman’s</td>
<td>30%</td>
<td>52%</td>
<td>63%</td>
</tr>
<tr>
<td>9.Cl</td>
<td>0.9% Saline</td>
<td>40%</td>
<td>44%</td>
<td>77%</td>
</tr>
<tr>
<td>10.Glucose</td>
<td>5% Dextrose</td>
<td>77%</td>
<td>52%</td>
<td>90%</td>
</tr>
</tbody>
</table>

**Conclusion and recommendation**

This information has been disseminated among all staff in both hospitals. The teaching provided improved knowledge and made intravenous fluid prescription safer. This teaching should be incorporated into trust induction or at least part of the formal teaching at the beginning of rotation, to improve patient’s care, as per doctor’s advice.

**References (100 words)**

The chest radiograph and acute asthma in adults: Are too many chest radiographs being requested unnecessarily?

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Background
Chest radiograph for initial assessment of acute asthma is not routinely recommended unless life threatening features or suspicion of radiographic abnormalities. Unnecessary CXRs exposes patients to unjustified radiation exposure and increases expenses for the NHS.

Aim
We conducted this audit to determine whether CXRs for acute asthma were being ordered appropriately according to BTS 2016 asthma guidelines and whether CXR resulted in change in diagnosis and management plan.

Method
93 patients were admitted with acute asthma to the Respiratory Admissions Unit at Nottingham University NHS Trust over 2 months from September to October 2017. Digital health records were reviewed and data collected retrospectively.

Results
83 patients had completed CXRs. 57% (47 of 83) were inappropriate according to BTS guidelines. 10 CXRs (12%) were abnormal. 5 CXRs (6%) resulted in change in diagnosis and management. 4 of these 5 CXRs were appropriate by BTS guidelines, while 1 CXR was inappropriate.

Discussion/Conclusion
Inappropriately requested CXRs resulted in a total cost of £1,222.00 to the NHS with approximately 141 days of unnecessary background radiation within a 2-month period. Only a small percentage of CXRs for acute asthma resulted in change in diagnosis and management. CXRs for initial assessment of acute asthma should not be routinely ordered unless indicated and justified. We recommend revision of respiratory admissions clerking
proforma to include indications for CXR and an IT popup on cost and radiation exposure per CXR when requesting CXRs.

References (100 words)


Use of Non Invasive Ventilation in the management of Acute Hypercapnic Respiratory Failure in a District General Hospital.

Peggy Fooks, Foundation Doctor, West Middlesex University Hospital

Introduction

Non invasive ventilation has revolutionised the management of COPD patients in hospital, halving mortality and reducing length of hospital stay1. NICE recommends that all hospitals admitting COPD patients should offer NIV to patients in acute hypercapnic respiratory failure meeting the BTS criteria2. The pace of implementation has, however, overtaken the guidelines with evidence of inappropriate use3. In our hospital, we have noted that NIV is frequently started when not indicated, with insufficient documentation, without ceilings of care in place, and without any mechanism for auditing its use.

Method

We undertook to align practice within our hospital more closely with the BTS guidelines4. We examined the use of NIV over two months in COPD patients admitted for acute hypercapnic respiratory failure. In the first phase, we audited patients' medical notes against a set of criteria based on the BTS guidelines. Secondly, we designed a proforma based on these guidelines to be completed whenever commencing NIV. This was introduced as part of a wider education programme. Thirdly, we reaudited to establish the efficacy of our programme.

Results

Our initial audit demonstrated that NIV was being used inappropriately and with inadequate documentation. The re-audit showed improvement in all parameters, but especially ensuring ceilings of care in place, and in medical management prior to resorting to NIV.

Conclusion

NIV is a life saving tool for COPD patients admitted with a respiratory acidosis, however its effectiveness does not justify indiscriminate use. Our audit demonstrates that staff education and accessible local guidelines must be available if NIV is to be used to its best advantage. Based on our results, we are instigating a further education program targeted to where improvement is most needed.

References (100 words)

1 Ram et al. Non-invasive positive pressure ventilation for treatment of respiratory failure due to exacerbations of COPD. Cochrane database of systematic reviews 2004


Background

Anaemia diagnosis is based on a hemoglobin (Hb) of less than 135 g/L and less than 115 g/L, in men and women, retrospectively. Anaemia causes can be differentiated based on the mean corpuscular volume (MCV). It has been observed, in our emergency assessment unit that anaemic patients during their acute medical admission have not been identified promptly to have known or new anaemia. We performed an audit study to look further into it.

