ARTERIAL BLOOD GASES: WHAT ARE OUR COPD PATIENTS BREATHING?

Neha Kaushik

Audit & Quality Improvement

Aim

Chronic obstructive pulmonary disease (COPD) is a major cause of UK hospital admissions. Department of Health figures suggest that an average UK district general hospital (DGH) serving a population of 250,000 will admit 680 patients per year (1). COPD patients admitted with acute exacerbations are at risk of respiratory failure. Arterial blood gas (ABG) measurements are key to such diagnoses. The partial pressure of oxygen in arterial blood (PaO2) is related to the fraction of inspired oxygen (FiO2) and is therefore vital for ABG interpretation. Our aim was to determine whether patients admitted to the Royal Bolton Hospital with COPD exacerbations had the FiO2 recorded on their initial ABG and to determine if practice could be improved. NICE guidelines state that exacerbations of COPD managed in secondary care should have FiO2 recorded with all ABG measurements (2). Therefore our standard was 100% FiO2 documentation.

Methods

A prospective audit assessing FiO2 documentation on initial ABG printouts of 20 patients admitted to the Medical Assessment Unit was carried out over a two-week period.

Following this, an intervention of displaying notices on ABG analysers asking users to document FiO2 took place. Subsequent re-audit of a further 20 patients, post intervention, completed the audit cycle.

Results

The initial audit showed 70% documentation of FiO2, well below the 100% gold standard. Re-audit showed a 10% improvement in documentation.

Conclusions

This audit highlighted inadequate documentation of FiO2 that COPD patients receive. With simple interventions, practice can be improved to optimise patient safety and care.

References


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ABSTRACT

Coronary heart disease is the most common cause of death in the UK. The presence of cardiac Troponin T alongside signs and symptoms of Myocardial Infarction (MI) are suggestive of an acute MI.

**Background:** In November 2010, The Royal Liverpool University Hospital introduced the new Elecsys Highly Sensitive (HS) Troponin T. Its serial measurement at 6 and 12 hours increases the incidence of MI diagnoses and also allows rapid diagnoses.

**Objective:** To evaluate the performance of The Royal Liverpool University Hospital against the standards set by NICE guidelines which recommends that all Troponin T levels between 14ng/L-100ng/L should be repeated after 6-9 hours.

**Methods:** In March 2011, a hundred and four patients were collated and information on time of Troponin T request was gathered from the ICE system. We found that standards were not met, with only 41% of those repeated samples were done between 6-9 hrs.

**Interventions:** Posters were put up in clinical settings and lectures were given to educate junior doctors.

**Re-audit results:** In September 2011,a re-audit consisting of a further hundred and five patients, showed that 50% of samples are repeated within the appropriate timeframe.

**Conclusion:** There is an overall mild improvement of 20% in achieving targets. Further strategies are necessary to encourage adherence to NICE guidelines. Therefore, we have designed the 'HS Troponin T Interpretation' proforma to be incorporated into the Acute Coronary Syndrome Integrated Care Pathway.
What effect would a short-form screening tool have on the community acquired pneumonia pathway in the Royal Liverpool University Hospital?

Charles Haber

Audit & Quality Improvement

AIM

Community acquired pneumonia (CAP) is a prevalent medical problem with a high mortality rate\(^1\) (>290/100 000 > age-65\(^2\)) and high costs to the NHS\(^3\). Evidence suggests delay in commencing antibiotics positively correlates with increasing mortality\(^4\).

The AQ guidelines recommend antibiotics are commenced within 6 hours of admission\(^5\). Currently, there is no fast-track tool in place to streamline the treatment of patients presenting with a suspected CAP. This study aims to determine whether acute medical unit (AMU) inpatients diagnosed with CAP would have been picked up by a new short screening tool(SST) (Appendix 1) enabling triage nurses to send patients directly for X-rays, bypassing an initial consultation with a doctor. A secondary aim was to evaluate whether confusion should be added to this SST to increase sensitivity.

METHODS

Patients admitted over a 10 week period to a University Hospital AMU were assessed. The CAP screening had not been implemented into current practice. Each patient with a diagnosis of CAP was then reviewed using the SST.

OUTCOMES/RESULTS

Data were collected from 23 inpatients. 73.7% of CAP patients were treated within the AQ-recommended time without using the CAP SST. Had the SST been used then overall a further 2 patients (84.2%) would have picked up suggesting that patients could receive antibiotics faster should this be implemented. Adding confusion to the SST would not have identified any extra patients.

CONCLUSION

The SST has a high sensitivity and this study recommends its implementation thereby enabling improved prognoses for patients and better adherence to trust policy for the hospital.

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department. Emergency medicine journal, EMJ; 2007
Understanding of Stress Hyperglycaemia in Acute Care

Cameron Bell

Audit & Quality Improvement

AIM

Stress hyperglycaemia (SH) is an insulin resistant and acute hyperglycaemic state commonly seen during acute illness\(^1\). Despite being associated with poor outcomes (including prolonged length of stay and increased mortality\(^2\)) in a range of medical conditions it remains under-recognised. We examined current understanding of SH using a short survey.

METHODS

The ten question survey was given to doctors on the wards and meetings to obtain data on SH in an acute setting.

OUTCOMES/RESULTS

40 doctors completed the survey (FY 57.5%, CT 7.5%, ST 20% and Consultants 15%) over two weeks. “Definitions” for SH plasma glucose ranged from 6.1-20mmol/L (median 10mmol/L).

<table>
<thead>
<tr>
<th>Initial Responses to SH</th>
<th>Yes (%)</th>
<th>No (%)</th>
<th>NK (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review medication chart/nutrition</td>
<td>90.0</td>
<td>2.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Monitor BMs</td>
<td>90.0</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Repeat blood glucose</td>
<td>90.0</td>
<td>2.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Dietetic review</td>
<td>30.0</td>
<td>50.0</td>
<td>20.0</td>
</tr>
<tr>
<td>Inform diabetes team</td>
<td>27.5</td>
<td>52.5</td>
<td>20.0</td>
</tr>
<tr>
<td>Start treatment for hyperglycaemia</td>
<td>7.5</td>
<td>70.0</td>
<td>22.5</td>
</tr>
</tbody>
</table>

50% of respondents would alter their initial actions based on level of blood glucose.

Suggested treatments included: insulin (45%), metformin (20%) and gliclazide (12.5%). 7.5% required confirmation of diabetes or specialist advice before treatment (22.5% NK).

The majority (77.5%) would arrange follow-up with 35% specifying diabetes specialist and 35% GP.

HbA1c (45%), fasting glucose (37.5%), OGTT (22.5%) and ketones (10%) were suggested to further investigate patients.

CONCLUSIONS
Doctors vary in their understanding of the diagnosis and treatment of SH. Given the large numbers of patients presenting to the AMU with SH further work to improve understanding and develop UK guidelines is needed.

REFERENCES


Using an admission bundle to improve initial delivery of care for COPD

Andrew Hardy

Audit & Quality Improvement

Aim: A bundle is a group of evidence based elements of care which should be delivered to all patients with a specified condition to improve outcomes. As part of a Trust programme to improve inpatient mortality from COPD an admission bundle was developed with the aim of improving initial management of acute exacerbations (AECOPD)

Methods: The Trust improvement team agreed bundle elements and targets times for their delivery (Table 1). Existing disease specific management pathways were replaced by a bundle sticker placed in the patients medical notes. A programme of education regarding initial disease management and use of the bundle was delivered to junior doctors and nursing staff in acute areas to support its introduction. Following introduction of the bundle, an audit of 25 consecutive admissions in patients with AECOPD was undertaken. This was repeated after six months and the proportion of patients receiving each bundle element within the specified time and the median time to delivery of each bundle element was calculated.

Outcome: The proportion of patients receiving all bundle elements within the specified time increased from 24% in July 2011 to 32% in January 2012. There was a measurable improvement in the time to deliver five of the seven bundle elements (Table 1). It was noted that the time to having an arterial blood gas reduced by 65 minutes, the time to receive first dose of parenteral steroid reduced by 114 minutes, but the time to receive first dose of antibiotics increased 24 minutes. We have no information regarding what constitutes a clinically meaningful change for these measurements.

Conclusion: Introduction of an admission bundle improved initial delivery of care of AECOPD in the first six months of use. An ongoing monitoring process has been adopted and a repeat audit is due in July 2012 to ensure that these improvements have been sustained.
Meeting the BTS oxygen therapy challenge: compliance with target oxygen levels

Paul Schmidt

Audit & Quality Improvement

Aim: Audit of compliance with BTS target oxygen pulse oximetry levels.

Methods: 188068 pulse oximetry recordings collected on VitalPAC over a 2 year period on all AMU admissions were grouped by first, second, and later observation sets. All oxygen saturation observations were categorised to <88%, 88-92%, 93%, 94-98% and >98%. Observations were also grouped to whether supplemental oxygen by mask was given. The Patient Administration System for each patient episode was examined for ICD10 diagnostic codes for COPD. All observations assigned to "COPD" group, were expected to achieve a target oxygen level of 88-92% for the second and later observation sets, while the goal for all others were 94-98%.

Results: 21.9% of observations documented supplementary oxygen therapy. 13.9% of all observations were assigned to COPD group, and 31.6% of observations on supplementary oxygen.

Non-COPD group: 8.7% of patients had hypoxia below target level of 94-98% at first observation, worsening to 9.3% and 10.9% of patients respectively at the second and later observations. 27.3% of patients receiving oxygen supplementation had pulse oximetry readings >98% at first observation improving subsequently to 21.4% and 19.2% respectively at second and later observations.

COPD group: 4.7% of patients had hypoxia below target level of 88-92% at first observation, improving to 4.1% at second observation, before worsening again to 4.7% at later observations. 69.1% of patients receiving supplementary oxygen had pulse oximetry readings in excess of the target of 88-92% at first observation, worsening slightly to 70.1% at second observation before improving to 66.7% at later observations.

