2014

MCHFT Exposition

Book of Abstracts

'Evidencing Quality

11th July 2014

Leighton Exposition

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‘Evidencing Quality’

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Acknowledgements

Organising Committee

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LEIGHTON EXPOSITION – 2014

‘Evidencing Quality’

11th July 2014 : 10:00 - 15:00

Postgraduate Medical Centre, Leighton Hospital, Crewe

PROGRAMME

09:00	Registration
10:00	Welcome to the Exposition: Dennis Dunne, Chairman, MCHFT
10:15	Official Opening of the Exposition: Rt Hon Stephen O’Brien, MP Eddisbury
10:30	Introduction of Adjudication Panel: • Tracy Bullock, Chief Executive, MCHFT • Lesley Massey, Director, AQUA • Professor Neil Fowler, Head of Department & Associate Dean Curriculum and Quality, MMU
10:45	Start the Competition for Best Poster
12:30-13:00	Lunch
13:30	Announcement of Competition Winners & Presentation of Awards
14:00	Continued Viewing and Discussion
15:00	Close

Tea and coffee will be available throughout the day

Past Winners

2012 EXCELLENCE AND INNOVATION

1st	"The Assessment and Monitoring of Urinary Catheters on Medical Wards in Leighton Hospital" "A Review into Stroke Mortality in Leighton Hospital: Terminal Events" "A Review into Stroke Mortality in Leighton Hospital: Post Stroke Complications" Somauroo MI
2nd	"CT Dose Audit" Greenwood S
3rd	"An Audit of Medicines Reconciliation Accuracy at MCHFT" Wilkinson L
Student	"How Did You Get Here" Parr K

2011 CHANGING PRACTICE, INFLUENCING OUTCOMES

1st	"Achieving a 14 Day Turn Around in Gynae Cytology" Randall A
2nd	"Performing the Foundation Teaching Programme at Leighton Hospital: Going Back to the Foundations" Jackson V, Wilson A & Zaman S
3rd	"Implementing NICE Workplace Health Guidance in Mid Cheshire Hospitals" Preece R
Student	"What are the Sources of Anxiety When Attending a Sexual Health Clinic and can we Improve Patient Experience" Virdee T

2010 QUALITY COUNTS

1st	"Are Intubated Patients Having Their Cuff Pressure documented Appropriately and Maintained within an Acceptable Range of Pressures" Eyeington C
2nd	"Does Volume-Outcome Relationship Exist in the Hospital Episode Statistics (HES) Data? A Quantitative Analysis of Hospital Volume & In-Hospital Mortality for Complex Cancer Surgery Based on HES" El-Dhuwaib Y, Cade D, Slavin JP & Willmott S
3rd	"Do We Follow NICE Fever Guidelines in Assessment of Infants in a District General Hospital Paediatric Unit" Yelland M & Thompson A
Student	"Opportunistic Chlamydia Screening: Can Chlamydia Screening in the Emergency Department Reach a Different Section of the Target Population" Stanley L & Ellks R

2009 SHARED LEARNING

1st	"Communication Friendly Environments – Promoting Autonomy and Access for People with Memory and Cognitive Impairment" Learoyd J & Dementia Care Pathway Group
2nd	"The Effect of Consultant Caseload on re-Operation for Recurrence following Inguinal Hernia Repair in England" El-Dhuwaib Y, David G, Corless DJ & Slavin JP
3rd	"Medicines Reconciliation on Admission at a District General Hospital" Ritchings A, Thomas K, Bradbury C & Allen T
H.C.	"Admissions for IV Antibiotics in Children with Cystic Fibrosis – An Audit of Admission Documentation in Multidisciplinary Case notes" Bowen A & Ellison J

2008 IMPROVING QUALITY

1st	"Collaborative Working : Implementing National Guidelines to Recognise and Respond to Acute Illness amongst the Obstetric In-Patient Population" Hancock A & Hulse C
2nd	"Patient Satisfaction – Post Stapled Haemorrhoidopexy in a District General Hospital" Ved A & Chowdhary S
3rd	"Implementation of Healthcare Recommendations Arising from the Victoria Climbie Inquiry 2003" Pugh RE, Gardner S & Rozzell M
Student	"The Challenge and Evidence Based Solution of the Management of Pain in Elderly Medical Patients" Talbot A & de Mellow WF

2007 MAKING KNOWLEDGE COUNT

1st	"Chlamydia Screening in Schools in Central & Eastern Cheshire" Ritchie D & Hall J
2nd	"Orthopaedic Re-Admissions for Fracture Neck of Femur" Pegg D, Simpson H & Rozzell M
3rd	"Therapies Early Supported Discharge Team: A Pilot for Stroke Patients" Prowse J & Masterson H

2006 GETTING EVIDENCE INTO PRACTICE

1st	"A Prospective Study of the Relationship of Severity Assessed by CURB-65 Score & Mortality in Patients with Community Acquired Pneumonia" Kedia R, Kumar A & Khetan S
2nd	"Patient's Satisfaction with Day Case Tonsillectomy" Chan P
3rd	"Repeat Hospital Admissions following Cholecystitis in England 2003 / 2004" David G, Al-Sarira A, Corless DJ & Slavin J

2005 INAUGURAL EXPOSITION

1st	"Colorectal Symptoms in the Community – A Ticking Time Bomb" Soin G, Armitage J, Selvachandran SN & Cade D
2nd	"Is a DRE Essential in Diagnosing Early Prostate Cancer?" Phillip J, Marr C, Hough C & Javle P
3rd	"A Prospective Study of Yield of Fibre optic Bronchoscopy (FOD) and CT Thorax for Lung Cancer in Patients with Haemoptysis with Normal or Non-localising CXR" Kedia R et al

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Abstract 1

AUDIT OF PREOPERATIVE NON PRESCRIBED DRUGS HISTORY

Author(s):
Damani Z, Formisano R (Anaesthetics) MCHFT

Background/Introduction/Aims:
The audit follows the publication of the paper 'Herbal Medicines and Anaesthesia' (Continuing Education in Anaesthesia, Critical Care and Pain, 2011), which highlights the following points.

- The use of herbal medicines is increasing - a significant proportion of these remedies have side effects and drug interactions which are relevant to anaesthesia and surgery
- The American Society of Anaesthesiologists recommends that patients discontinue the use of herbal medicines 2-3 weeks before surgery

The aim of the audit was to avoid interactions between herbal remedies and anaesthesia. The objectives were to assess how many patients presenting for elective surgery in our trust were taking herbal remedies relevant to anaesthesia and surgery and assess whether patients were asked at Pre-Op Assessment Clinic (POAC) about non-prescribed drugs.

Methodology:
Data was collected prospectively over a period of 2 months (July and August 2012) and a sample of N=486 was collected; Male 209 (43%), Female 277 (57%). The audit looked at all adult in-patients presenting for elective surgery.

Results:
A significant proportion of patients undergoing elective surgery in our trust use non prescribed drugs; 3.5% of patients use herbal remedies relevant to anaesthesia and surgery. Only 29.8 % of patients were asked at POAC about non prescribed drugs use.

Conclusions/Recommendations:
The following recommendations to POAC staff were made:

- to take a full drug history including herbal medicines
- to advise patients to stop herbal remedies relevant to anaesthesia 2 weeks before surgery

Abstract 2

ADHERENCE TO BRITISH HERNIA SOCIETY GUIDELINES

Author(s):
Hanafy M, Fletcher J, Cozon C (General Surgery) MCHFT

Background/Introduction/Aims:
Inguinal hernia repairs are amongst the most commonly performed general surgical operations. In the NHS, patients and surgeons have the choice between various techniques and materials and currently it is left to the surgeon and healthcare policy makers to decide which to use. At present there is no national system of audit or follow-up. The British Hernia Society has produced guidelines representing the currently available best evidence in the management of groin hernia. This audit is to ascertain the degree to which Hernia practice at MCHFT adhered to the latest guidelines.

Methodology:
- Retrospective analysis between 1st Jan 2013-31st Jul 2013
- Inclusion criteria: Adult (age 16+); Underwent inguinal hernia repair (primary/recurrent/unilateral/bilateral); Elective case - open or laparoscopic repair
- Data collected by reviewing case notes using a standardised data collection tool
- Data collected solely by SHO to ensure consistency
- Data analysed using MS Excel

Results:
Overall we are meeting and or exceeding BHS guideline, with the exception being 30 day readmission rates

Conclusions/Recommendations:
Overall the trust met the audit target with the exception of 30 day readmissions rates. The available guidelines do not specify if 30 day readmissions include those readmitted within 7 days or if the two are separate; the team will clarify this situation.
Why?
- Mainly due to 7 day readmissions
- Relatively small numbers/sample size?
- Patient selection for day case vs. inpatient procedure?
- Can we reduce incidence of hernia related readmissions?
- Several patients with urine retention – are we sending patients home prematurely?
- Readmissions with wound infection – is our current “no antibiotic prophylaxis” policy appropriate?
- Do we need to consider antibiotics in higher risk patients (e.g. diabetics?)

The central recommendation will be to continue current practice. The data surrounding waiting times will be reviewed however in this stance it was outside the remit of the audit and no specific recommendations will be made at the current time.
Recurrence rates at 12 months could not be assessed as insufficient time had passed since primary surgery, thus a re-audit will be carried out in August 2014.