Aim and/or Objective

The primary outcomes of the audit were to investigate the percentage of the anaemic patients that were identified during admission, whether anaemia was characterized based on the MCV and if an action plan was put in place. Secondary outcomes were causes of anaemia and investigation of iron deficiency anaemia (IDA).

Methods

Data was collected retrospectively from a cohort of 450 medical admissions from 01/02/2018 to 06/02/2018 and 100 anaemic patients were identified. We looked into whether the anaemia was documented, classified, whether it was new or previously investigated and whether a plan of investigation was requested.

Results

Anaemia was recognised in 25% of the patients and it was characterised based on the MCV in 9% (chart1). A 40% of the 25 patients recognized with anaemia, had a new diagnosis. Almost two thirds of the 25, recognized, anaemic patients had an initial investigation plan set up (chart 2). The main causes of anaemia were cancer, chronic disease and gastrointestinal bleeding in order of frequency. 16% of the anaemic patients had iron deficiency and 63% of them investigated in line with the British Society Gastroenterology guidelines.

Conclusion

We have demonstrated that in clinical practice there is inconsistence in identifying and investigating the anaemic patients. We advocate an anaemia investigation pathway to guide doctors in the management of anaemia and presentation to our local audit meeting.
Chart 1

<table>
<thead>
<tr>
<th>Category</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaemia recognition</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>MCV characterized</td>
<td>9%</td>
<td>91%</td>
</tr>
<tr>
<td>Previously known / investigated anaemia</td>
<td>29%</td>
<td>71%</td>
</tr>
<tr>
<td>Hematenics done</td>
<td>18%</td>
<td>82%</td>
</tr>
</tbody>
</table>

Chart 2

Plan within 5 days from 25 recognized anaemia patients

- Yes: 64%
- No: 36%
References (100 words)

2. Willoughby JMT, Laitner SM Audit of the investigation of iron deficiency anaemia in a
district general hospital, with sample guidelines for future practice Postgraduate Medical
3. NICE: Anaemia - Iron deficiency (Last revised April 2018)
4. NICE: Anaemia - B12 and folate deficiency, (Last revised March 2018)
5. Andrew F Goddard, Guidelines for the management of iron deficiency anaemia, Gut
2011;60:1309e131
Increasing advanced care planning in Level 1 Pathway patients

Asha Aggarwal, CMT2 Doctor, Oxford

Aim:
The Level 1 Pathway (L1P) was created at Milton Keynes University Hospital (MKUH) in order to identify ward patients at high risk of deterioration early. The initiation of the pathway leads to more frequent observations, outreach nurse input and more regular consultant review. A retrospective analysis showed that patients on this pathway had a 40% 1-year mortality, in contrast with the national inpatient average of 30%.1 Those at highest risk were those over 80 years of age or with major co-morbidities. Resuscitation status was documented for 84% of patients, but only 16% of these patients had more detailed advanced care planning over the course of their admission.

The aim of the project was to increase Advanced Care Planning in Level 1 Pathway patients by 50% by August 2018.

Methods
The existing pathway paperwork was altered to encourage advanced care planning, and incorporated a full-page ‘treatment escalation plan’. The new paperwork was used for a short time before computerisation of medical records at MKUH.

Outcome:
Of the patients initiated on the pathway using the new paperwork, all had resuscitation decisions documented. 12 of 15 patients had a detailed treatment escalation plan.

Further data collection could include qualitative data regarding ease of use, and the number of patients on the L1P referred to palliative care for formal advanced care planning.

Conclusions:
The change in the proportion of L1P patients with advanced care planning was significant (from 16 to 80%), and was higher than anticipated. This increase enabled better care for patients, and clearer plans for on-call teams. However, the new paperwork was only in use for a short time period due to computerisation of MKUH medical records. Therefore, changes made as part of this project will need to be incorporated in to the electronic version of the pathway for sustainable change.
Aim

Warrington and Halton Hospitals Trust have two Rapid Response Respiratory Community Teams. (Halton-Community based, Warrington- Acute & Community based)
In September 2015 it was recognised that there were many patients within the Halton service with severe end stage Respiratory disease at risk of admission and poor end of life management. A pilot was set up to look at supportive care for these patients in the community. We aimed to fully assess and work in partnership with other health care professionals: GP/Community Matrons/North West Ambulance Service (NWAS)/District Nurses/Social Services/Local Hospice.