Where supplementary oxygen was provided, appropriate oxygen targets were only achieved for 25.3% of COPD patients and 60.2% of non-COPD patients in subsequent observations.

Conclusion: Oxygen therapy remains poorly targeted. The most significant deviations from BTS guidance are uncorrected hypoxaemia in approximately 10% non-COPD patients and excess oxygenation for about 60% of COPD patients against BTS oxygenation saturation targets. There is no evidence of systematic goal-directed application of BTS oxygenation targets by adjusting oxygen therapy in response to pulse oximetry readings.
Treatment of diabetic patients with hypoglycaemic episodes on the Acute Admissions Unit at a large District General Hospital

Louis Koizia

Audit & Quality Improvement

Aim:

The prevalence of diabetes, in hospital inpatients, is around 20% nationally. Hypoglycaemia, is the commonest diabetic complication in these acutely ill patients’; with some studies predicting that 10% will experience a hypoglycaemic episode. Our aim was to determine whether these hypoglycaemic episodes were treated in line with best practice, in our Acute Admissions Unit (AAU).

Methods:

During a 3-month period patients who were admitted to the AAU with known diabetes, had their blood glucose (BM) chart assessed to identify hypoglycaemic episodes. A hypoglycaemic episode was defined as a BM <4mmol/l. A proforma was devised, based on the hypoglycaemic audit form (composed by Diabetes UK), to collect data including diabetes type, medication, BM and treatment of hypoglycaemia.

Outcomes/ Results:

105 hypoglycaemic episodes were recorded. 46% of patients were on insulin, 5% on sulphonylureas, 16% on metformin, 27% on a combination of medication and 6% diet controlled. 71% of the hypoglycaemic episodes were treated with 100ml Lucozade, 14% with intravenous dextrose and 15% received no treatment. Only 13% of episodes had the BM rechecked after 10 minutes. Overall only 9 episodes were treated according to the national guidelines. The study identified that the BM charts were not well laid out and lacked space for critical information.

Conclusion:

We felt that the best way to improve the treatment of hypoglycaemic episodes was to redesign the BM chart and attach the hypoglycaemic treatment algorithm onto the reverse. Following re-audit we have identified that more patients are being treated correctly, with more than 45% of episodes having their BM repeated after 10 minutes.
Does Focused Nurse training Improve Patient Care Pre-Cardiac Arrest

John McGonigle

Audit & Quality Improvement

Does Focused Nurse training Improve Patient Care Pre-Cardiac Arrest


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Aim

A recent NCEPOD report states that nearly 64% of cardiac arrests were predictable and warning signs were often unrecognised and poorly acted upon\(^1\). At our hospital we provided a training program for nurses to help them recognise the deteriorating patient in line with NICE recommendations\(^2\). We used an audit cycle to assess if focused nurse training improved their ability to act upon abnormal physiology in the acutely unwell patient.

Methods.

We reviewed the observation charts of patients who had a cardiac arrest between October and December 2011. We focused on the Early Warning Score (EWS) prior to the arrest and whether action was taken on a raised score. We compared this to previous data from 2008. In the interim, our nurses undertook the AIM\(^\text{©}\) (Acute Illness Management) course and senior nurse educators reinforced this training thereafter.
Results

The 2008 data involved 37 patients with 8 successful resuscitations. 20 patients had an EWS of 3 or more prior to their arrest but only 2 patients had any documentation of action taken (10%). The results from 2010 involved 30 patients, 11 of who survived. 13 patients had an EWS more than 3 immediately prior to their cardiac arrest and in 9 patients action was taken (69%).

Discussion

Our results showed an improvement between 2008 and 2012 however we are still not achieving a 100% standard. Focused nurse education has been partly effective and this initiative should be sustained to help improve the care of the acutely ill patient.

1. Cardiac Arrest Procedures: Time to Intervene (NCEPOD 2012)
Audit of the sepsis bundle on AMU in the Norfolk & Norwich Hospital

Natalie Alvarez Tapia

Audit & Quality Improvement

Audit of the use of a sepsis bundle at the Norfolk and Norwich Hospital

Aim

To encourage medical staff to treat sepsis effectively, Norfolk and Norwich University Hospital introduced a sepsis bundle consisting of giving oxygen, fluids and antibiotics promptly; taking blood cultures and measuring lactate and urine output.

Methods

In both audits case notes of all admissions to NNUH AMU were examined for a sepsis bundle and to see whether they fulfilled our definition of sepsis. Sepsis was defined as a SIRS>2 with evidence of infection on clinical examination, blood work, urinalysis or imaging. To improve bundle compliance after the first audit, sepsis bundles were put in all admission packs and potential sepsis cases were highlighted on the hospital admissions system. In the re-audit the same method was used and the efficacy of the bundle was assessed by the proportion of completed steps in the bundle and non-bundle groups.

Results

See table 1.

Conclusion

SIRS criteria appears to be a good trigger to use the sepsis bundle as 90% of patients with sepsis had a SIRS >2. Bundle use did seem to improve care with more blood cultures being taken (82% vs 68%) and more antibiotics given in 1hr (90% vs 58%) when it was used. Nevertheless the bundle will only be effective if it is used, and bundle usage was poor. In the audit only 50% had a bundle completed and this fell to 37% in the re-audit despite efforts to publicise the bundle for the re-audit. This audit shows bundles may improve sepsis care but getting doctors to use them is more difficult.
Understanding the elevated Hospital Mortality Standardised Ratio for Pneumonia at Lincoln County Hospital (LCH)

Tomos Chivers

Audit & Quality Improvement

Aim

The Hospital Mortality Standardised Ratio (HMSR) for pneumonia at LCH is 5.2% higher\(^1\) than would be expected. In order to understand the relatively high mortality the following retrospective audit was performed.

Methods

The notes of all consecutive inpatients with a cause of death coded as pneumonia who died between March-September 2011 were analysed. Consultant physicians collected data regarding age, gender, length of stay (LOS), any adverse events or avoidable deaths.

Outcome/Results

43 patients died of pneumonia during the period analysed. Of these, 14 (33%) were due to community acquired pneumonia (CAP), 10 (23%) hospital acquired pneumonia (HAP), 4 (9%) aspiration pneumonia, and 15 (35%) were unclassifiable.

Conclusions

CAP accounted for the largest proportion of deaths. 4/14 were early deaths, the patients were deemed terminal on arrival.

HAP accounted for the largest proportion of late deaths, therefore reducing LOS could reduce the HMSR.

6% of notes were incorrectly coded reflecting administrative errors rather than clinical. HMSR is calculated from the admitting diagnosis and therefore does not necessarily mean patients died of pneumonia. This could be contributing to the high HMSR.

Pneumonia is a common cause of death reflecting age and frailty. The average age of patients studied was high (88). Therefore the high HMSR could be a reflection of the terminal mechanism of death in the elderly. Alternatively, pneumonia is used as a catch-all diagnosis for lack of a more accurate cause of death.

We have introduced meetings between coders and clinicians and will continue to audit deaths from pneumonia.

1. Dr Foster.co.uk. www.da.drfroster.co.uk (accessed 05/06/12)
Lumbar puncture documentation - is it adequate?

Nigel Lane

Audit & Quality Improvement

Aim

To ensure that when a lumbar puncture is performed it is clearly documented in the patient's clinical record and includes a minimum data set.

Methods

25 sets of patient records were analysed for information against the audit standards\(^1\)-\(^2\). Interestingly there are no national or international standards. The information was collected and analysed using Microsoft Excel. This was a retrospective audit. An aide-memoire sticker was then introduced that could be placed in the patient record and a further sample (31 sets of patient records) re-audited.

Outcome/Results (see table)

Documentation of lumbar punctures in patients’ records prior to the introduction of an aide-memoire sticker was not done well. Confirmation that any consent had been obtained improved in the re-audit from 64% to 84%.

Position of patient and anaesthetic used are important in case the patient has any complications. The documentation of this information improved to 90% in the re-audit.

CSF colour and opening pressure when recorded can assist in clinical diagnosis; these improved from 76% and 64% respectively to 97% and 87%.

Results are vital to make a clinical diagnosis. This remained static at 88%.

Post lumbar puncture advice if correct can reduce the risk of post lumbar puncture headache, improve analgesia post procedure and assist in a timely discharge. This improved from 36% to 84%.

Conclusion

The audit and re-audit of lumbar puncture documentation found that the introduction of an aide-memoire sticker improved documentation. This can assist in diagnosis, treatment and discharge in a timely manner.

References

2. Hewett R and Counsell C. Documentation of cerebrospinal fluid opening pressure and other important aspects of lumbar puncture in acute headache Int J Clin Pract, Volume 64, Number 7, June 2010, pp. 930-935(6)
Quality & Performance indicators in the Acute Medicine Units: the current state of affairs in the North-West of England

Syed Ahmed

Audit & Quality Improvement

AIM:

In October 2011, the SAM proposed monitoring of standards of care using key-performance-indicators (revised) in AMUs (Table 1). This survey appraises whether the AMUs in the North-West of England are using the recommended indicators to monitor the quality of care and performance.

METHODS:

It is a retrospective survey of 24 regional hospitals. Data was collected over a two-week period in August 2011 and then March 2012 using a proforma based on the SAM’s recommendations. Either an AMU ward-manager or an Acute-Physician was contacted to complete the questionnaire via e-mail or phone. No audits were done to identify whether these protocols were adhered to in practice.

RESULTS:

21/24 AMUs responded to most of the questions. No AMU used all key indicators as per recommendations. 21/21 followed the EWS-guidelines and consultant review within 14 hours of admission. The ‘4-hour-standard’ was followed in 6/21(29%) AMUs. Mortality-rates monitoring showed poor results, with 5/15(33%) monitored hospital mortality rates for patients admitted through AMU. Proportion of patients discharged within 48 hours from AMU was monitored in 3/21(20%) units. Readmissions within 7 days was monitored in 7/18(39%) units.