Abstract 3

TRUSTWIDE CLINICAL AUDIT OF BLOOD PRODUCT WASTAGE FIGURES AT THE MID CHESHIRE HOSPITAL FOUNDATION TRUST (MCHFT)

Author(s):
Adams LJ (Pathology), Platt RJ (Clinical Audit) MCHFT

Background/Introduction/Aims:
At MCHFT, blood products should be administered and used in accordance with the recommendations set out by the NHS Blood Transfusion Service. The purpose of auditing blood product wastage is to see that this is done and to determine where and why blood products are being wasted and how we can reduce this cost to the Trust, as set out in the Health Service Circular Better Blood Transfusion HSC 2007/001. The aim is to audit and trend wastage figures yearly, evaluating MCHFT blood product wastage and identifying and implementing standards for blood ordering; whilst establishing closer links with all divisions within the Trust.

Methodology:
This is an annual project where the monthly wastage figures from all divisions within the Trust are collated and recorded on a central spreadsheet. These figures are collated monthly and fed back to each division; this allows reflection of the causes for blood product wastage and allows any areas of concern to be addressed. The figures are then totalled at the end of the financial year to show the annual Blood Product Wastage figure.

Results:
The results have shown that active liaison and involvement with all divisions within the Trust has made an impact in reducing blood product wastage results:
2009-10: £18,691
2010-11: £14,042 (-25%)
2011-12: £12,328 (-12% from previous year, -34% since 2009-10)
2012-13: £ 8,425 (-32% from previous year, -55% since 2009-10)
2013-14: £ 8,570 (+1.7% on previous year, -54% since 2009-10)

Conclusions/Recommendations:
To continue to monitor blood product wastage figures monthly and to highlight areas of concern regarding wastage issues to all divisions for their attention and to rectify, under the surveillance of the Hospital Blood Transfusion Committee.

Abstract 4

DEVELOPMENT OF MULTIDISCIPLINARY CARE PATHWAYS AND A SERVICE SPECIFICATION FOR PAEDIATRIC AUDIOLOGY SERVICES IN CHESHIRE

Author(s):
Warren L (MCHFT), Curran A (Withington Hospital), Dalzell J, Donald S (COCHT)
Members of CHSWG (Cheshire Children's Hearing Services Working Group)

Background/Introduction/Aims:
Since the introduction of the Newborn Hearing Screening Programme (NHSP) there has been a systematic development of national guidelines for hearing screening and paediatric audiology services commonly underpinned by Quality Assurance. As a consequence of this, a process of ensuring the service is streamlined and well integrated is essential for both service providers and users.

Methodology:
A subgroup of the Cheshire CHSWG, consisting of NHS paediatric audiology based clinical scientists and paediatricians, was formed to work on developing the patient care pathways. The aim of these care pathways was to map out paediatric audiology and its interactions with other agencies or services for hearing impaired children across Cheshire. The care pathways contribute to the ongoing development of a service specification for paediatric audiology. The care pathways outline services for hearing impaired children, from birth to transition to the adult audiology services.

Results:
A draft service specification has been developed using the NHS Standard Contract Document for 2012/2013 using five mandatory sections with subheadings as agreed locally:

- Section 1 describes the evidence base for the description of this service model and includes the references supporting the care pathways.
- Section 2 describes the aims and objectives of the service
- Section 3 outlines applicable service standards specifying Key Performance Indicators, a threshold and method of measurement and outcomes of any breach
- Section 4 of the service specification is to detail outcome measures used to monitor the service including feedback from the parent subgroup
- Section 5 describes the need for the service to be delivered at locations convenient for service users, with suitable facilities meeting the relevant national standards

Conclusions/Recommendations:
The care pathways and ongoing development of the service specification highlight the complexity of the service we offer hearing impaired children; however it was felt important to document the involvement of other agencies in the multidisciplinary service in order to effectively advise commissioners.

Abstract 5

SEPSIS IN ACUTE SURGICAL ADMISSIONS: COMPLIANCE WITH THE SEPSIS SIX GUIDELINES AND ITS CORRELATION WITH 30-DAY MORBIDITY AND MORTALITY

Author(s):
Gerakopoulos S, Balance L, Slavin J (Surgery) MCHFT

Background/Introduction/Aims:
Severe sepsis is estimated to result in 37,000 deaths each year in the UK. Sepsis is also prevalent amongst surgical patients, with studies demonstrating that sepsis and septic shock are ten times more common than perioperative myocardial infarction or pulmonary embolism in surgical patients. The aim of our study was to audit the adherence to international sepsis guidelines amongst acute general surgical admissions and its correlation with 30-day morbidity and mortality

Methodology:
Any patient aged 16 years and over, admitted urgently with sepsis to the general surgical department over a period of 8 weeks, November - December 2013, was included. Patients were included whether or not they ultimately underwent surgery or another invasive procedure, were treated with medical interventions, or were managed conservatively. Compliance with the Sepsis Six Guidelines and achievement of timely source control were audited. Any 30-day morbidity or mortality was also recorded. A specially designed tool was used for data collection.

Results:
Thirty four patients admitted urgently with sepsis were identified. Mean age = 62.4 (18-91) SD=22.3, male=20, female=14. Number of patients that underwent an operation = 7. Proportion of patients where the source of sepsis was identified =91.2%. Proportion of patients treated according to all of the Sepsis Six Guidelines = 47% (control group), proportion of patients that received 5 or fewer of the Sepsis Six Guidelines = 53% (case group).There was a statistically significant increased prevalence of 30-day morbidity and mortality in the case group as compared to the control group

Conclusions/Recommendations:
Our study, despite the small numbers, confirms that the early identification of high risk septic surgical patients and the treatment of them according to the Sepsis Six Guidelines are greatly beneficial for their welfare and their positive final outcome, reducing morbidity and the mortality. We aim to disseminate our results throughout the surgical department through teaching sessions of junior doctors and senior nurses, thereby increasing awareness of sepsis diagnosis and management, with the aim of re-auditing this project in 6 months.

Abstract 6

SMOKING CESSATION SERVICES: WHAT MOTIVATES PEOPLE TO STOP SMOKING?

Author(s):
Lumley S, Morris E, Thomas P, Fullerton D, Nazareth D (MCHFT)

Background/Introduction/Aims:
Interventions to help smokers to quit are effective and highly cost effective, should be offered to all smokers as a routine component of healthcare provision and is a NHS and NICE priority.
Our NHS Trust has a smoking cessation in-reach service and this study assesses the smoking patterns of in-patients, their motivation to quit and their engagement with smoking cessation services (SCS).

Methodology:
We administered a structured questionnaire to consecutive patients admitted via the medical admissions unit assessing the above. This was done over a three month period from December 2013 – February 2014.

Results:
- Of the 80 in-patients surveyed 47% had a smoking history (current 21%), with a mean pack years of 12 (range: 0.2-53) for ex-smokers and 18 (0.7-75) for current smokers.
- Successful ex-smokers (79%) quit predominantly due to cost (48%) and personal illness (38%)
- Of these successful ex-smokers 67% quit without assistance, 19% using SCS and 10% with support from family/friends
- The most common reason for patients to restart smoking were due to stress (57%) and lack of willpower (29%)
- During the preceding 12 months, 41% of smokers attended hospital or visited their GP (94%). Only 41% of these patients were offered a referral to SCS [GP (15%) and hospital (22%)], with the 14% that accepted this service, 50% ultimately did not utilise the service

Conclusions/Recommendations:
This survey indicates that cost and poor health are major contributors to stopping smoking. Stress was the most common factor for restarting. Secondary care referral rates for smoking cessation advice need improving. This is important, as those patients who utilise a SCS are more likely to successfully stop smoking. We are working with our SCS team and the Trust to increase the frequency of in-reach services.

Abstract 7

COMPLIANCE WITH SURVIVING SEPSIS GUIDELINES DURING INITIAL RESUSCITATION OF PATIENTS WITH SEVERE SEPSIS

Author(s):
Ballance L (Surgery), Hammell C (Critical Care) MCHFT

Background/Introduction/Aims:
The incidence of sepsis, severe sepsis and septic shock is increasing, with around 18 million people a year developing sepsis. It carries a very large morbidity and mortality with around 1400 deaths worldwide every day and is responsible for a large proportion of admissions to Intensive Care Units (ICU) with resultant cost to the NHS. The Surviving Sepsis campaign was created with an aim to decrease mortality from severe sepsis by a third. International guidelines were created to assist with patient management during the early resuscitation phase. They include appropriate fluid resuscitation, early and appropriate antibiotic therapy, blood cultures being performed and measurement of serum lactate.

Methodology:
A retrospective audit was undertaken between sample dates: 01/05/2012 – 01/05/2013, of 50 patients admitted into ICU with a diagnosis of sepsis. Compliance with the initial resuscitation recommendations from the surviving sepsis campaign was measured. Data was collected on a tool and entered into an excel spreadsheet.

Results:
From the 50 notes identified, 34 notes were available and relevant to this audit. The mean age was 64. The complete sepsis guidelines were followed in only 6 of the 34 patients (15%). The biggest area of concern was the fluid management, with only 41% of patients receiving 30ml/kg of fluid prior to ICU admission. Although the figure for collecting 2 sets of blood cultures was low, most (88%) had one set taken prior to antibiotic administration. Tazocin was the most commonly prescribed antibiotic, with it being prescribed in 50% of patients.