Method

A Domicillary visit service (Consultant & Advanced Nurse Practioner (ANP)) was implemented. Patients were identified using advanced disease criteria:

Patients were reviewed with family member / carer to investigate current state of health, symptom management and development of a home management plan with appropriate support and documentation for e.g.: Electronic Reporting Information Sharing System. (ERISS) to link with NWAS and prevent hospital admission. We compared the number of admissions 2015-2016 (Twelve months pre and post pilot)

Results

43 patients fulfilled the criteria.
37 Patients admitted 117 times pre pilot
15 patients admitted 17 times post pilot (table 1)
The ERISS plan completed in 10% pre - 84% post pilot. (Table 2)

Advanced Care Planning (ACP) completed in hospital = 2%-post discharge 37 % (Table 3)
Gold standards framework completed 11% pre - 75% post pilot (table 4)

![Gold standards framework chart](image)

(Table 4)

**Conclusion**

Significant reduction in respiratory related hospital admissions.
Improved end of life planning.
Improved patient confidence and support with co-ordinated cross boundary working.

**Future planning**

Extension to Warrington site 2018
Obtain cost effectiveness data including hospital bed days.
Quality of life review including patient and relative acceptability.
Improved ACP completion in hospital.
Review of severe end stage respiratory disease care pathways to support home care.

**References (100 words)**

1. National End of Life Care Programme, (2011). *Capacity, care planning and advance care planning in life limiting illness (A guide for Health and Social Care Staff).*
Poster 17
Impacts of the Virtual Ward initiative in rural Primary Care: A Qualitative study
Neev Trehan, 3rd Year Medical Student, Imperial College London

Submission

Mid Wales healthcare study conducted in September 2014, a significant problem was identified for rural patients. These patients found it extremely difficult to access hospital services. Therefore, Powys Health Board commissioned the 'Virtual Ward' initiative in primary care to combat this problem. The Virtual Ward is run differently in each individual GP but the main objective is to reduce hospital admission rates. It includes a multidisciplinary team meeting containing a vast array of healthcare professionals where they discuss patients who they believe are likely to be admitted into hospital. The goal of the meetings is to devise a holistic community care package for each patient.

Our research aimed to identify the staff and patient outlooks on the Virtual Ward scheme and the limitations and improvements.

We produced interview questions for both staff and patients asking them about their opinions of the Virtual Ward over a period of 3 weeks from May 21st to June 8th 2017. The qualitative data was then sorted, using thematic analysis, into impacts on the patients and the impacts the scheme had on NHS.

Figure 1 shows that the Virtual Ward has been a success for patients and GPs alike. Medical staff highlighted that the Virtual Ward has allowed them to interact with healthcare professionals outside their practice and that had a big impact on their learning. Patients identified that they were able to receive their treatment at home and spend their time with loved ones.

The Virtual Ward poses a viable solution for admission avoidance, reducing costs on the NHS and increases availability of beds to others. The Virtual Ward allows patients to be discharged earlier and finish their treatment in the community. The scheme has been applied for a short time in a rural setting but the early results have been promising.
Figure 1: spider diagram infographic highlighting the key categories identified which impact at an organisational level and impact the patients.

References (100 words)
Title:
Impacts of the Virtual Ward initiative in rural Primary Care: A Qualitative study

1. Longley, M. (2014) *Mid Wales Healthcare Study*, University of South Wales
Poster 18

Jin-Min Yuan, Foundation Year 2 doctor, St Mary’s Hospital

Communicating osteoporosis and falls assessments with GPs: an orthogeriatric initiative

Authors

Dr Jin-Min Yuan, Dr Guy Lumley

Aim

Fragility fractures are debilitating, deadly\(^1\), and pose an increasing burden on the NHS\(^2\). Further fractures can be prevented by judiciously using secondary prevention strategies, outlined in the British Orthopaedic Association’s gold-standard ‘The Care of Patients with Fragility Fractures’\(^3\). This is vital: a previous fall is the strongest predictor of future fragility fracture. Anecdotal evidence on our orthogeriatric ward suggested that osteoporosis and falls assessment outcomes, integral components of the post-fragility fracture assessment, were not being adequately communicated to GPs. This potentially hinders the quality of continued care once patients are discharged.

We sought to identify opportunities to improve GP discharge summaries and to audit the impact of the new intervention.

Methods

Discharge summaries were reviewed retrospectively over a 2 month period. Data were collected on the inclusion of vitamin D level, calcium/vitamin D replacement, consideration of bisphosphonate therapy, bisphosphonate safety information (if newly started), and osteoporosis and falls assessments.