CONCLUSION:

Standards of monitoring set by the SAM are only partially adopted by the AMUs in the North-West of England. It highlights the areas need improvement, mainly the monitoring of mortality-rates and readmission, and the time frames for full clinical-assessment and management plan initiation. A much larger study will be required to see the state of affairs in the rest of England.

Acknowledgments: Hamza Ahmed for proof reading
Atrial Fibrillation (AF) in the Acute Medical Unit (AMU): A Day in the Life National Survey

John Tshon Yit Soong

Audit & Quality Improvement

Aim: Atrial Fibrillation (AF) is the most common cardiac dysrhythmia; clinical sequelae include stroke and heart failure. NICE has identified several implementation priorities. This survey aims to determine AMUs’ adherence to best practice.

Methods: Data from 149 patient episodes from 75 of 225 AMUs (33% response rate) was collected nationally over a 24 hour period (14–15th Sept 2011) using an electronic survey. The survey was designed to assess the management of adult patients with AF in the AMU setting across the UK against national body guidelines (NICE CG36) (1).

Outcomes: Digoxin was prescribed as initial monotherapy for 22.1% of patients. 22.8% of patients with AF had a recorded stroke risk score, and 79.1% of patients with a significant risk for thromboembolic stroke (CHA2DS2-VASC score of > 2) (2) had no anticoagulation therapy prescription at discharge. Fifteen (23.8%) patients with a HAS-BLED score of ≥ 3 (8.7 major bleeds/100 patient years) (3) were discharged on anticoagulation therapy, and four concomitantly discharged on antiplatelet therapy. There is a non-significant trend to be discharged after 24 hours and less documentation of stroke risk when admitted out of hours compared to during the normal day. Results are limited by the survey’s “snap-shot” nature and reduced response rate.

Conclusions: This was the first service evaluation of its kind. It emphasizes discrepancies between clinical practice and best evidence. It is imperative that barriers in translating these guidelines to clinical practice are identified and resolved.

References


HIV Testing in Medical Patients: Why are we failing to meet guidelines?

Claire Alston

Audit & Quality Improvement

Aim:

The 2008 National Guidelines on HIV testing state that all acute medical patients with clinical indicator conditions and/or from high risk areas should be screened for HIV\(^1\). We aimed:

1. To assess compliance with guidelines within our Trust

2. To establish the attitudes towards and knowledge of HIV amongst doctors on the acute medical admissions team.

Methodology:

We conducted a case-note review of 200 acute medical patients admitted in 2011 to determine if national guidelines for HIV testing had been followed.

We also devised a questionnaire based on the guidelines\(^1\) to assess experience and knowledge of HIV medicine. The questionnaire was completed by 50 doctors across all grades working in acute medicine at a district general hospital in Surrey.

Results:

Of 100 patients from high-risk areas, 1% were tested for HIV. Of 100 patients from non-high risk areas; only 3% underwent HIV testing even though it was indicated in 17%.

The survey showed that, on average, doctors could name 3.48 clinical indicator conditions out of 38. 50% of doctors across all grades reported sufficient knowledge of HIV. 68% were confident asking about HIV risk factors and 74% were confident consenting for HIV testing. However 88% felt that they needed further training in HIV medicine.

Conclusion:

We are failing to meet national guidelines for HIV testing. Although doctors report confidence in some areas of HIV investigation, knowledge of clinical indicator conditions is poor. We suggest there is an opportunity to improve clinical practice with regards to HIV testing by providing further training.

References:

Re-audit: First consultant review following an acute medical admission. An assessment of acute medicine against NCEPOD. Epsom General Hospital

Ahmed Shalabi
Audit & Quality Improvement

Aim/Background

NCEPOD recommends that all acute admissions must be reviewed by a consultant at the earliest opportunity, ideally within 12 hours [1]. In addition, CPR status must be considered and clearly documented during the consultant review [2]. The first local audit at Epsom General Hospital showed that only 47% of patients were seen by a consultant within 12 hours of admission and only 5% had a resuscitation status documented. Action points included implementing post-take ward round (PTWR) proformas and training junior staff on using them. The re-audit assesses the effect of these recommendations.

Methods

A retrospective analysis of 60 random case notes in the Acute Medical Unit (AMU) from January to March 2012. Data was analysed and compared to both the original audit and NCEPOD.

Outcomes/Results

The re-audit showed a slight improvement in consultant reviews within 12 hours (from 47% to 50%) although this remains below the NCEPOD report level of 60.1%. There was a big improvement in the documentation of a clear impression (from 49% to 80%). Documentation of a management plan increased from 91% to 93%. Resuscitation status was recorded in 63% of cases which is a significant leap from 5% in the previous audit.

Recommendations

1. Changing the rota to increase acute physician cover
2. Continued improvement of the PTWR Sheet.
3. Consultant on-call to ensure information is recorded properly.
4. Acute physicians to champion importance of issues such as resuscitation status.
References


THE HANDOVER PROCESS AT PENNINE ACUTE TRUST 2012

Rauf Munshi
Audit & Quality Improvement

AIM:

With increasing change to shift work resulting in the loss of continuity of care, good handover is vital for patient safety and good clinical care. The RCP have devised a toolkit for medical handover to guide practice. We conducted an audit on handover with the aim of assessing the current handover practice across Pennine Acute Trust including all specialities and grades. The aim being to gain the views of those involved in handover including suggestions of what is good practice and what is not in order to make improvements.

METHOD:

A survey questionnaire was designed which contained three sections. Section 1 was demographic data of the respondent. Section 2 comprised of questions regarding the logistics of the handover process such as format of handover, length of time, register of attendance,... and Section 3 consisted of statements to establish views regarding handover to which the respondents were asked to rate on a Likert scale.

RESULTS:

In total 85 questionnaires were returned which was approximately a 35% response rate. Majority (59%) surveyed were not aware of any guidelines with regards to handover. Verbal handover is the predominant method in most specialities. Paediatrics have verbal and written handover process in the morning and evening with the consultant the most senior clinician. There is no handover meeting in the mornings in medicine other than the transfer of the baton bleep.

On weekends and bank holidays patients are handed over to the on call team informally. 51% felt the handover practice is effective. Opinion was split whether consultants should attend handover meetings. A significant proportion (39%) reported being called away from the meetings and 49% reported that they had to review patients who should have been handed over but were not or missed.

CONCLUSION:

Suggested recommendations were formal handover training at induction, written documented handover and not just verbal (ideally electronic) and the introduction of a morning handover meeting.
Root Cause Analysis reduces avoidable cardiac arrests

Mohan Thapa

Audit & Quality Improvement

Aims: To reduce avoidable cardiac arrests by improving recognition and response to deteriorating patients.

Methods: As part of trust’s Mortality Reduction Group (MRG) work this exercise was undertaken. Multidisciplinary team including consultant anaesthetist, acute physician, nurse consultants, senior sisters and resuscitation officer was set up. Team agreed on pro-forma for root cause analysis. To begin with root cause analysis was started on acute medical unit from January to June 2011 followed by gradual roll out to various other departments. At least two members met twice a week to look into all the cardiac arrests. Involvement of the parent team was actively sought. The findings were fed back to the parent teams and presented in MRG meeting.

Result:

Since the start we have done 56 reviews. Most striking finding was number of out of hours avoidable cardiac arrests were six times higher than during working hours(weekdays).Main problems identified were-recognition of clinically unwell patients by monitoring Early Warning System, medical response, lack of recognition of sepsis and its management and formulating escalation plan for severely unwell patients. Medical evidence indicates that many patients show signs of deterioration during the 24 hours before cardiac arrest 1 (Hillman et al, 2001). Feedback to the parent teams has helped to reduce number of avoidable cardiac arrests in acute medical unit. The biggest impact seen in weekdays (working hours) reduction of avoidable cardiac arrest is due to senior’s end of life decision making. Similar studies in past have shown that cardiac arrest rates can be reduced by actively increasing appropriate DNAR decisions.

Conclusion:

Root cause analysis by MDT is a very powerful tool and essential part of clinical governance. By actively involving and feeding back the recommendations to the parent teams helps to reduce avoidable cardiac arrest. Each Trust/Hospital should set a local goal for reduction in cardiac arrests leading to CPR attempts.2

References:


The effect of a checklist on handover efficiency

Catherine Blogg

Audit & Quality Improvement

Aim

Inadequate or complete omission of patient handover has been shown to be responsible for a significant number of adverse events in UK hospitals. This audit aims to evaluate and improve the handover process.

Methods

Despite a lack of evidence base for standards, guidance from the Royal College of Physicians (RCP), as well as audit of the handover process and surveys were used to identify key areas that required improvement. A handover checklist and a documentation sheet were implemented and the process then re-audited.

Results

Survey prior to implementation showed 97% of the doctors felt that information failed to be handed over on occasions and 65% felt there should be documentation of the handover.

Following implementation, 89% of the doctors believed that the checklist had made the process more structured and 91% felt the documentation sheet was adequate. Permanent documentation records increased drastically from 0% to 70% of patients. Numbers of doctors completing of the attendance sheet improved from a mean of 6.1 to 7.2. The number of simultaneous handovers decreased from 1.9 to 1.4 with the maximum number decreasing from 4 to 2. Mean time of handover remained at 25 minutes despite increase in written documentation.

Conclusion

Implementation of a handover checklist and documentation sheet has improved compliance of the handover process with recommendations made by the RCP, and has improved documentation and structure of handover without increasing the length of time taken.
Nurse Championship: a site based collaborative approach to embedding quality improvement initiatives in an Acute Assessment Unit

Theresa Weldring

Audit & Quality Improvement

**Aim:** To address shared challenges to embedding multiple quality improvement (QI) initiatives in a busy Acute Assessment Unit (AAU) by raising awareness amongst nurses and coordinating QI processes through a Nurse Champion.