Conclusions/Recommendations:
1. Reinforcement to clinical teams regarding use of the trust sepsis pathway. This recommendation has been embedded into the trusts sepsis training which is now mandatory for all clinicians
2. Education of F1/F2 doctors regarding fluid management/antibiotics in sepsis
3. Brief redesign of the sepsis pathway to add information regarding appropriate initial antimicrobials

Abstract 8

(REGIONAL) AUDIT OF MASSIVE HAEMORRHAGE

Author(s):
Tarkovacs G (Haematology), Adams LJ (Pathology), Platt RJ (Clinical Audit) MCHFT

Background/Introduction/Aims:
The National Patient Safety Agency issued a Rapid Response Report (NPSA/2010/RRR017) in 2010. The North West Regional Transfusion Committee also issued a Regional Massive Haemorrhage Protocol to be introduced within all Trusts in the North West. The North West Regional Transfusion Committee will continue to assess how massive haemorrhages are dealt with across the region; of which this clinical audit forms part of the assessment.
The regional clinical audit data was collected for 2013-14 and submitted. However, due to issues related to staffing at the Regional Centre, a Regional Report was not published; hence, a local report was collated by the MCHFT Transfusion Practitioner and Clinical Audit Facilitator, for information at the Hospital Blood Transfusion Committee. Results are reviewed at the Hospital Blood Transfusion Committee and feedback given to the Divisions concerned.

Methodology:
The response and management was reviewed for all patients who have suffered a massive haemorrhage between 1st April 2013 and 31st March 2014. Health Records for the patients were retrieved and the episodes scrutinised by the Hospital Transfusion Practitioner. Data was entered into an Excel spreadsheet, for analysis.
During the period there were 21 patients for whom the Massive Haemorrhage protocol was initiated, but two of the instances are exceptions to the study with one patient deceased and the protocol stood down, whilst another patient was transferred to the University Hospital of North Staffordshire, therefore the audit sample was 19.

Results:
Although the result of 58% (11/19) for correct initiation of the Massive Haemorrhage policy is low and below the standard, we can see that improvements have been made throughout the year, following feedback being given to the Divisions post-massive haemorrhage. Obstetrics did not comply with the Regional Massive Haemorrhage Policy until September 2013, due to adopting their own massive haemorrhage protocol. Practice improved within the Obstetrics Department when the Regional Policy was followed.

Conclusions/Recommendations:
Continue to audit each initiation of the Massive Haemorrhage (MH) and share the results with the division where the MH occurred. Arrange simulation sessions of massive haemorrhage situations. Complete IR1 forms where avoidable wastage has occurred. Should a Regional Report be published, that will be attached to the project and dealt with accordingly; a Gap Analysis will be written.

Abstract 9

RE-AUDIT OF EXCISION RATES OF BASAL CELL CARCINOMA (BCC) IN THE DERMATOLOGY DEPARTMENT

Author:
Harris AJ (Dermatology) MCHFT

Background/Introduction/Aims:
A previous baseline clinical audit was undertaken in 2010 to discover the excision rates of BCC and to look at the management of the patients within the Dermatology department. The re-audit was undertaken to establish and compare current practice of Basal Cell Carcinoma excision rates against the previous findings with the aim of producing local guidelines for adherence here at MCHFT.

Methodology:
This was a retrospective data collection; where 538 patients were treated for Basal Cell Carcinoma between 1st July 2011 and 1st February 2013, which included 1 incision, 33 punch biopsies, 138 curettage and cautery and 366 excisions. The audit only considered those patients who had excisions performed in the Dermatology department (366). All histology reports were reviewed and anomalies identified, in order for patient health records to be examined and reasons for discrepancies established. Data was collected in an Excel spreadsheet for analysis.

Results:
315/366 (86%) patients had BCCs completely excised with uncomplicated margins.
13/366 (4%) patients had incompletely excised lesions, of which 5 were not referred to MDT for discussion.
38/366 (10%) of BCCs were completely excised with < 1mm of normal skin, representing an improvement of 5% from the previous audit.
There was a 4.5% improvement in patients who had BCCs excised with 1mm margins.
There was a 0.5% improvement in patients with involved excision margins.

Conclusions/Recommendations:
There was inconsistent patient management between medical staff and there was lack of evidence of adequate information regarding follow up for patients in certain cases. There was significant operator variability, but this may be attributable to complexity of cases and numbers seen. Guidance for the management of Basal Cell Carcinoma in the Dermatology department is to be developed.

Abstract 10

AUDIT OF PHOTOTHERAPY

Author(s):
Wong C, Lloyd C, Blackburn R, Billington S (Dermatology), Platt RJ (Clinical Audit)
MCHFT

Background/Introduction/Aims:
The purpose of this project was to check that patients undergoing phototherapy treatment were adhering to recognised guidelines; that patients were not exceeding the recommended numbers of treatments per course or total cumulative treatments, and thus checking that treatments were being administered with minimal adverse effects and maximum response.

Methodology:
This was a retrospective audit of patients who had Phototherapy treatment between 01/05/2011 and 31/12/2011. 100 Patients were identified and two patients were excluded as one patient did not attend the course of treatment and another self discharged, Hence the sample n=98. Information was entered onto an excel spread sheet for ananlysis by the Phototherapy Nurse and Technicians.

Results:
95/98 (97%) of patients had documented consent in their patient health records.
41/98 (42%) had more than 30 treatments per course, but of these 40/41 (97%) had clinician input to approve this.
97/98 (99%) returning patients had Minimal Exposure Dose/Minimal Phototoxic Dose testing if it was more than 12 months since the last treatment.

Conclusions/Recommendations:
Maintain high standards evidenced for phototherapy treatment through the development of a Standard Operating Procedure.

Abstract 11

AUDIT OF EXTRACTED TESTOSTERONE REQUESTS

Author(s):
Scott J (Biochemistry) MCHFT

Background/Introduction/Aims:
Female testosterone samples are tested in-house in a direct (non-extracted) immunoassay, which can give falsely high results. Subsequently, samples are sent for testing in an extracted immunoassay, which has time and cost implications. When the results are compared, the number of high readings from the extracted testosterone assay is often less than that of the direct assay, which is probably due to interference by water-soluble steroid conjugates. Extracted testosterone assay testing is considered to be the Gold Standard.
The aim of this project is to look at resources and the results from both assays and compare them; possibly identifying raised levels which do not need further testing.

Methodology:
26 samples tested between 01/11/2013 and 31/12/2013 by both the Direct Assay and the Extracted Assay were obtained from the Pathology IT system and compared. Data was entered into an Excel spreadsheet and analysed.

Results:
1) 24/25 (96%) samples for females <50 years exceeded the variation for testosterone >2.1nmol/L or Free Androgen Index (FAI) >5.6
2) 1/1 (100%) sample for female >50 years exceeded the variation for testosterone >1.7nmol/L or FAI >4.5

Conclusions/Recommendations:
Testosterone levels reduced in 22 of the samples (84%) between direct and extracted assays, stayed the same for 1 (4%) and increased in 3 (12%). This was the same for the results of Free Androgen Index. The differences between the extracted testosterone and the in-house (direct) testosterone results were not consistent. Any change could not be predicted, as the amount varied from person to person. Sex Hormone Binding Globulin (SHBG) level may have an effect especially at the extremes of the reference range. In conclusion, there is a need to continue with current practice of sending samples of elevated testosterone/FAI for further investigation.

Abstract 12

ENHANCED RECOVERY PROTOCOL REDUCES HOSPITAL STAY AND SHORT TERM COMPLICATIONS IN PATIENTS UNDERGOING AN ELECTIVE TOTAL HIP OR TOTAL KNEE REPLACEMENT

Author(s):
De Burlet KJ, Widnall J, Barton C (Trauma & Orthopaedics), Gudimetla V (Anaesthetics) MCHFT

Background/Introduction/Aims:
Enhanced Recovery Protocol (ERP) for elective total hip or total knee replacement has become the gold standard. It includes pre-operative patient education, peri-operative standards for anaesthesia and local injection and postoperative analgesia and fluid management and early mobilisation. This multidisciplinary approach has been proven beneficial for the patient with a significant reduction of early postoperative complications and a reduction in length of stay (LOS).
The aim of this study is to evaluate the impact of the Enhanced Recovery Protocol at MCHFT.

Methodology:
A retrospective review was performed including all patients who underwent primary hip or knee arthroplasty surgery between January 2011 and December 2013. The ERP was implemented in our department in August 2012 thus creating two cohorts; the traditional postoperative group and those undergoing ERP. Outcome measurements of length of stay, postoperative transfusion, thrombo-embolic complications and number of re-admissions were assessed.

Results:
1262 patients were included. The traditional group contained a total of 632 patients and the ERP group contained 630 patients. The number of patients receiving a blood transfusion postoperatively significantly decreased from 50 (7.9%) in the traditional group to 27 (4.3%) in the ERP group (p value <0.05). There was no statistical difference in postoperative thrombo-embolic events. The length of stay was reduced from 5.5 days to 4.8 days (p value <0.05). There was no difference in the number of re-admissions.

Conclusions/Recommendations:
ERP has led to a significant decrease in transfusions after elective arthroplasty surgery, without increasing the incidence of thrombo-embolic events. Furthermore it has significantly reduced the length of stay which has obvious cost implications. This study agrees with the current literature in that enhanced recovery should indeed be the gold standard for elective arthroplasty procedures.