A new pre-written template (figure 1) was devised to add to discharge summaries of all patients with fragility fractures. This standardised format was designed to clearly and succinctly communicate risk assessments, and document bisphosphonate therapy advice for patients and caregivers based on ‘Medicines and Healthcare products Regulatory Agency’ warnings regarding potential atypical femoral fractures and jaw osteonecrosis.

After intervention, discharge summaries were re-audited prospectively, applying the same previous methodology.

Data were analysed using 2-tailed Fisher’s exact test to derive statistical significance.

Results

Conveyance of risk assessment outcomes in discharge summaries was generally poor.

Following intervention, there was a significant increase in discharge summaries conveying osteoporosis (29% increase, \(p=0.01\)) and falls (33%, \(p=0.02\)) assessment outcomes, and bisphosphonate safety information (79%, \(p=0.0001\)). An increase in having considered bisphosphonate therapy tended towards significance (23%, \(p=0.07\)).
Conclusion

This template is a simple intervention that has measurably improved the quality of discharge summaries in orthogeriatric patients with fragility fractures.

**Falls assessment**  
Mechanism of fall:  
Risk factors identified:

**Osteoporosis assessment**  
Vitamin D:  
Vitamin D replacement:  
Calcium replacement:  
FRAX score: *(Not required in post-menopausal women with fragility fracture)*  
Anti-resorptive therapy:

*All patients newly started on a bisphosphonate should have a dental check-up as soon as possible. Please maintain good oral hygiene, continue routine dental check-ups and report any dental mobility, pain, swelling, non-healing sores or discharge. Please also report any thigh, hip or groin pain during treatment with a bisphosphonate.*

Figure 1: the new discharge summary template, added to the discharge summaries of all patients with fragility fractures

References (100 words)

Poster 19
A checklist to safeguard pleural procedures

Dr Jin-Min Yuan, Foundation Year 2 doctor, St Mary’s Hospital

Authors
Dr Jin-Min Yuan, Dr Alexander Taylor, Dr Tara Sathyamoorthy

Aim
Concise, comprehensive and contemporaneous documentation is the gold-standard in modern medicine, and has clear importance for patient safety and maintaining high quality care\(^1\). A review of documentation of invasive pleural procedures (pleural aspirations and chest drains) at our Trust suggested non-compliance with the gold standard British Thoracic Society (BTS) 2010 guidance\(^2\), raising patient safety concerns. This closed-loop audit aimed to quantify the problem, address non-compliance by introducing a checklist and re-audit to assess its effectiveness.

Methods
Patient notes were reviewed and data collected over a 4 week period on written evidence of compliance with important BTS mandated parameters: patient consent, pre-procedure INR and CXR, use of USS guidance, aseptic technique, use of local anaesthetic, procedural complications, drained fluid volume, use of sutures, drain type, post-procedure CXR and post-chest drain analgesia. A checklist standardising documentation was designed, revised following feedback from key stakeholders, and then implemented (figure 1). This was disseminated to all members of the multidisciplinary respiratory team at the departmental teaching and morning ward meeting. This was followed by a 4 week re-audit. Data were analysed using 2-tailed Fisher’s exact test to derive statistical significance.

Results
There were extensive shortcomings in documentation. After introducing the checklist, there was a significant increase in documentation of pre-procedure INR (61% increase, \(p=0.002\)), chest radiograph (73\% \(p=0.0003\)), local anaesthetic (54\%, \(p=0.006\)), sutures (58\%, \(p=0.044\)) and drain type (83\%, \(p=0.003\)). Documentation of all other BTS mandated parameters increased (nearing significance) or remained static at 100%.

Conclusion
This checklist is a simple intervention that has measurably increased the documented compliance of pleural procedures with BTS guidance. We believe this improves patient safety. After review by A&E, acute medicine and respiratory leads, the checklist has now been included in the Trust’s pleural procedures protocol, to be used across the Trust’s 3 hospitals.

40
References (100 words)

1. GMC, Good Medical Practice, 2010
BTS Pleural Disease Guideline Group, Pleural procedures and thoracic ultrasound: British Thoracic Society Pleural Disease Guideline, 2010
Aim

The Level 1 Pathway (L1P) was created at Milton Keynes University Hospital (MKUH) in order to identify ward patients at high risk of deterioration early. The initiation of the pathway leads to more frequent observations, outreach nurse input and more regular consultant review. A retrospective analysis showed that patients on this pathway had a 40% 1-year mortality, in contrast with the national inpatient average of 30%. Those at highest risk were those over 80 years of age or with major co-morbidities. Resuscitation status was documented for 84% of patients, but only 16% of these patients had more detailed advanced care planning over the course of their admission.

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