**Methods:**

- 6 month pilot study of a Nurse Champion (NC).
- Mixed method evaluation using focus groups and survey

**Outcomes/results:** Twenty-one (n=21/85, 24.7%) surveys completed. Twenty (20/21, 95.2%) were aware of the term QI. Identified challenges to implementing QI: time (n=8/21, 38.1%); workload (n=4/21, 19.0%); communication and information (n=4, 19.0%); staffing issues (n=4, 19.0%); medical staff turn over (n=2, 9.5%); and resources (n=1, 4.8%). Suggestions for improving sustainability of QI projects: teaching and communication (n=9, 42.9%); protected time for nurse involvement (n=3, 14.3%); integrating projects into IT services; staggering introduction of multiple projects (n=1, 4.8%); and staff incentives (n=1, 4.8%). Focus groups supported survey results. The majority agreed that a collaborative approach to teaching and sharing information, and centralisation of project information and documentation were useful in terms of raising awareness and reducing workload.

**Conclusion:** Nurse engagement in QI is universally challenging but vital to success. Embedding change remains a challenge, but appointing specific, directed resource to enable and facilitate collaboration of multiple initiatives in a single site has shown to improve awareness, uptake and communication around QI and its practical application amongst nurses. Recommendations for building on this initial work to support QI have been produced as a result of this capacity and capability building approach. Integration with trust processes and mapping against trust objectives are key catalysts for releasing
Productive Ward Round: Our Experience on Preston MAU

Nadia Raza
Audit & Quality Improvement

AIM

The aim of this project was to improve ward round processes and practice on Preston MAU.

METHODS

We have held regular meetings attended by junior doctors, nurses, pharmacists, the ward housekeeper, patient flow co-ordinators, consultants and a Productive Ward facilitator. All staff were invited to make suggestions about how we could optimise ward round quality and value. Following baseline data collection, we implemented a number of changes, including a “Patient Status at a Glance” board, daily multidisciplinary board round, ward safety checklist and weekly visits from IT to repair the mobile computers.

We prospectively collected data before and after the changes were implemented, including the number of interruptions on the ward round, the number of times we had to search for missing notes and charts, and the number of times the mobile computers malfunctioned. We also recorded the proportion of time spent face to face with patients on a ward round, and we interviewed patients about their experience of the ward round, before and after the changes.

RESULTS

We have demonstrated a reduction in the number of missing notes and charts, interruptions and mean length of the ward round since implementing these changes. The proportion of time spent face to face with patients on the ward round increased from 32% to 49%. We also achieved improved patient feedback following the changes.

CONCLUSION

The Productive Ward Round module can be implemented on any ward, with minimal consumption of financial resources, to improve patient experience and increase staff satisfaction.

REFERENCES

Prescribing antibiotics in chest diseases. Are we in compliance with guidelines?

M. naeem Ashraf

Audit & Quality Improvement

AIM: To identify choice of antibiotics prescribed in common respiratory disorder on respiratory wards.

To assess compliance with local and national Trust Guidelines.

Other parameters were also assessed like CURB score documentation and start/stop date of antibiotics on prescription sheet.

METHOD: Prospective audit of 40 patients admitted in respiratory ward requiring antibiotics for various respiratory disorders. A prepared proforma was used for the audit.

Trust guidelines, NICE guidelines and BTS guidelines were used as standered.

OUTCOME/RESULTS

INITIAL PHASE OF AUDIT

1: Almost 50% prescribers did not follow any guidelines

2: CURB score was documented in only 25% cases where diagnosis was pneumonia

3: Only in 30% cases Antibiotics were changed on post take consultant round when they were prescribed against the guidelines.

4: 70% prescriptions were continued in spite against the guidelines

5: 77% prescribers (31/40) did not document start or stop date.

Audit results presented in respiratory departmental teaching and medical directorate meeting.

RE AUDITE AFTER 2 MONTHS

1: About 75% prescriptions were in compliance to guidelines (as compared to 52% in first phase of audit)

2: CURB score documentation improved from 25% to 66.5%

3: About 45% of prescriptions were changed on post take consultant round, slightly better than first phase when it was only 32%
4: Documentation of start/stop date for antibiotics for antibiotic prescriptions improved three times as compared to previous audit (22.5 to 67.5%)

CONCLUSION

1: Regular audits certainly help improving safe prescriptions which is essential to deliver quality service to the patients

2: Prescribers should always follow guidelines while prescribing medications

3: CURB score guides assessing severity of pneumonia and it should be documented in all cases where diagnosis is pneumonia

4: Prescribing antibiotics without a start/stop date can have serious consequences in the management of patients

5: Re Audit must be considered to counteract basic prescription errors. This audit has shown a significant improvement in safe prescription on respiratory ward in Blackpool Hospital.
Improving decision making and documentation of resuscitation and ceiling of treatment decisions.

Louise Powter
Audit & Quality Improvement

Aim

A quality improvement project was undertaken to improve decision making and documentation regarding escalation of treatment, in line with the recent NCEPOD report¹. Our Trust currently uses a ‘Do not attempt cardiopulmonary resuscitation’ form; however CPR is at the end of a spectrum of treatment options and often no ceiling of treatment decision is documented. This leads to inappropriate treatments causing patients distress, without benefit, or lack of escalation of treatment when this is appropriate.

Methods

A ceiling of treatment form was developed for use on one ward. This form was then piloted in the Older Persons Unit (5 wards), then a new combined resuscitation and ceiling of treatment form was developed following feedback from the first pilot (figure 1). This involved collaboration between acute medicine, intensive care, elderly care, the resuscitation department, palliative care and the legal department. This new form was trialled on 2 wards, replacing the old DNACPR form.

Results

Documentation of ceiling of treatment decisions rose from 30% to 57% after the first pilot and to 90% after the second. Resuscitation decisions were documented in 68%, then 74% then 90% respectively.

A survey of medical trainees showed that 62.5% had seen the ceiling of treatment form, and 100% had found it useful on their on-call shifts.

Conclusions

Using the combined resuscitation and ceiling of treatment form increased decision making and documentation of escalation plans in the event of deterioration, ensuring patients receive the appropriate level of care. This form will now be adopted Trust wide.

Use of an antibiotic checklist to improve antibiotic prescribing on AMU

Andrew Hardy

Audit & Quality Improvement

Aim

Antibiotic prescribing is common in acute medicine units (AMU). Good prescribing practice includes a clear indication for antibiotics, an appropriate choice and route, and regular review of prescribing with a switch to oral narrow spectrum agents where appropriate. The aim is to reduce drug resistance, side effects and antibiotic costs. A multidisciplinary Trust Antibiotic Working Group was tasked with improving antibiotic prescribing on the AMU.

Methods

An antibiotic prescribing checklist was developed by the Antibiotic Working Group. The checklist included 7 points to prompt good antibiotic prescribing practice and was printed on a sticker which was attached to the prescription chart. A baseline audit of antibiotic prescribing was undertaken by reviewing all drug charts of patients who were on antibiotics on one day in February 2012. A more comprehensive weekly audit of prescription charts and medical notes was undertaken during and after the sticker testing phase.

Results

Audit results are shown in table 1. During the test phase 50% of patients on antibiotics had a checklist sticker attached to the drug chart. The main outcome measures were the proportion of patients with a documented indication for antibiotics and a stop or review date on the drug chart. During the testing phase compliance with these two measures was higher in the group in whom a sticker had been used. Compliance following the test phase was similar to those in whom a sticker had not been used. In 4 of the 5 other measures audited during the testing and post-testing phase compliance was higher in those patients with a sticker.

Outcomes

Good antibiotic prescribing practice was higher in those patients in whom a checklist sticker was used. The trial period was too short to assess the impact on measures such as antibiotic costs and the incidence of complications such antibiotic related infections. Following the pilot work an extensively revised Trust prescription chart which includes the checklist elements will be introduced in August 2012. Ongoing audit and monitoring is being undertaken.
‘Easy to say, hard to do’ – Reliable smoking cessation support in secondary care

Oliver Quick

Audit & Quality Improvement

Aim:

NICE guidelines for professionals in secondary care states all patients who smoke should be offered smoking cessation services ¹. Review of current practice on a cardio/respiratory ward showed that referral rates for admitted patients were suboptimal. This healthcare improvement project aimed to audit referral numbers, then design and embed a reliable system to improve referrals.

Methods:

We identified all Acute Coronary Syndrome patients admitted over one month, then contacted them to ascertain their smoking status and whether they had been referred for smoking cessation support. 26% of patients were smokers (slightly higher than the national average) ² of which 29% were referred.

We identified that the electronic discharge summary, which is completed for all admitted patients, offered a reliable and user-friendly medium for referring to the cessation team. We embedded a ‘consent to referral’ tick box within the software and educated doctors on the use of this new method. We later studied the referral numbers both pre and post intervention to ascertain its success.

Results:

Preliminary data showed in the 5 months after the intervention went ‘live’ the total number of referrals almost doubled. The average number of monthly referrals increased from 11.4 to 21.

Conclusion:

Smoking remains the biggest preventable cause of death and disease in the UK. Two-thirds of smokers would like to quit ³. Early data shows the introduction of a referral option on the well established electronic discharge summary has increased smoking cessation referral rates to community services; and offers the framework to support future use.

References:

1. NICE Guidelines. Brief interventions and referral for smoking cessation (PH1)
Measurement of Compliance with Society of Acute Medicine Quality Standards in a Teaching Hospital Acute Medicine Unit

Alistair Green

Audit & Quality Improvement

Aim

To compare the performance of a teaching hospital Acute Medicine Unit (AMU) with the Society for Acute Medicine’s Quality Standards.

Methods

Analysis of 8-month’s data using an electronic database (Symphony), which is used to track patients, triage to specialty and collect data prospectively on all patients.