Abstract 13

CAPTURING THE ELUSIVE DISEASE: AUDIT OF RISK STRATIFICATION AND DIAGNOSIS OF PULMONARY EMBOLISM IN LEIGHTON HOSPITAL

Author(s):
Chukwu CA, Hammersley S (Emergency Care) MCHFT

Background/Introduction/Aims:
The clinical diagnosis of pulmonary embolism (PE) is always a difficult task, due to the fact that its clinical features are notoriously non specific. Clinicians are faced with the challenge of correctly diagnosing all patients with PE while at the same time minimizing unnecessary investigation of patients who are unlikely to have PE. Currently, national and international guidelines have suggested a standardised diagnostic approach which involves the use of pre-test probability scoring, D-dimer test and computed tomography pulmonary angiogram (CTPA).
The aim of the audit was to assess the use of pre-test probability scoring (PE Wells score), D-dimer testing and CTPA in the diagnosis of suspected PE.

Methodology:
A retrospective analysis of case notes as well as a review of D-dimer results and CTPA reports of all patients who had a CTPA in the month of October 2013. 80 patients were identified out of which 36 case notes were available for analysis. D-dimer and CTPA reports were analysed for all 80 patients

Results:
The mean age of the patients was 66.8 years (range 22-93) and 25/36 (69%) were female. 5/36 (14%) had a documented Wells score and a retrospective 2 level PE Wells score was calculated for the remaining patients.
30/36 (83.3%) had a PE unlikely score (4 or less) while 5/36 (14%) had a PE likely score (>4) and one PE score was not calculated due to pregnancy.
3/5 (60%) of patients with a PE likely score had a confirmed PE and 5/30 (17.2%) of Patients with PE unlikely Well score had a confirmed PE.
D-dimer test was performed in 61/80 (76%) of all cases and none of the patients with a negative D-dimer test had a confirmed PE. There was a trend obseved that a lower D Dimer made the a positive PE finding less likely. 15/80 (19%) of patients investigated for suspected PE had a CTPA confirmed PE.

Conclusions/Recommendations:
The audit highlighted an underutilisation of the pre-test probability score. When could be due to poor awareness of the standardised diagnostic methods. The diagnostic yield of 19% compares favourably with national and international average (16-35%). Low pre-test probability score is consistent with a low risk of PE, which supports the evidence that patients with low pre-test probability score and a negative D dimer do not need a CTPA. The provision of a standardised PE diagnostic pathway in combination with improved clinician awareness will improve diagnostic accuracy and reduce unnecessary investigation.

Abstract 14

RE-AUDIT OF PROSTATE NEEDLE CORE BIOPSY (NCB) REPORTS WITH ADENOCARCINOMA

Author(s):
Ligory CN, Nasir N (Histopathology) MCHFT

Background/Introduction/Aims:
Re-audit of an original project performed in 2011 which assessed histopathology reporting of prostate needle core biopsies with adenocarcinoma at MCHFT. The results from 2011 showed that although there was good compliance for reporting important prognostic criteria (as dictated by the RCPath national dataset), there was variability between different pathologists within the institution.
The main recommendation was therefore to use an agreed standard template for all needle core biopsy specimens with cancer to ensure consistency in reporting so that high standards were maintained. This re-audit therefore evaluated whether the recommendations of the original audit have been met and whether this has improved the standard of reporting.

Methodology:
A retrospective computer search was performed to identify all prostate needle core biopsies containing adenocarcinoma from October 2011 to October 2013. Fifteen reports by each consultant were selected from the list for assessment (total 105). Each report was examined against the following criteria:
1) Specimens submitted according to local protocol; 2) Use of standard template;
3) Grouping of cores according to side of prostate; 4) Localisation of cores involved with cancer – apex, mid or base; 5) Gleason Score given; 6) Correct terminology used reporting tumour extent; 7) Number of cores involved by adenocarcinoma as a fraction of total number submitted from that side; 8) Total percentage cancer involving each side.

Results:
100% compliance was achieved in 6/8 variables. Improvement in compliance with all criteria was also seen compared to results from original audit. The two variables where the results were short of 100% were:

- Use of standard template; (99% achieved) which only fell short due to the use of an individualised report in one case where material did not survive laboratory processing
- Submission of specimen according to local protocol; (96% achieved) as 4 cases were not submitted appropriately; although this was still an improvement from the original audit and achieved the target aim of >90%

Conclusions/Recommendations:
The results show that the original audit recommendation of using a standard template for prostate needle core biopsies has been implemented well and has provided significant improvement in the standard of reporting. Important prognostic criteria are now being included in reports with less variability and greater consistency.

Abstract 15

A BASELINE AUDIT INVESTIGATING AREAS OF IMPROVEMENT FOR AN ENHANCED RECOVERY IN OBSTETRICS FOLLOWING ELECTIVE CAESAREAN SECTION

Author(s):
Williams V, Edmondson P, V Gudimetla V (Anaesthetics) MCHFT

Background/Introduction/Aims:
Enhanced recovery in colorectal and orthopaedic surgery is well established in Mid Cheshire Hospitals NHS Foundation Trust (MCHFT) and throughout the country. It has been accredited with improved outcomes and reduced inpatient stays. But has not been extrapolated to the UK wide obstetric population. A baseline audit was undertaken prior to the adoption of an enhanced recovery policy for elective Caesarean Section (CS), which aims to improve recovery time and allow new mothers to return home sooner.

Methodology:
Data was collected throughout October 2013 and all elective caesarean sections performed during this time period were included. Data gathered included: length of stay, fasting times, intra-operative techniques, timescales for mobilisation, removal of the urinary catheter and discharge home. The quality indicators used were based on the NHS enhanced recovery partnership document.

Results:
24 patients underwent elective CS during the time period (mean age: 30.5 years; mean BMI: 26.8). The principal indicator for elective CS was previous CS (54%), followed by perineal trauma (25%). The mean fasting time was 14 hours for solid diet and 9 hours for fluids against the recommended times of 6 and 2 hours respectively. All of the patients had a spinal with intrathecal diamorphine, only 33% had prophylactic antiemetics and 12.5% had a syntocinon infusion. Mean time to oral fluid intake post surgery was 125 minutes and 217 minutes for solid diet. The mean time to urinary catheter removal was 21 hours, ranging from 17-35 hours. Time to mobilisation was 22.4 hours. Mean time to discharge from time of CS was 50.3 hours, increasing to 59.4 hours when the 3 outliers with a prolonged stay of 98-174 hours were included. Reasons for delayed discharge (after 48 hours) included bladder injury or more commonly, neonatal admission to the special care baby unit.

Conclusions/Recommendations:
We believe that the introduction of an enhanced recovery programme for obstetrics will improve patient satisfaction and patient flow. By allowing mothers to return to their normal environment sooner we may reduce their risk of morbidity. The programme will focus on minimising fasting times, improving patient education and the introduction of high energy drinks two hours prior to surgery. Additional aims include the reduction in removal time of the urinary catheter to a maximum of 12 hours and the mobilisation of the patients on the evening of surgery. A standardised analgesic regimen will be instituted including patient controlled oral analgesia on the post natal ward. The next step is to undertake an audit on quality of care for emergency CS.

Abstract 16

AN AUDIT OF EMERGENCY PAEDIATRIC SURGERY AT LEIGHTON HOSPITAL

Author:
O'Shea K, Holmes D, Hanafy M (General Surgery) MCHFT

Background/Introduction/Aims:
In 2013, the Children's Surgical Forum published a set of guidelines outlining 'Standards for Children's Surgery'. From this document we have drawn three standards pertaining to emergency surgery.
Aim: To ensure all children requiring emergency surgery are operated on within 12 hours of a decision to operate being made and ensuring children are prescribed adequate fluids and analgesia during their admission. Our target compliance for all standards is >90%.

Methodology:
This was a retrospective case note audit of 90 emergency paediatric (0-16 years) surgical admissions that underwent operative intervention between August 2012 and August 2013.

Results:
Of all the children who were taken to theatre 72% were operated on within 12 hours of the decision for theatre being made. Of those requiring post-operative fluids, 32% of children were prescribed adequate fluids, with only 38% of these receiving adequate monitoring of their electrolytes. Pain scores were only documented in 70% of admissions; however we deemed 88% of children were prescribed adequate analgesia.

Conclusions/Recommendations:
Compliance in all three areas is below target, which is attributable to lack of knowledge and lack of awareness of policy. It is recommended that a paediatric surgical admission proforma is developed to improve compliance with guidelines.

Abstract 17

EMERGENCIES IN ANAESTHESIA: IMPROVING PATIENT SAFETY

Author:
Edmondson P , Damani Z (Anaesthetics) MCHFT

Background/Introduction/Aims:
The use of checklists in crisis situations has become a widely accepted practice across many high-risk industries to improve performance related care. A recent study looking at the use of protocols in high fidelity simulated peri-operative emergencies showed significant improvement in patient management. In 2010, the Helsinki Declaration on Patient Safety in Anaesthesiology, implemented patient safety guidelines in anaesthesia, advocating that institutions providing peri-operative care should have access to protocols for the management of perioperative complications. In particular, protocols on: difficult/failed intubation, malignant hyperpyrexia, anaphylaxis, local anaesthetic toxicity and massive haemorrhage. We acknowledge that lone protocols have a tendency to become misplaced and difficult to access in an emergency situation.