Results

In total 15750 patients were assessed. Initial nurse assessment took place within 30 minutes in 42.7% of patients. Within 4-hours of admission to the unit 94% of patients had a full clinical assessment and 83% of patients were reviewed by a competent decision maker (registrar or consultant). Within 14-hours 100% of patients were reviewed by a consultant physician. The hospital mortality rate for patients admitted to the AMU was 6.3%. AMU’s 7-day readmission rate was 2.7%. 35.1% of admissions were discharged directly from AMU within 48 hours.

Conclusion

Accurate identification of all patients with a predicted LOS less than 48-hours is possible. AMU re-admission rate is a useful surrogate marker. An overall mortality rate of 6.3% is consistent with published results (6.2 -7.96%), however direct admissions to ITU are excluded from our statistics.

Inputting data as an integral part of the admission process is key to collecting data on all patients. This enables an accurate measure of overall performance, as the variation of out-of-hours mortality is well documented.

In our experience continuous data collection is essential to ensure that the admission process provides quality of care equally out-of-hours and during surges of activity.

References

An ambulatory care protocol for non-variceal upper GI bleeds

Ruaraidh Stewart
Audit & Quality Improvement

AIM

Non-variceal GI bleeding is an important cause of acute hospital admission. Evidence suggests that low-risk patients may be safely managed as outpatients using the Glasgow-Blatchford Bleeding Score (GBS).\textsuperscript{1-3} A tertiary centre introduced an ambulatory care protocol incorporating risk-stratification using GBS, with subsequent senior review, dedicated endoscopy slots and specialist follow-up as required (figure 1). This audit reviews ambulated cases since the protocol’s introduction.

METHODS

All patients with suspected non-variceal bleeds presenting to Primary Assessment Area (PAA) between August 2011 and April 2012 were eligible, including those referred directly from GPs or initially assessed in ED. Details were collected from the Ambulatory Care admissions book, and subsequently from medical notes and electronic records.

OUTCOME / RESULTS

30 patients were managed in ambulatory care with 28 having a Blatchford $\leq 1$. One patient (Blatchford 2) was ambulated after ED consultant review. A further patient was ambulated inappropriately from PAA, although without harm. Figure 2 shows outcomes of the 27 patients who returned for assessment.

There were no haemodynamically significant events. In total, 22 patients underwent endoscopy. No patients with Blatchford $\leq 2$ required endoscopic therapy or transfusion. 6 patients were referred for outpatient appointments.

CONCLUSIONS

This audit suggests that ambulatory management is safe for low-risk patients, although what constitutes a low-risk Blatchford score remains uncertain.

All patients undergoing ambulatory care were managed without incident, although one case was managed inappropriately and subsequently reviewed. Given that no patients with Blatchford $\leq 2$ required endoscopic intervention, a higher threshold for endoscopy may be warranted. Some minor amendments to the protocol were suggested.
REFERENCES


The Last 96 Hours Revisited

Petra Schinle

Audit & Quality Improvement

Aim

To review and improve ‘End-of-Life’ care at Jersey General Hospital.

Methods

An audit compared patients who died within 96 hours of admission in 2009 (n=118) to the National Confidential Enquiry into Patient Outcome and Death (NCEPOD) report, ‘Caring to the End?’. Recommendations were implemented following a Morbidity and Mortality meeting and discussions with hospital management. These were:

- Twice daily consultant ward rounds
- Early discussion of resuscitation decisions with patients and relatives
- Implementation of a palliative care pathway

A re-audit of 100 patients was conducted in 2010, using the same audit tool.

Outcomes/Results

As shown in Table 1 and Figure 1:

1. Consultant review within
   a. 12 hours: 55% 2009, 47% 2010, 70% NCEPOD¹
   b. 24 hours: 92% 2009, 91% 2010, 95% NCEPOD¹

2. DNACPR discussed with patient or relatives: 70% 2009, 81% 2010, 85% NCEPOD¹

3. DNACPR form present for patients not expected to survive: 89% 2009, 94% 2010, 70% NCEPOD¹

4. DNACPR form signed by middle grade doctor or above: 100% 2009 and 2010, 78% NCEPOD¹

5. The Liverpool care pathway is currently being piloted

Conclusion

1. The time to consultant review within 12 or 24 hours did not improve

2. The number of DNACPR discussions with patients or relatives increased by 11%
3. There was a high compliance in senior doctors completing DNACPR forms for patients not expected to survive

Recommendations following re-audit:

1. Timely consultant review
2. Employment of acute medicine consultants
3. Documentation of DNACPR status at first consultant review

Acute Physicians at the front door of a busy DGH still failing to understand cardiac risk in patients presenting with Acute Coronary Syndromes (ACS)

Upasana Tayal

Audit & Quality Improvement

AIM

Patients presenting with ACS represent almost 30% of acute medical takes [1]. Risk stratification of this population enables appropriate use of cardiac investigations. The 2010 NICE chest-pain guidelines specify that patients diagnosed with unstable angina/NSTEMI should have individual risk of future cardiovascular events documented [2]. High-risk patients should undergo early angiography, with low-risk patients undergoing non-invasive ischaemia testing first.

We sought to establish whether acute physicians were using risk scores and if not, whether they were able to recognise high-risk ACS patients using clinical judgement alone.

METHODS

We prospectively analysed notes for all admissions with ACS for 1 month for documentation of an appropriate cardiac risk-score.

We also presented three cases to physicians at the Medical Grand Round and asked doctors to identify which patient had the highest in-hospital mortality risk (Figure 1).

OUTCOMES/RESULTS

Admitting clinicians performed poorly at documenting risk-scores with only 3 out of 30 notes having any scores documented. Half the patients underwent an angiogram, including 6 low-risk patients, who did not have prior non-invasive ischaemia testing.

Upon survey, 64% of physicians incorrectly selected patient 2 as the highest risk of cardiovascular events as opposed to patient 3 (Figure 2).

CONCLUSION

Clinical judgement alone, even of experienced physicians, is insufficient at identifying patients presenting with high-mortality-risk ACS. This has implications for appropriate use of angiography resources, potentially leading to delays for high-risk patients because they have not been identified as high-risk. The integration of apps and smartphones into day to day practice now permits real time complex calculations for the benefit of patients.

Refs:

Do we transfuse acute medical patient appropriately: A subset analysis of acute medical patient from the National Comparative Audit of use of blood in medical patients

Robert Nipah
Audit & Quality Improvement

AIM

The aim of this analysis was to evaluate the use of red cell transfusions in adult patients admitted to emergency assessment units (EAU) and medical assessment units (MAU) across the UK.

The consensus standards for the study were derived from the British Committee of Standards for haematology (BCSH) red cell transfusion guidelines, national indication codes, a Cochrane Review, AABB guidelines 2012 and evidence in literature. This was part of a larger national audit (1).

The following points were analysed

Who were we transfusing?
Who was making the decision to transfuse?
What were the common reasons for transfusion?
Who had potential reversible reasons for anaemia?

METHODS

We conducted a prospective and retrospective audit of all medical patients aged 18 or above that received a blood transfusion for one week in the months of September, October and November 2011. A sub analysis or EAU and MAU patients was performed.
RESULTS

1094 cases were analysed. The male to female ratio was 1:1 with the transfusion rates skewed to an elderly population.

Figure 1 Age distribution of acute medical patients transfused

Figure 2 Subset analysis in acute medical patients

In this population, 30.3 % had possible iron deficiency, 3.4% B12/folate deficiency, 0.6% anaemia associated with positive direct antiglobulin test and 1.2% renal anaemia (defined as EGFR < 30). In total, 34% of cases have a possible potentially reversible anaemia

CONCLUSION

Most transfusions in the EAU / MAU settings are in the elderly. Less than a third of the decisions to transfuse were decided by consultants. There is a high rate of transfusion in cases with potentially reversible anaemia.

REFERENCE

National Comparative Audit of Blood Transfusions: 2011 Audit of use of blood in adult medical patients – Part 1, NHS Blood and Transplant / Clinical Standards Royal College or Physicians
Optimising emergency care for the older patient: a pilot study on patient characteristics, diagnostic and treatment patterns in a Dutch academic emergency department.

Edmée Schrijver

Audit & Quality Improvement

AIM

Current Dutch emergency care system focus on rapid emergency department (ED) management with 4 hour completion times, which may not meet specific needs of the older patient. This pilot study was conducted to assess geriatric patient profile in a Dutch ED.

METHODS

Observational pilot study in patients aged ≥70 years presenting at ED of a University hospital in Amsterdam, Netherlands.

OUTCOME/RESULTS

100 patients were included. Median age 81.0 (70–97) years, 35% male. Majority (86%) lived independently at home. Fall-related injuries were most common reason for ED presentation (36/100). 51.7% with current outpatient medication list (n=87) used ≥5 prescription drugs. 67/100 had ≥2 comorbid conditions. Delirium prevalence rate was 9%. Mean ED length-of-stay was 181.3±84.1 minutes. Involvement of ≥1 medical specialty significantly prolonged ED length-of-stay (p=0.001). 53/100 patients were discharged home. 27/53 presented with fall-related complaints, of which 1-in-4.5 had a 30-day ED return visit.

CONCLUSION

The majority of 70+ patients were discharged home. Over 50% presented with fall-related complaints of which nearly 1-in-4 returned within 30 days, suggesting that fall assessment was not adequately performed. Current Dutch ED care systems focus on rapid patient management with care being delivered by many specialities. As a result, care is fragmented, leading to poor care coordination. We believe geriatric assessment training for emergency physicians or adding geriatrician to the acute care team could improve care for older ED patients.
Medical Thoracoscopy is Safe and Efficient in the Investigation of Exudative Pleural Effusions

Alvin Soosay

Audit & Quality Improvement

Aim:

With the increasing burden of pleural diseases and high incidences of malignant pleural effusions, the BTS guidelines recommend the utilisation of medical thoracoscopy (MT) in the investigation of cytology negative, exudative pleural effusions. Only 60% of malignant effusions can be diagnosed by cytological examination.1,2 We assess the safety and efficacy of MT in our district general hospital.