Methodology:
A cross sectional study on the availability of trust protocols was undertaken in all 13 theatres across MCHFT in January 2014. Furthermore, anaesthetists were interviewed using a pre-defined questionnaire, to assess their knowledge of drug management in three anaesthetic emergencies (malignant hyperpyrexia, local anaesthetic toxicity and emergency reversal of rapid sequence intubation (RSI) dose of rocuronium), and their opinion on the implementation of a quick reference booklet containing perioperative complication treatment protocols. A total of 24 anaesthetists, ranging from CT1 to consultant participated.

Results:
Only 2/13 (15.4%) theatres had access to protocols, including anaphylaxis, malignant hyperpyrexia, difficult intubation and major haemorrhage protocols. The questionnaire revealed significant gaps in personal knowledge on specific drug doses in the three anaesthetic emergencies. The initial dose (2.5mg/kg) and maximal dose (10mg/kg) of dantrolene, was correctly reported by 8% and 50% of participants respectively. Only 25% and 21% of respondents correctly identified the initial loading dose (1.5ml/kg) and infusion dose (15ml/kg) of 20% lipid emulsion for the treatment of local anaesthetic toxicity respectively. Regarding the emergency reversal of RSI dose of rocuronium with sugammadex, 54% reported the correct dose (16mg/kg). Of the 24 staff members included, 96% supported the implementation of a quick reference booklet into all theatres.

Conclusions/Recommendations:
The accessibility of theatre based protocols and knowledge of specific drug doses in anaesthetic emergencies is poor. We recommend the implementation of quick reference booklets, with protocols endorsed by The Association of Anaesthists of Great Britian and Ireland (AAGBI), Difficult Airway Society (DAS), the Resuscitation Council and hospital trusts, into all theatres, with scope for national endorsement. We believe this will lead to improved patient safety.

Abstract 18

AUDIT OF LOW VOLUME VENTILATION STRATEGIES AT MCHFT

Author:
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Background/Introduction/Aims:
Over recent years there has been a shift in strategies for ventilation of critically ill patients. The benefits of lung protective strategies, including lower tidal volumes with higher Positive End-Expiratory Pressure (PEEP) in patients with Acute Respiratory Distress Syndrome (ARDS), have been repeatedly demonstrated since the ARDSNET trial, with resulting reduction in mortality. There is also some suggestion that this approach may reduce the progression of ventilated patient to ARDS. There are at present no low volume ventilation guidelines in place at Mid Cheshire Hospitals NHS Foundation Trust (MCHFT). The purpose of this audit was to compare the ventilation parameters of a selection of patients ventilated on MCHFT Critical Care Unit with the current accepted best practice and implement a local guideline.

Methodology:
The standard measured against was a target expired tidal volume of 6ml/kg based upon ideal body weight (IBW), calculated from ulnar length as a estimation of height. 21 sets of data were collected from a selection of ventilated patients over a 3 week period during August / September 2013. The mean and median expired tidal volumes were calculated from values recorded hourly over a 24-hour period.

Results:
Results from the initial data collection revealed that the expired tidal volume exceeded the target of 6ml/kg in all cases by a mean value of 141ml equivalent to 142% of the predicted tidal volume. The median values correlated well with this. 43% of patients were ventilated with a end tidal volume of 6-8ml/kg, 33% received 8-10ml/kg, with a further 24% receiving 10-12ml/kg, significantly exceeding recommended targets.

Conclusions/Recommendations:
Practice has been modified by placing a chart for estimation of IBW from ulnar length in each bay on critical care. This includes guidelines regarding target expired tidal volumes of 6ml/kg when adjusting ventilation settings. The project will be re-audited.

Abstract 19

A COMPARISON OF MID CHESHIRE HOSPITALS NHS FOUNDATION TRUST (MCHFT) OBSTETRIC CRITICAL CARE ADMISSIONS WITH NATIONAL DATA

Author:
Williams V, Greene M, Saul D (Anaesthetics) MCHFT

Background/Introduction/Aims:
The Centre for Maternal and Child Enquiries (CMACE) has provided doctors with excellent data over the past 50 years about maternal mortality, but unfortunately no data about maternal morbidity. In December 2013, the Intensive Care National Audit & Research Centre (ICNARC) produced a second report analysing critical care admissions of women who were pregnant or recently pregnant (2009-2012 inclusive).

Methodology:
Data was collected from the hospital's ICNARC database for a four year period (2009 - 2012). A comparison was made between MCHFT and national ICNARC data.

Results:
Overall the number of obstetric critical care admissions is proportionally comparable with national data. Local data indicates the primary indication for admission in the 'currently pregnant patient' was sepsis. This corresponds with national data and the most recent CMACE report in which sepsis was the leading direct cause of maternal death. In contrast, the leading obstetric cause for 'currently pregnant' admissions nationally was pre-eclampsia, of which there were no local admissions during the period of review.
In the "recently pregnant" group, there were equal proportions of patients admitted for obstetric and non-obstetric reasons. This differs from the national data, which lists the leading indication for admission as post-partum haemorrhage. Local records indicate that in the two year period 2010-2012, only 3 patients out of 42 who had a haemorrhage of more than 2.5 litres were admitted to critical care.

Conclusions/Recommendations:
Diagnosis and treatment of pre-eclampsia is prompt and effective on the labour ward, hence there were no critical care admissions for this indication. MCHFT does not have an obstetric High Dependency Unit but in hospitals that do, patients with major obstetric haemorrhage (>2.5 litres), would be admitted for closer monitoring and possibly goal directed therapy.
This audit has highlighted the need for discussion around which patients should be admitted to critical care and the need for specialised critical care facilities for the critically ill mother. The Obstetric Association of Anaesthetists has accepted our recommendation for a national survey of critical care admission criteria in the obstetric population.

Abstract 20

INTRODUCTION OF THE ONCOTYPE DX TEST TO THE BREAST SERVICE

Author(s):
Ballance L, Pope V (Breast Surgery) MCHFT, Armstrong A (Medical Oncology) Christie Hospital

Background/Introduction/Aims:
Breast cancer is the most commonly diagnosed cancer in women in England. Surgical treatment is often combined with radiotherapy, hormonal manipulation, and/or chemotherapy. Chemotherapy is recommended for patients who have a higher chance of recurrent disease.
Tools have been developed to predict an individual's risk of cancer recurrence. Initially these tools relied on basic information, e.g. tumour size, grade, and stage. Newer algorithms consider the tumour's biological features, e.g. oestrogen sensitivity, and the patient's general health. More recently the 21-gene Oncotype DX test (Genomic Health) has been validated to quantify the risk of distant recurrence, and to predict the magnitude of chemotherapy benefit in women with ER-positive, Her2-negative breast cancer. NICE guidance produced in September 2013 allows NHS clinicians to request Oncotype DX for patients where it would help to decide whether or not to give chemotherapy. The aim of this study was to assess the impact of this new test on the clinical practice in the Breast Unit at MCHFT.

Methodology:
Patients eligible for Oncotype DX testing were identified at the MCHFT Breast Multi-Disciplinary Team Meeting, between September 2013 and April 2014. The results of the OncotypeDX were compared to the results of less sophisticated predictive tools. The decision whether or not to have chemotherapy was recorded.

Results:
Ten patients' tumours have undergone oncotypeDX testing. All these patients would previously have been recommended (higher risk), or considered (intermediate risk) for chemotherapy. Of the 7 higher risk patients who would previously have been recommended chemotherapy, only 2 had a high oncotypeDX score (these patients both had chemotherapy). Two had an intermediate oncotype DX score (one had chemotherapy), 3 had a low oncotype DX score (and avoided chemotherapy). Of the 3 intermediate risk patients, in whom chemotherapy would have been considered previously, 2 had an intermediate oncotypeDX score (one had chemotherapy). One patient had a low oncotypeDX score (and avoided chemotherapy).

Conclusions/Recommendations:
Oncotype DX testing gave a clinically useful result in 6/10 (60%) patients. 4/10 (40%) patients were able to avoid chemotherapy on the basis of the oncotypeDX results. The continued use of the oncotypeDX is recommended.

Abstract 21

OXYGEN PRESCRIBING: ATTITUDES OF HEALTH CARE PROFESSIONALS

Authors:
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MCHFT

Background/Introduction/Aims:
Oxygen supplementation is safe and effective when used correctly, but can be dangerous if used incorrectly. The British Thoracic Society (BTS) guidelines for emergency oxygen use (October 2008) recommends the safe prescription and administration of all medical oxygen. A Mid Cheshire Hospitals NHS Foundation Trust (MCHFT) oxygen prescribing policy exists, however not all patients receiving oxygen have an oxygen prescription and it is not always correctly applied. This study attempts to identify possible factors and attitudes that influence healthcare professionals (HCPs) in their approach to oxygen prescribing.

Methodology:
A structured questionnaire was used to assess the attitudes of HCPs towards oxygen prescription.

Results:
Of the 50 HCPs surveyed: 64% were residents, 26% nurses and 10% pharmacists. Although 92% were aware that oxygen should be prescribed, only 24% were aware of guidelines (18% local hospital and 6% BTS).
Regarding oxygen prescribing, 94% agreed that it ensured patient safety and was good clinical management, and 88% indicated that this should not be left to nursing staff. The reasons why oxygen may not be prescribed are given below. Only 8% welcomed ward pharmacist input and 12% felt that guidelines interfered with clinical practice and freedom to make decisions.

Some of the responses to the question “When I do not prescribe oxygen, it is because…” included:

- 92% of doctors felt that nursing staff would change oxygen concentration themselves according to patient saturations
- 76% of doctors felt they were at risk of developing extra work
- 78% of doctors felt it would not alter patient management
- 98% of doctors felt there was a lack of reminder and it was easy to overlook
- All prescribers knew where to prescribe oxygen

Conclusions/Recommendations:
Most staff are aware that oxygen needs prescribing, but there is a significant proportion who are unaware of the guidelines. Failure to start a prescription is largely the result of staff being forgetful. Pharmacist input would be helpful in this regard, but there seems to be some resistance to this measure. A small proportion of staff appear to be resistant to the idea of prescribing oxygen for a variety of reasons; these attitudes are being addressed through educational and training programs.

Abstract 22

RE-AUDIT OMITTED DOSES OF MEDICATION AT MID CHESHIRE HOSPITALS NHS FOUNDATION TRUST

Authors:
Margerum E, Jones T, Thomas K, Ritchings A (Pharmacy) MCHFT

Background/Introduction/Aims:
In response to the 2010 NPSA alert 'Omitted and Delayed Doses', RRR009 MCHFT identified a list of critical medicines that require timely administration and highlights the importance of incident reporting in response to the omission of critical medicines. The NPSA alert also recommends annual auditing of omitted and delayed doses. At MCHFT there are approved codes for use on a prescription chart when it is appropriate or necessary to omit a prescribed medicine. This audit looked at the unnecessary omission of all critical and non-critical medicines and compare the results from May 2013 to November 2013 to see if previous actions have resulted in fewer unnecessary omissions.

Methodology:
A retrospective audit was carried out between 22/11/2013 and 26/11/2013. Ward pharmacists were asked to select 20 prescription charts from their wards and complete the information as specified on the data collection tool. Wards that had fewer beds or patients admitted during the audit period were asked to audit the prescription charts that were available. Medicines that were prescribed on a 'when required' basis were excluded from the audit.
The data was collected by ward Pharmacists and ward Pharmacy Technicians. Copies of all incident reports relating to omitted medicines were requested from the incident reporting database. All wards were included in the audit with the exception of Ward 26 (labour ward) and Accident and Emergency. The results were then compared to those from May 2013.

Results:
A total of 24,392 doses were prescribed on the sampled prescription charts (5731 of which were critical medicines). 97.5% of medicines were administered when they were due (critical and non-critical) and 97.6% of critical medicines were administered when they were due. Incident reports were completed in 53% of cases where critical medicines were omitted, compared to 19% in May 2013 (an improvement of 34%). 2.4% of critical medicines were omitted across the Trust during the November 2013 audit period compared to 2.6% in May 2013 (an improvement of 0.2%).

Conclusions/Recommendations:
Medicines are often omitted or delayed in hospitals. While these events may not seem serious, delays or omissions can cause serious harm or death. The review of incident reports can lead to system improvements that reduce harm from delayed or omitted medicines. The above reinforces the need for nursing staff to attend Medicines Management Training and emphasises the importance of encouraging and enabling staff to complete incident report forms on all occasions that critical medicines have been omitted or delayed.

Abstract 23

CARDIAC MAGNETIC RESONANCE IMAGING AT LEIGHTON HOSPITAL

Author(s):
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Background/Introduction/Aims:
Cardiac Magnetic Resonance imaging (CMR) is an established diagnostic imaging tool. It is an essential investigation in the diagnostic work-up of patients with Heart Failure (HF), ischaemic heart disease and cardiac arrhythmias. It provides assessment of cardiac structures, function and myocardial scarring, providing accurate diagnoses and therefore ensuring appropriate treatment. MCHFT is one of few district general hospitals with an established CMR department with the service becoming increasingly utilised.
The aim was to evaluate the impact of CMR on cardiac patient's diagnosis and on-going treatment.

Methodology:
A service evaluation was performed of CMR at MCHFT during September and October 2013. We reviewed the indication and impact of the CMR by reviewing the reason for referral, CMR result and the outcome on treatment.

Results:
34 CMR scans were performed during this period (27 outpatients, 7 inpatients). The most common indications were to determine the aetiology of patients with a newly diagnosed cardiomyopathy (12 patients) and to assess patients suspected of having had a myocardial infarction (MI), (7 patients).
Out of 12 patients with newly diagnosed cardiomyopathy, 6 were non-ischaemic, 2 had viral cardiomyopathies, 2 had hypertensive heart disease, 1 had ischaemic heart disease in 1 ventricle and had recovered. In the 7 patients with suspected MI only 3 had ischaemic scar, whereas 4 had no evidence MI.

Conclusions/Recommendations:
CMR has become an essential resource in reaching accurate diagnoses in cardiac patients. The above cases demonstrate how the information provided from CMR can directly impact on a patients care as the service becomes increasingly utilised.

Abstract 24

AUDIT OF BLOOD GLUCOSE MONITORING AND INSULIN DOSE ADJUSTMENT IN PATIENTS WITH DIABETES

Author(s):
Butler R, Ritchings A (Pharmacy) MCHFT

Background/Introduction/Aims:
The NHS in England spends around £2.3 billion a year on inpatient care for people with diabetes. In spite of this, the National Diabetes Audit suggests that inpatient care is still poor. People with diabetes experience avoidable complications whilst in hospital owing to medication errors and lack of access to specialist inpatient services.

Methodology:
A retrospective audit was carried out over a three-week period from 17/02/2014 to 07/03/2014 and included all medical wards at MCHFT. Pharmacists highlighted patients with diabetes to the investigator. Prescriptions, blood glucose monitoring charts and case notes were reviewed for each patient. Data from the previous 7 days was collected using a data collection tool.

Results:
57 patients with diabetes were screened, 18 of these were prescribed insulin. Out of the 18, 10 patients (56%) experienced persistent hyperglycaemia and insulin was increased according to guidelines in 4 of these patients. 8 patients (44%) were prescribed 'when required' insulin. 8 patients (44%) experienced one or more hypoglycaemic episode and insulin was continued in 5 of these patients. No patients were started on variable rate intravenous insulin following an episode of hypoglycaemia. 3 patients (17%) experienced persistent hypoglycaemia and 2 of these patients had their maintenance insulin dose decreased.

Conclusions/Recommendations:
Insulin is not being increased in accordance with Trust guidelines when patients are hyperglycaemic; training is needed on dose adjustment. The use of 'when required' insulin is still common practice at MCHFT; instead the regular insulin should be adjusted. Guidelines state that after hypoglycaemia is treated, the next dose of insulin should not be omitted. However, patients are having their insulin omitted following episodes of hypoglycaemia, posing the risk of hyperglycaemia. Once successfully treated, variable rate IV insulin to 'stabilise' blood glucose should not be started. The Trust is fully compliant with this standard. At MCHFT, it is expected that the patient's regular insulin should be reduced however no guidance is given on how many units to adjust by. Although patients are having their maintenance insulin decreased, practice needs to be standardised. There are no guidelines that state how frequently patients should have their blood glucose monitored whilst in hospital. The trust currently spends £46,000 annually on blood glucose test strips; it is recommended that guidelines are produced to rationalise this.

Abstract 25

QUALITY OF PRESCRIBING ON PAEDIATRIC WARD

Authors:
Lumley S, R Haseeb R, Holmes DGW, Pyper S, Burns SJ (Paediatrics) MCHFT

Background/Introduction/Aims:
Thousands of medications are prescribed on a daily basis within the health care setting with no consequences. However, prescribing errors can occur which can result in potential fatal events. It is thought that children have a three times greater risk of an adverse drug reaction than that of an adult. This is important as prescribing errors are often heightened in paediatrics due to need of calculations to determine doses.
Previously within the paediatric department numerous incident reports had been submitted regarding prescription errors. The aim of the audit was to identify common mistakes in paediatric prescribing, learn about what constitutes safe prescribing and decrease clinical incidents within the department.

Methodology:
Our data was collected prospectively between September 2013 and May 2014. A selection of drug charts were reviewed at regular intervals during this time period producing a total of 115 inpatient paediatric prescription charts that were reviewed against the MCHFT Prescribing Standards Medicines Policy.

Results:
For the 115 in patient drug charts audited:

- Patient demographics, ward and consultant were present on 86% of the charts
- All allergy boxes were fully completed with appropriate signature and date
- 75% had items written as per medicines policy in block capitals in black ballpoint pen readily legible and clear
- Prescribers were easily identifiable on 64% of the charts
- 92% had all start dates documented as the date the patient was first prescribed this medicine in hospital
- For 97% of the charts drug doses prescribed in micrograms, nanograms, or units were correctly written in full
- 58% of charts had essential anti-microbial indication
- Correct dose, route, and frequency were documented in 99% of the charts
- Correct cancellation and alteration of a medication was achieved in 42% of the charts
- 95% of charts had the 'Multiple charts' section filled out

Conclusions/Recommendations:
A significant proportion of drug charts are currently filled in adequately however, to ensure safer prescribing improvements can be made in alterations to a medication, indication for anti-microbials and easily identifiable prescribers. Continuous auditing of prescription charts highlights areas of weakness that can be relayed back to the paediatric team to ensure these errors are reduced. Integration between pharmacists and nurses on the ward should also be encouraged to ensure greater compliance of the MCHFT Prescribing Standards Medicines Policy.