Methods:

A retrospective review of case notes, radiology and pathology reports of patients who underwent MT between January 2010 and March 2012 was conducted. All procedures were performed or assisted by a level II thoracoscopist with the aid of live ultrasound scanning. Data was collected and analysed for minor and major complications and diagnostic yield.

Outcomes and Results:

43 MT were performed during the period. 88% of patients were male (n=38). The mean patient age was 70.1 years (SD 8.69). There were no major complications or deaths related to the procedure. 4 minor complications were noted (trapped lung, surgical emphysema, wound infection and haematoma). The diagnostic yield was 95.3% (n=41). 34.9% of patients had malignant histology obtained during biopsy (n=15), of which 60% showed malignant mesothelioma (n=9). The average length of stay (LOS) was 3.3 days. 63% of patients underwent MT electively (n=27) with an average LOS of 1.9 days.

Conclusions:

MT greatly improves the diagnostic yield for malignant pleural diseases (95.3% when compared to only 60% from pleural aspirate sampling). MT can be performed safely and effectively with no mortalities and low morbidity when performed by thoracoscopists with appropriate experience level.

References:


Implications of compliance with NICE guideline CG95 on Cardiology Services

Jamal Sajid

Audit & Quality Improvement

AIM

To quantify the need of additional diagnostic cardiology services in order to follow the NICE guidelines of ‘Chest Pain of Recent Onset’.

METHODS

We retrospectively audited the management of 73 consecutive patients, who had no previous confirmed CAD and were admitted with chest pain to Acute Medical Unit and had normal Troponin and normal or no new changes to their ECGs, during one month in Torbay Hospital, Torquay.

OUTCOMES/RESULTS

Out of 73 patients, 18 patients (25%) had typical angina, 42(57%) had atypical angina while remaining 13(18%) had non-anginal chest pain.

On estimating likelihood of CAD, 5 had very low risk, 10 had low risk, 17 had moderate risk, 18 had high risk and 23 had very high risk.

7 patients underwent coronary angiogram, 14 had exercise ECG, while no patient had functional imaging or CT calcium scoring done as part of their investigations.

CONCLUSION

In patients without confirmed CAD, NICE recommends the arrangement of investigations according to their estimated likelihood of CAD.

In our patients, 11 more patients should had coronary angiogram (18 in total), while functional imaging and CT calcium scoring should have been done in 17 and 10 patients respectively. None of the patients needed exercise ECG.

We recommend provision of additional diagnostic services, i.e. as an estimate, 132 more angiogram, 204 more functional imaging, and 120 more CT calcium scoring are needed during a 12 month period to comply with NICE guidelines.
Auditing 'Quality Indicators' at the Gloucestershire Royal

Matthew Williams

Audit & Quality Improvement

AIM: - The Society for Acute Medicine has published ‘Quality Indicators’ to be used by acute medical units (AMUs). Gloucestershire Royal Hospital (GRH) has a 25 bedded AMU with an average throughput of 13,755 patients per year. We looked for 100% compliance with the following targets:

1. All patients should have an early warning score measured upon arrival.
2. All patients should be seen by a competent clinical decision maker within 4 hours of arrival.
3. All patients should be reviewed by an appropriate consultant physician within 14 hours of arrival.

METHOD: - We manually collected timings from admission notes on 64 consecutive patients over two days. One day incorporated an additional ward round from 5-9pm.

RESULTS: - 42% patients had an EWS within 15 minutes (median 18, maximum 175 minutes). 100% were seen by an F2 or above within 4 hours (median 0, maximum 126 minutes). 76% were seen by a consultant on the AMU within 14 hours (median 7:18, maximum 26:45). We noted that patients admitted between 15:00 and 20:00 were the least likely to be seen within 14 hours. On the day with a ward round from 5-9pm (blue diamonds on figure 1) the number of patients waiting more than 14 hours for a consultant assessment was reduced from 43% to 13%. Patients transferred out from the AMU prior to consultant review took three times longer to be seen.

CONCLUSION: - Evening ward rounds on AMU significantly reduce time to consultant review. Patients should be reviewed prior to leaving AMU.

REFERENCES: -

1) Clinical Quality Indicators for Acute Medical Units (AMUs) - Society for Acute Medicine (2011)
Improved Access to Diagnostic Imaging in the Norfolk & Norwich AMU

Angus Butchart
Audit & Quality Improvement

AIM

The Acute Medicine Task Force and NCEPOD reports (2007)\(^1\,\,\,^2\) recommend expansion of emergency diagnostic support. At the Norfolk & Norwich, a target of 1 hour was agreed for departmental plain radiography. The service was reorganised following audit in 2008. A dedicated X-ray facility has opened on the AMU; radiology requests are given high priority. In May 2012 a dedicated AMU radiology porter was employed between 1200 - 2000hrs. We review the impact of changes to the service after two closed audit loops.

METHODS

Electronic requests were retrospectively analysed to assess the delay between chest X-ray request and completion. Study periods were 6 months in 2007/2008, 12 months in 2010/2011 and 3 months from May 2012.

RESULTS

In 2008, 24% of departmental CXRs met the 1 hour target (105 per month). In 2010/2011 that improved to 29% (178 per month). Since the introduction of an AMU porter dedicated to radiology, 39% of requests meet the 1 hour target (248 per month). During the porters’ working hours, 51% of CXRs meet the target.


CONCLUSION

A dedicated radiology porter and an X ray facility on the AMU are major factors in significantly improving our patients’ access to rapid imaging.

Electronic data systems in Acute Medicine are an easy, reliable and useful way of recording patient and performance data; they provide compelling evidence for change and allocation of resources.

Early Warning Scores in the Acute Assessment Unit

Eirini Kasfiki

Audit & Quality Improvement

Introduction

Early warning scores (EWS) are used to prompt identification and treatment of sick patients, cornerstones of improving clinical outcomes in an Acute Assessment Unit. Correct application of these trigger systems can recognise the deteriorating patient early, help prevent adverse events and improve patient safety (NICE GC50).

Aim

We aim to demonstrate the use of an education programme designed to increase the adherence to the Acutely Ill Early Warning Track and Trigger System (EWS), a TAPS initiative, in order to recognise and respond to deteriorating patients early, reduce preventable morbidity and improve patient outcomes within the Acute Assessment Unit.

Methods

A prospective audit was performed over 6 months with weekly monitoring of specific outcome measures in representative patient samples. A continuing staff education process was then introduced after the first month, focussed on medical and nursing staff working on the unit. All staff participated in weekly drop-in sessions with 1-to-1 advice and guidance, which were followed by Critical Care Outreach Clinical Nurse Specialist-led seminars for nursing staff. Posters providing point-of-contact EWS information and Trust escalation policies were displayed in ward stations and on main notice boards throughout the department.

Results

Prior to implementation of the educational programme, EWS was completed within 15 minutes for 34 patients (68%), and calculated correctly for 34% of them. This improved to 78.6% following the education programme. Correct EWS values were calculated and entered in 85% of cases. Particular improvement was noted towards the end of the study period.

Conclusion

Staff education is the key to improving patient outcomes with small incremental steps maximising benefit. The education programme devised was effective in promoting the use and effectiveness of an Early Warning System.
Analysing the Phenomenon of task interruption on the STR during the acute medical take.

Gordon Wood

Audit & Quality Improvement

Aim

Interruptions in the workplace have been associated with adverse events. In the UK the medical registrar has evolved to be the centrepiece of the acute take, which makes them particularly prone to interruptions. Our aim was to analyse the extent of task interruption on the medical registrar during the acute take and to identify their nature and resultant impact.

Methods

During a prospective observational study, two trained observers followed the medical registrar during this two hour period for 15 consecutive weekdays. Data was collected relating to the number, length, method and nature of all interruptions.

Outcome/Results

193 primary tasks were performed with a total of 286 interruptions. 49.2% of tasks were interrupted once and 30.6% more than once. 90% of interruptions caused a change in primary task. Primary tasks lasting more than 8 minutes incurred an almost 90% chance of interruption. General practitioners were the largest source of interruptions (21%) and the task most likely to cause an interruption was a telephone referral, which accounted for 20% of all tasks performed. Importantly, an increased actual time on task was spent clerking patients (p=0.005) and prescribing medication (p=0.052) when those tasks were interrupted.

Conclusions

The role of the medical registrar on the acute take is complex and subject to multiple interruptions, most notably on patient clerking and prescribing, arguably two of the most important tasks. Hospitals need to develop ways to reduce these interruptions, facilitating the focus on efficient assessment and treatment of the acutely ill patient.
No Fire without Smoke? Doctors in Acute Medical Units don’t advise to stop (but could have a significant impact)!

Christian Subbe
Audit & Quality Improvement

AIM

Evidence suggests that smoking cessation advice and treatment are effective during a hospital stay [1], probably because patients are motivated through their acute illness, are in a place where smoking is prohibited and pharmacotherapy is readily available. We aimed to assess cessation advice provided by medical staff [NICE PH010,2] dealing with acutely admitted patients.

METHODS

Supervised questionnaires delivered were delivered to a random sample of 200 patients on two Acute Medical Units (AMUs) in UK hospitals. Both hospitals had access to a local Stop Smoking Service (SSS). We excluded those patients unable to converse due to severe medical illness or anyone who was confused. Anyone who admitted to smoking within the last 7 days or had exhaled CO 10ppm were deemed smokers.

OUTCOMES/RESULTS

42/200 acute medical admissions were smokers and these were significantly younger than non-smokers, mean age 57 versus 70 years (p<0.05). 31/42 said they wanted to quit and all had tried previously, reporting 33 quit attempts. 7 (17%) recalled being advised by a doctor on the current admission to stop smoking. 22 recalled ever being advised by a doctor to stop smoking.

Only 1 patient (2%) was referred to the local SSS.

A targeted intervention by a single AMU doctor (PA) identified 17 more smokers from 100 further admissions. All were counselled and 7 (41%) agreed to be referred to the SSS.