Abstract 26

CODEINE AS ANALGESIA POST-TONSILLECTOMY IN PAEDIATRIC PATIENTS: AN AUDIT OF PRACTICE

Authors:
Wilson L, Greene M (Anaesthetics) MCHFT

Background/Introduction/Aims:
Codeine is a mild opioid that has been used for many years for moderate pain relief in adults and children. However in July 2013 a Medicines and Healthcare Products Regulatory Agency (MHRA) alert was published advising against the use of codeine in any child under the age of 12; furthermore, contraindicating codeine administration for children under 18 years of age undergoing tonsillectomy +/- adenoidectomy for obstructive sleep apnoea (OSA). This alert was triggered by concerns of an increased risk of morphine toxicity when susceptible children received codeine for pain relief after surgery, following reports of three fatalities and one life-threatening case of respiratory depression. Therefore we performed an audit assessing the use of codeine in children post-tonsillectomy.

Methodology:
The project was registered with the audit department. A data collection tool was used to gather information about patient age, procedure, reason for procedure and post-operative analgesia and anti-emetics. All children undergoing a tonsillectomy between July and October 2013 were included.

Results:
A total of 28 children were identified. All patients were prescribed Paracetamol post-operatively, and 79% were prescribed Ibuprofen. 11 patients (39%) were prescribed codeine, of which 8 of the 11 children were less than 12 years of age.

Conclusions/Recommendations:
Over a third of children under the age of 18 were prescribed codeine for post-tonsillectomy analgesia which is contrary to the MHRA advice. This audit was presented to the anaesthetic department, and recommendations given for change. We are in the process of completing the audit cycle, following implementations for improving patient safety and quality of care.
A poster has been designed for theatre recovery regarding options and doses in paediatrics for analgesia and anti-emetics; it is currently going through medicines management having been agreed to in principle by pharmacy. We have also highlighted, during this audit and through surveying other doctors in the trust, that few people are aware of the MHRA and of any alerts it publishes. To address this issue we have met with the pharmacy department to discuss ways of cascading information more widely. Options include: nominating department leads to inform junior staff, posters of recent alerts to be displayed in anaesthetic office, and informing new staff during induction of free subscription to MHRA website for updates via email.

Abstract 27

COMBINING SIMULATION AND DEMONSTRATION VIDEOS OF THE CARDIORESPIRATORY EXAMINATIONS IN TEACHING

Author(s):
Anwar N A (Postgraduate Medical Centre) MCHFT

Background/Introduction/Aims:
Cardiovascular and respiratory clinical examinations are integral skills taught at the beginning of medical school. Traditionally, they would be taught by a clinician who demonstrates the performance on a patient to a group of medical students. The limitations of this method include: limited exposure to important clinical signs due to random patient presentation, lack of opportunities to practise skills repeatedly due to patient discomfort and limited clinician time for direct observation of student performance. The aims of this project were:

1. To provide a high-fidelity environment for students to hone their examination skills under direct observation without need for consideration of patient comfort
2. To enable students to identify a wide range of clinical signs which are normally encountered opportunistically
3. To utilize specialist clinician expertise without extra use of their time.

Methodology:
1. Video Recording and Editing:
   Two specialist examinations of the cardiovascular and respiratory systems were recorded separately and edited by the HLB Education Fellow and MCHFT Audio-Visual Technician.
2. Teaching Sessions:
   Seven third-year Manchester Medical Students were taught by the Education Fellow in two separate identical sessions. They were first shown videos of the examinations and then given opportunities to practise on a mechanical patient simulator (SimMan). Various clinical signs were demonstrated by controlling SimMan's output. Students were given feedback following direct observation of their technique and allowed to practise repeatedly.
3. Post-Teaching Data:
   Written feedback of student's perception of their teaching sessions was collected and analysed.

Results:
All students have found the session useful (average score=9.28/10). SimMan was mostly effective at demonstrating palpation and auscultatory findings.

Abstract 28

AUDIT OF ACCURACY OF CODING OF TOTAL HIP REPLACEMENTS UNDERTAKEN FOR TRAUMATIC NECK OF FEMUR FRACTURES AND CONSEQUENT COST ANALYSIS

Author(s):
Hughes LC, Howard N (Orthopaedics) MCHFT

Background/Introduction/Aims:
Clinical coding is a complex translation of a patient's medical notes into a standardised coded format allowing medical information to be communicated in a common clinical language. This faciliates accurate data retrieval for audit and research and provides a framework for hospital reimbursement and income generation. NICE guidance recommends offering total hip replacements to medically fit patients with a displaced intracapsular fracture neck of femur. Anecdotal evidence from the authors suggested that inaccurate clinical coding demonstrated an income loss.
The aim of this audit was to evaluate the accuracy of coding for patients who underwent total hip replacements for traumatic fracture neck of femur and to quantify the financial consequences of coding inaccuracy.

Methodology:
An electronic search was performed for patients admitted between December 2010 to February 2013 who had been coded for both a fracture neck of femur as the primary diagnosis and a total hip replacement as the primary procedure. All codes were reviewed and assessed for accuracy; where errors were found new codes were produced. Income generated by the original codes was compared to the theoretical income for the corrected code.

Results:
The search produced an audit sample of 55 patients. An overall accuracy of 80.9% was demonstrated with 10 coding errors detected in primary diagnosis and 11 coding errors in primary procedure. 39 patients (70.9%) had no errors in their coding, leaving 16 patients who had at least one coding error. Of these, five patients (9.1%) had errors in both of their primary codes.
Sub-analysis of the electronic discharge letters reveal that 23.8% of letters contained correct clinical information, 19.0% contained incorrect clinical information and the remaining 57.1% did not contain enough information for coders to accurately code the hospital admission.
The 16 patients who had coding errors had their income generation recalculated using the new accurate codes. In six cases there was no change to the financial banding. In two instances an underpayment totaling £984 was made and for the remaining cases overpayment totaled £11,826. This resulted in a net over reimbursement of £10,842.

Conclusions/Recommendations:
Coding is a complex task and correct clinical codes are essential for accurate research and data analysis as well as just financial reimbursement. The authors were surprised to find that a coding inaccuracy of 19.9% in a relatively small cohort of 55 patients could

have such a dramatic financial implication. Publising the importance of accurate coding is recommended.

Abstract 29

NORTH WEST REGIONAL AUDIT OF CA125 REQUESTING IN PRIMARY CARE

Author(s):
Robinson S (Pathology), Platt RJ (Clinical Audit) MCHFT

Background/Introduction/Aims:
Ovarian cancer is the leading cause of death from gynaecological cancer in the UK due to the late presentation of patients with the disease. NICE clinical guideline 122 (April 2011) recommends that the first-line test for the investigation of women with suspected ovarian cancer should be that of the CA125 tumour markers in the blood. The CA125 result is then used to identify which patients require an ultrasound. This differs from the previous protocol, where CA125 and ultrasound were requested together and used in conjunction. A local clinical audit and subsequent re-audit were undertaken to ascertain how well the change had been implemented one year and two years after the guidance was issued for requests made for testing at MCHFT. The results were then submitted to the North West Regional Audit.

Methodology:
Data for CA125 requests in a one month period (March 2012) was extracted from the laboratory computer system and entered into a bespoke Excel data collection tool for analysis. Electronic patient notes were used to extract further clinical information and imaging results. The data collection was then repeated one year later (March 2013).
Sample sizes were: In 2012, n= 199 at MCHFT and n=1015 for the Region. In 2013, n=189 at MCHFT and n=1182 for the Region.

Results:
In 2012, 153/199 (77%) of CA125 local requests were made appropriately in accordance with the symptoms outlined in NICE cg 122, as opposed to 670/1015 (66%) across the North West Region. In 2013, this increased at MCHFT to 163/189 (86%) whilst across the Region the result was 756/1182 (64%).
For patients with a raised CA125 who should have an ultrasound scan, in 2012 the result for MCHFT was 18/23 (78%) whilst the regional result was 86/113 (76%). In 2013, at MCHFT the result was 2/2 (100%) whereas the regional result was 18/23 (78%).

Conclusions/Recommendations:
The local audit and re-audit confirm a consistent proportion of appropriate reasons for CA125 requests. Interestingly, a similar pattern was observed across the North West region when data was analysed across six sites.
The local re-audit showed an improved requesting pattern amongst GPs for CA125 requests, yet 100% was still not achieved. There was also an improvement in referral of patients for an ultrasound, but there was a small number in this cohort.

Abstract 30

VENOUS THROMBO-EMBOLISM RISK ASSESSMENT AND PROPHYLAXIS IN ORTHOPAEDIC SURGERY: ARE WE DOING ENOUGH?

Author(s):
Colby AC, Davies HG (Trauma and Orthopaedics) MCHFT

Background/Introduction/Aims:
Venous thrombo-embolism (VTE) is a serious medical condition causing an estimated 25,000 potentially preventable deaths in UK hospitals each year. In addition, treatment of non-fatal symptomatic VTE and its associated complications incurs significant cost to the National Health Service. The National Institute for Clinical Excellence (NICE) Clinical Guideline CG92 states that all Orthopaedic patients should be risk assessed for VTE on admission and, where indicated, should be offered mechanical prophylaxis as well as pharmacological VTE prophylaxis provided there are no contraindications.
Our aims were to assess the proportion of Orthopaedic patients who underwent risk assessment for VTE on admission using the pre-existing VTE risk assessment proforma, and to evaluate whether they were placed on appropriate VTE prophylaxis in accordance with NICE guidelines.