CONCLUSION

We found a large unmet need for smoking cessation advice in AMU that was improved following a simple intervention. Sustainability needs further investigation.

REFERENCES:

“Specialised proforma for TLoC – the way to go!!” Re-Audit - piloting a structured TLoC proforma in University Hospital Acute Medical Unit

Omay Lee

Audit & Quality Improvement

BACKGROUND

Syncope is a common presentation in the Acute Medical Unit (AMU). An audit done previously compared the assessment of patients who presented with transient loss of consciousness (TLoC) in AMU to CG109 NICE guidelines. The results identified weak areas in documentation of clinical events and findings. Therefore a specialised syncope-proforma was designed in accordance to NICE.

AIMS

1. Re-audit to assess the effectiveness of specialised syncope-proforma to improve documentation and therefore to improve diagnosis.

2. Assess the feasibility of using this proforma in a time-constrained AMU.

METHODOLOGY

This prospective audit was conducted over 6-weeks in a busy University Hospital AMU. All consecutive patients with working diagnosis of TLoC were included. Traditional history-taking and documentation on a standard history sheet was compared with specialised TLoC-proforma. Feasibility in terms of time taken to fill the TLoC-proforma was compared with that of standard practice. Feedback was obtained from different grades of doctors.

RESULTS

Data from fifty-four patients (n=54) were analysed. Age range 75.9±2.8SEM. Clinical events and data-capture with the new proforma was 100%, however data-capture from the standard form ranged from 50% to 98% (Fig.1). It was also found that the TLoC-proforma consumed less time (20.4±13 vs 32.1±12.2SEM) when compared to standard case-notes and therefore is feasible. The final diagnosis correlated well with the diagnosis in the new proforma (Fig.2).

CONCLUSION

The new TLoC-proforma improved clinical-event capture, diagnosis and decreased inappropriate referrals. TLoC-proforma is feasible and consumed less time and hence useful for AMU.

RECOMMENDATION

To pilot the proforma use instead of standard case-notes. Re-audit in 6-months time.
Comparing our acute care quality indicators on AMU to SAM standards

Adnan Gebril

Audit & Quality Improvement

Aim:

Is the time of arrival to AMU is enough to evaluate the acute care clinical indicators on AMU advocated by SAM.

Methods:

Systematic approach to mapping inpatient flow system.

Prospective case notes reviewed of 676 patients admitted to AMU over 3 weeks in 05/2012.

276 patients were found to have complete data and were included in the audit. Additional data were taken from emergency department and patient track system (life electronic EWS system).

Data collected included date and time of admission to ED, date and time of referral from ED or direct admission to AMU, time of medical clerking by oncall medical team, time of transfer to AMU and time reviewed by on duty consultant.

Outcomes/ Results:

About 65% of patients referred were clerked in ED.

85 % of patients were medically assessed within first 4 hrs of referral or arrival. 15% were within 30 minutes and 35% within first hr. 85% of patients had consultant review within 12 hrs of admission. 5 % were reviewed at the same time of clerking. Just fewer than 40% of patients were reviewed within first 4 hrs.

Due to bed block, there is on average 2 hrs wait between patients being referred by ED and transfer to AMU.

Conclusion:

SAM standards are very important to follow and we have found that the clinical quality indicators should be evaluated from the time patients are referred from ED rather than the time they are transferred to AMU.

We think that every AMU should map their own process to match their own needs and identify the flow stream and blockage of their patients.

Reference:

It takes two to SAMBA: Using the Society for Acute Medicine's Benchmarking Audit (SAMBA 2012) “A day in the life of the AMU” to drive local improvement

Christian Subbe

Audit & Quality Improvement

AIM

We aimed using SAMBA data to improve local practice using rapid cycle change.

METODS

Two cohorts of patients, each admitted over a 24 hour-period, were reviewed against the National Standards of SAM: First during a pilot and on then on the Acute Medicine Awareness Day (SAMBA2012) 4 weeks later. We recorded timing of basic investigations and care processes, initial physiological observations and outcomes at 48 hours and 7 days.

Data of the initial pilot was shown on posters in utility and coffee rooms on the AMU and used by the nursing and medical team to discuss problems and suggest improvements in key parameters.

For the second cycle two parameters were selected for improvement: earlier treatment and weighing of patients.

RESULTS

Data was easy to obtain. 33 patients were admitted during the first 24-hour pilot period and 32 on the Acute Medicine Awareness days. The two chosen key performance parameters were improved after team review (Table). Additionally there was improvement of escalation processes.

At 48 hours and 7 days 39% and 70% of patients were discharged during the pilot and 42% and 69% during SAMBA 2012.

CONCLUSIONS

We observed timely care for the majority of patients. The data collection tool allowed identification of shortcomings in a way that facilitated feedback to teams with the scope for significant improvement.
SAMBA can be used as a standardized service improvement aid on the AMU but is likely to require refinement.
Documentation on Admission to the Horton General Hospital Critical Care Unit

Benjamin Millette

Audit & Quality Improvement

Aim

Staff in our small DGH critical care unit noticed that patient documentation on admission has been of variable quality with respect to local trust and Intensive Care Society guidelines. This could potentially lead to substandard patient care. We therefore designed and executed an audit and a targeted intervention to demonstrate this deficiency and rectify it.

Methods

We retrospectively identified non-elective critical care admissions for level two or three care over a period of two months and assessed them by means of a standardised scoring system with respect to nine essential admission documentation criteria. We implemented a new admission form and an awareness campaign following data collection. We then conducted two further one month retrospective audits to assess the impact of these interventions.

Results

In the audit, re-audit and second re-audit we identified 34, 18 and 16 patients for inclusion respectively. Of the nine criteria, these datasets had a mean of 5.41, 7.06 and 7.94 successfully recorded criteria respectively (p<0.001 comparing audit with second re-audit using Mann-Whitney U test). Five of nine criteria underwent statistically significant improvement between the initial audit and the second re-audit (two-tailed Fisher’s exact test p<0.05). The gold standard (100% compliance) was achieved in six of nine criteria.

Conclusion

These improvements represent significant progress in patient documentation and thus patient care. We expect patient care and outcomes to have improved by encouraging early consideration of treatment goals and limitations. Further work should focus on sustaining these changes and achieving 100% compliance in all of the criteria.
Audit of the Ambulatory Management of Suspected Pulmonary Embolism

Matthew Maw

Audit & Quality Improvement

Aim

Patients with suspected pulmonary embolism (PE) commonly present to the Acute Medical Unit and are traditionally managed as an in-patient. There is a growing body of evidence for ambulatory anticoagulation in low-risk patients, but limited evidence for out-patient investigation of suspected PE. In 2008, we implemented a clinical algorithm (diagram 1) to identify low-risk patients with suspected or confirmed PE, who could be managed as an out-patient at Sandwell General Hospital, West Midlands. The aim of this re-audit was to review our current practice following its introduction.

Methods

Low-risk patients for ambulatory management were identified as those with none of the algorithms prognostic variables (BP <100mmHg, pulse rate >100bpm, oxygen saturations <94%, respiratory rate >30, clinical/ECG evidence of right ventricular strain, positive troponin and significant co-morbidity). We retrospectively analysed the medical records of patients managed on an ambulatory basis between 2009-2011.

Results/Outcomes

We analysed 33 medical records. We found that each prognostic variable was not recorded in 100% of patients (table 1), which was the required standard. Despite this, there were no major adverse events/death in the first week. There were 2 minor adverse events (6%). At 3 months, there was the death of a patient following sub-therapeutic INR and 2 minor adverse events (6%).

Conclusion

The data from this audit suggests that the clinical algorithm can be used to identify low-risk patients, who can be successfully managed on an ambulatory basis. However, continued audit and education are required to ensure that the algorithm is adhered to.

References


Acute Medical Unit (AMU) Handover; A Risky Business

Charlotte Masterton-Smith

Audit & Quality Improvement

Aim

The Royal College of Physicians recognise handover as a ‘high-risk’ step in patient’s care [1] and local guidelines recommend that patients transferred from AMU should be handed over to their new team. Previous data showed poor compliance with these standards potentially increasing patients’ length of stay, affecting mortality and morbidity.

Methods

Over a two-day period all inpatient notes on the general medical wards were reviewed. 50 sets of notes were suitable for audit. Information was collected from patient notes and hospital computer records. Reasons for absence of handover were identified.

Results

50 patients were audited in May 2012. The results showed that 10% of handover documents were filled in. 86% of patients were transferred within working hours, and 96% were transferred on a weekday. A new easy-to-use handover tool was implemented and staff educated in the importance of handover. A re-audit of 47 patients at 2 months showed 28% of patients were handed over.

Conclusions

Startlingly few patients were being handed over on leaving AMU, despite transferring within working hours, where a member of both teams would be available to both give and receive hand-over. Our intervention has vastly improved this, however, there is still room for further improvement. A new cohort of junior doctors, the easy-to-use handover tool and further promotion, spells greater improvement at re-audit in a few months, the results of which will be available at time of presentation.

References

**International co-operation for the development of a National Patient Observation Chart (IRL) incorporating the National Early Warning Score**

Eilish Croke

Audit & Quality Improvement

**AIM**

To design a National Patient Observation Chart incorporating the National Early Warning Score, for use in all acute hospitals (IRL). This will ensure that there is consistency with regard to patients' vital sign observations while utilising our National Early Warning Score, in all acute hospital in the country. Using a National Patient Observation Chart would mean that health service staff would be familiar with the chart used for recording vital sign observations, while utilising the National Early Warning Score, when moving between all acute hospitals in the country.

**METHOD**

Following the agreement of a National Early Score in April 2011 in Ireland, an International and National review of Patient Observation Charts was carried out. A draft chart was designed and reviewed by national and international experts. A quality improvement process was adopted. The chart was piloted in four acute hospital sites in Ireland and users of the chart in the clinical area provided feedback availing of an 'issues log’ i.e. a feedback system set up on email. Following this improvements were made the chart.

**OUTCOME / RESULTS**

The National Patient Observation Chart was agreed and signed off at senior Health Service Executive Level in February 2012. The chart is colour coded, incorporates the National Early Warning Score, utilises the Airway, Breathing, Circulation, Disability, Exposure (ABCDE) Assessment principles and SEPSIS Six prompts. It is currently being implemented in all acute hospitals in Ireland. Some hospitals have added sections for relevance to their service area e.g. Renal Units. A website contains all the relevant information for staff (www.hse.ie/go/nationalearlywarningscore/)

**REFERENCES:** Available on request

**Acknowledgements:**

To: Dr. Christian Subbe, Senior Clinical Lecturer in Acute and Critical Care Medicine at the School of Medical Sciences, Bangor, Wales for sharing the prototype patient observation chart.

To: Assoc. Prof. Imogen Mitchell, Critical Care Consultant, Canberra Hospital, Australia and Heather McKay, Program Manager for the Early Recognition of the Deteriorating Patient
Program for the ACT Government, Canberra Australia, for sharing their colour coded patient observation chart, reviewing drafts and offering support throughout the process.
Comparison of communication experience between hearing impaired and hearing patients in the AMU setting: an analysis based on the adult inpatient survey questionnaire results

Elpida Toumasi

Audit & Quality Improvement

AIM

Hearing impaired individuals may face communication barriers when in a new environment. We postulated that patients with hearing impairment admitted to acute medical units (AMU) may have more communication difficulties with staff compared to hearing patients. These difficulties may be more significant in AMU’s compared to other hospital wards as AMU’s are often busy and noisy wards and patients have contact with many staff who are often new to them and may be unaware of their hearing difficulties.

METHODS

We analysed national results of the CQC Adult Inpatient Survey (AIPS) 2010. We selected patients admitted as medical emergencies with LOS ≤ 2 days and who remained on the admitting ward, assuming that probably were cared for on AMU. We compared the proportion of patients reporting “no problem” for questions about communication, respect and overall care, between patients with and without hearing impairment in this group. We also compared the responses of patients with hearing impairment in this group with all other. Comparison was by Chi-Square test with alpha 0.05.

OUTCOMES/RESULTS

These are outlined in tables 1 and 2.

CONCLUSION

Patients with hearing impairment admitted as short stay medical emergencies were less often able to get answers to their questions, to find staff to discuss their concerns, were less involved in decisions, and less likely to have adequate instructions on discharge. Several aspects of communication were worse in the “AMU” group than for other in-patients. We recommend that Acute Medicine professionals explore ways to improve communication with this vulnerable group.
What's the catch? Understanding the context of change in complex acute settings to ensure that the change is an improvement

Katie Randall

Audit & Quality Improvement

Aim: To use a variety of quality improvement (QI) methods in combination to inform the effective implementation an evidence-based care bundle for all Community Acquired Pneumonia patients on arrival to hospital via the Emergency Department or Acute Medical Unit to improve uptake and outcomes.

Methods: A series of multidisciplinary facilitated workshops produced a complex process map of the ED and AMU care pathways. Critical Path Methods highlighted timings and dependencies, and Failure Modes Effect Analysis identified steps with the highest risk of ‘failure’ to meet the 4 hour treatment goal. Patient Mapping was undertaken to ascertain the experience of the patient at various steps in the pathway which added a critical human element to the breakdown which had demonstrable benefits.

Results: The visualisation and resulting comprehension of the different processes and dependencies in the care pathway allowed the project team to effectively focus resources to address delays and inefficiencies, ensuring the greatest impact on patient care and staff processes. All active stakeholders could be clearly identified and appropriately engaged, and training and changes introduced to ensure quicker x-ray ordering and drug administration.

Conclusion: This novel combination of QI methods displayed visually allowed quick dissemination of information and increased bundle usage. Both the production and the results of these exercises built capacity and capability within the acute workforce through practical use of QI methods and increased insight into local practice. Staff participation resulted in local staff ownership, and a focus on patient experience added to the motivation for improvement.
Treatment Room Standardisation in Croydon University Hospital

James Bickley

Audit & Quality Improvement

Aims

- Standardise equipment layout in all treatment rooms across Croydon University Hospital
- Increase ward efficiency and productivity
- Improve patient safety

Methods

- Timed challenge to 16 Foundation Year 1 doctors to locate eight items required to insert a venous cannula
- Questionnaire to 40 doctors based on perceptions of patient safety and treatment room efficiency
- Open discussion with clinical staff about most appropriate layout of equipment
- Two week trial period on 'Ward 1'
- Alterations following further discussions with 'Ward 1' staff
- Rolled out across Croydon University Hospital
- Increased awareness amongst clinical staff through Trust e-mail
- Identification of ward individual responsible for continued compliance

Results

- Foundation Year 1 timed challenge
  - Pre intervention times ranged from 56 to 375 seconds with a mean of 130 seconds
  - Post intervention times for 16 doctors ranged from 16 to 48 seconds with a mean score of 30 seconds (compared in Graph 1)
- Questionnaire
  - Twenty doctors surveyed. The results showed a decrease in perception of both the time spent and difficulty (mean score from 7.15 pre to 2.95 post intervention, 10 being most difficult) locating equipment and improved patient safety
- Clinical staff feedback
  - Once adapted to the new layout, clinical staffs comments showed their appreciation in the value of the project and increased satisfaction with the layout
Conclusions

- Decreased time locating equipment leading to increased efficiency and therefore more productive staff
- Increased time for patient centred care
- Increased patient safety
- Increased multidisciplinary team working (shared responsibility for locating and restocking equipment)
- Increased staff satisfaction
Clinical Quality Indicators for Acute Medical Units: Feasibility of Data Collection from Electronic Patient Records

Mark Holland

Audit & Quality Improvement

INTRODUCTION

The Society’s Clinical Quality Indicators (CQIs) measure the global functioning of an Acute Medical Unit. Standards will only be met if the right systems for delivering care are in place. However, there is some apprehension about the ease and accuracy by which data can be recorded. This study was designed to not only benchmark our current practice but also assess the feasibility of collecting data from electronic patient records.

METHOD

We studied the patients seen in our immediate assessment area in May 2012. Patients were identified from the venous thromboprophylaxis monitoring list. Data was drawn from our electronic records (iSOFT). Data pertaining to the CQIs was collected. Once proficient, the data collector timed the collection of data from 100 consecutive case records.

RESULTS

407 patient data sets were analysed. The results are summarised in Table 1. We also report readmission and mortality data at 28-days from admission. It took approximately 3.5 hours to collect 100 patient data sets and in addition 2 hours to collect all the 28-day data. The electronic records also afforded the opportunity to easily look at the reasons for failing to achieve CQIs 2, 3 and readmission.

CONCLUSIONS

Our electronic patient records contain all the necessary data to collate CQIs. We will develop the system to collect data more easily as the current manual process is time intensive. Using electronic patient records also provides ready access to the reasons why CQIs are not met, leading to service improvement through a dynamic and iterative process.
Management of Patients with Headache—What Does The Future Hold?

Bushra Alam

Audit & Quality Improvement

Aim

More than 10 million people in the UK experience headaches. Concerns that patients who experience headaches and migraines might not be receiving correct and timely diagnoses has led to publication NICE guidance (currently out to consultation) on the assessment and management of headaches.

In an attempt to reduce unnecessary investigations ‘red flag’ symptoms highlight the need for further investigations.

The aim of this study was to investigate the results of lumbar punctures performed on patients presenting with headaches.

Methods

Results from lumbar punctures performed from medical wards were collected for a six-month period from January 2012.

109 lumbar punctures were preformed following CT brain to further investigate patients with headaches. See table 1

Results

Of the 49 lumbar punctures performed for suspected subarachnoid haemorrhage, 2 samples were positive for xanthochromia and 41 negative. Six samples had either insufficient CSF sent or exposed to light resulting in a possible false negative.

Conclusion

The findings suggest that a considerable number of patients exposed to invasive investigations with little positive yield. On the basis of the study a clinical decision tool is being developed locally, to assist in the correct diagnosis of headaches ensuring neuroimaging and lumbar punctures are only performed where clinical need dictates.
Interestingly Perry et al report that modern third generation CT scanners have a sensitivity and specificity of 100% for detecting subarachnoid bleeds when performed within 6 hours of a new acute headache, which reaches maximal intensity within one hour of onset.

References


Lessons from 'Adding insult to injury' NCEPOD report

Suneeta Teckchandani

Audit & Quality Improvement

AIM

Acute kidney injury (AKI) occurs in around 20% of acute hospital admissions and its incidence appears to be rising. In 2009, NCEPOD reported deficiencies in care of 50% of patients with AKI\(^1\).

Therefore, the aim of our audit was to review our practice.

METHODS

We retrospectively analyzed a random selection of AKI patients. We designed an audit tool which looked at NCEPOD and Renal association recommendations\(^1,2\). We looked at 25 patients at each site (2 sites - CRH & HRI). Our inclusion criteria were based on the definition of AKI (KDIGO criteria). 19 patients at CRH and 22 patients at HRI met inclusion criteria.

RESULTS

Nearly all our patients were diagnosed with AKI at the time of admission\(^\text{fig1}\).

Basic investigation like urine dip was not done in all patients and so was urine output monitoring\(^\text{fig1}\).

More than 90% of our patients had a senior review within 12 hours\(^\text{fig1}\).

All patients noted to be hypotensive were given intravenous fluids and their antihypertensive medications were stopped. Nephrotoxic medications were stopped in all patients. Around 40% of patients did not have renal dosing for medications.

In response to these results we designed an AKI bundle\(^\text{fig2}\). We piloted it in 15 patients and the re-audit showed an improvement in the areas where we were lacking.

CONCLUSION

AKI is a common presentation to AMU and there is evidence that non specialists are not good at managing this. We have designed an AKI bundle which clearly has shown to improve care in our patients.

References