Methodology:
This is a prospective study which sampled all Orthopaedic elective and trauma patients admitted to Mid Cheshire HospitalsNHS Foundation Trust in April and May 2013. There were no exclusions. Data was collected for each patient by examining the VTE risk assessment tool, the drug prescription chart and the case notes.

Results:
84 patients were included in the study of which 81/84 (96.4%) had a VTE risk assessment proforma present in the case notes. 82% of our patient group had been appropriately risk assessed within 24 hours of admission. However, despite this only 4% of the sample had a fully documented VTE risk assessment tool completed, signed and entered into the patients' notes. For Subgroup analysis; 65% of elective lower limb arthroplasty patients were prescribed and receiving mechanical prophylaxis where indicated with 94% appropriately prescribed and receiving pharmacological prophylaxis. 73% of hip fracture patients were prescribed and receiving mechanical prophylaxis with 100% prescribed and receiving pharmacological prophylaxis. Of the remaining orthopaedic patients, 53% were prescribed and receiving mechanical prophylaxis where indicated with 84% receiving appropriate pharmacological prophylaxis.

Conclusions/Recommendations:
Significant improvements need to be made in increasing healthcare professional's awareness in the importance of accurately risk assessing orthopaedic patients for VTE using the VTE risk assessment proforma as well as prescribing appropriate prophylaxis where indicated. In order to achieve this we recommend the use of educational posters, staff education and changes to the VTE assessment tool to ensure all findings and recommended treatments are recorded.

Abstract 31

STUDY TO EXAMINE SHARED DECISION MAKING FROM THE PERSPECTIVE OF THE PATIENT WITH THE CHRONIC DISEASE, PSORIASIS, MANAGED IN NURSE-LED CARE

Author(s):
Lawson N (Dermatology) MCHFT

Background/Introduction/Aims:
Shared decision making is conceptualised as a particular type of professional/patient interaction which seeks to engage patients and providers in a collaborative process to choose clinical options that reflect patient preferences (Elwyn & Charles, 2009). Models of shared decision making are based on acute decision making in medical models, however, there has been a shift towards chronic & preventative care (DOH, 2004) and significant involvement of nurses in long term care.
This study explores shared decision making within this novel patient provider interaction using a constructivist approach and the Repertory Grid Technique (RGT) to advance an understanding of the personal meaning of sharing for patients with the chronic disease psoriasis.

Methodology:
The Repertory Grid was administered in four stages in the context of a structured interview. 10 patients (3 female; 7 male) who had suffered from psoriasis for a mean of 13.3 years and had been care managed/part managed by a nurse for a mean of 4.6 years.
Using the repertory grid method in a structured interview setting, qualitative & quantitative data was collected.
Content analysis was synthesised to understand participants' perception of sharing and what guides their sharing behaviour.

Results:
All participants identified a health professional they would share with and these professionals often came close to 'ideal' sharers. 60% could not identify a 'least sharing nurse'.
Individual grid analysis indicated that individuals valued different aspects in a sharing relationship.
There was congruence in the superordinate constructs/most important factors which facilitate sharing, although it was also found that individual practice can deter sharing.

Conclusions/Recommendations:
The Repertory Grid Technique enabled participants to articulate their views on a complex topic and revealed crucial discriminations between practice that would encourage or deter sharing. Findings demonstrated the importance of a negotiated individually tailored approach to sharing in a clinical relationship.
Some common factors emerged that appear to facilitate sharing in long term care including: a nursing discipline based on caring concern; positive personal connection; human relatedness and communication which may enhance patient engagement in

shared decision making; and in addition, the continuity of care to develop trust (and tolerance).

Abstract 32

THE URGENT CARE CENTRE AT MCHFT
SUNDAY OPENING INITIATIVE

Author(s):
Tildsley D, Farrington M, Couper K, Brunt E, Slater R, Bickley R, Butler-Barnes J, Brown T, Muirhead R, Hammond E, Chapple S, Lockett C, Chishti Z, Lam C, Roughsedge N, Billington C, Davies M, Burns L (Urgent Care Centre) MCHFT

Background/Introduction/Aims:
The Urgent Care Centre (UCC) normally operates from Monday to Friday, 0800-1830. Weekends, in particular Sundays, are very busy in the Emergency Department (ED) and in order to reduce winter pressures we piloted Sunday opening. The aim was to augment front-end decision making, to help improve the flow of patients with Primary Care needs to reduce waiting times, to free up ED Triage time and to save admissions.

Methodology:
From 29th December 2013 to the end of March 2014 we provided a GP and a Streaming Nurse between 1000 and 2000 every Sun. Streaming is the process whereby an experienced nurse rapidly assesses patients on arrival to quickly determine the best place for them to be seen. Streaming is central to the safe and efficient flow of patients as they arrive at the Emergency Department. For example, during the week we stream 35% of patients directly to minor injuries, saving triage time for higher-acuity cases, and up to 7% of patients back to their own GP if appropriate. Routinely there are 4 streaming options with an optional fifth option called See & Treat, which operates when the department is very busy:

i) Back to own GP
ii) Straight to minors
iii) ED triage
iv) UCC GP
v) See and treat.

A sixth option at weekends is streaming to the Out of Hours GP. We also continued to encourage ‘drop-in’ patients to go back to their own GP in-hours or seek help from pharmacies.

Results:
The UCC GP saw up to 20% of all cases presenting to ED between the hours of 1000 and 2000. Analysis of case mix: Minor injuries 30.7%, Paeds 14.6%, Medical 11.1%, Surgical/abdo pain 8.7%, Skin 8.4%, Urology/UTI 7.3%, Ophthalmology 5.2%, Gynae 5.0%, ENT 2.8%, Dental 2.4%, Mental health 1.7%, Chronic ortho 1.4%, Misc 0.7%.

Conclusions/Recommendations:
Streaming enables proper identification of cases suitable for an UCC GP and saves triage time especially when 35% of cases are sent straight to minors. Sunday UCC opening showed that GPs with a special interest in urgent care can safely and efficiently see patients near the ED 'front of house' and consideration should be given to replicating this model throughout the year.

Abstract 33

THE OVER TREATMENT OF BUCKLE FRACTURES OF CHILDREN

Author(s):
Nahabedian A (Orthopaedics) MCHFT

Background/Introduction/Aims:
This benign condition is a simple fracture, which after a single visit to the hospital/emergency department (ED), needs treatment for the pain element for a week or two with the least immobilisation and inconvenience. It is receiving more treatment than it needs, entailing many visits to the hospital, having various plaster casts applied, imposing daily living difficulties such as bath/shower unnecessarily and waiting hours in the clinic to be seen. This causes confusion from one visit to the next regarding the condition and treatment.

Methodology:
- Retrospective collection of data
- Data from one surgeon in a routine consecutive fracture clinic that sees non-allocated patients
- Data period 01/07/2013 to 01/12/2013
- Data obtained from the records of patients seen in the fracture clinic
- Total sample size n=37
- Method of data analysis packages used Excel

Results:
37 cases identified over this period of 6 months.
19 cases had an optimum treatment in the ED but a second visit unnecessarily.
14 cases had an optimom treatment in the ED but a third visit unnecessarily.
3 case started with overtreatment in the ED had 3 visits to the hospital
1 case started with optimum treatment in the ED but had 4 visits .

Conclusions/Recommendations:
The data can be extrapolated and it potentially shows 1092 cases over a year for all the 19 Consultants/week clinics. These cases should have a single visit to the ED, They should have either a half a plaster/back slab or a removable Futura splint and be discharge with advice, assurance and a patient information leaflet. Approximatly 1092 visits to the hospital could be saved if they were discharged from ED after one visit, which has a huge implication to the patient and the hospital, saving time, resources and money.

Abstract 34

OXYGEN PRESCRIBING AND DELIVERY: A NEED FOR RE-EDUCATION?

Author(s):
Balance L, Morris E, Lumley S, Jackson A, Bakilis M, Farnan S, Fullerton DG
(Respiratory Medicine) MCHFT

Background/Introduction/Aims:
Oxygen is one of the most widely used drugs in secondary care. The National Patient Safety Agency (NPSA), UK issued guidance in conjunction with British Thoracic Society (BTS) guidelines ensuring safer management of oxygen delivery. This study assesses Health Care Professionals (HCPs) knowledge of the basic principles of oxygen delivery.

Methodology:
Nurses and junior doctors in our hospital completed a pictorial questionnaire, where commonly used oxygen delivery devices had to be identified. A panel of Respiratory Physicians evaluated the answers.

Results:
Over 3 weeks a convenience sample of 75 HCPs completed the survey 31 % nurses (n= 23), 61 % doctors (n= 46), 8% other (n=6). With regards to oxygen prescription, 33% always prescribed it, 39% some of the time and 22% never prescribed it. However, 92% were aware of the BTS oxygen prescribing guidelines.

Conclusions/Recommendations:
The majority of HCPs correctly identified the O2 delivery devices. However, some could not correctly name a non-rebreathing reservoir mask, despite the fact that requesting and identifying the correct oxygen delivery system is critical when managing patients. Following this study educational sessions have been introduced as well as a hospital oxygen steering group to target education and resource allocation.

Abstract 35

RE-AUDIT OF CONTINUOUS ELECTRONIC FETAL MONITORING

Author(s):
Murray C, Dunn J, Sawyer R, Cunningham S (Obstetrics & Gynaecology), Rozzell M (Clinical Audit) MCHFT

Background/Introduction/Aims:
Electronic Cardiotocography was introduced with the aim of reducing perinatal mortality and morbidity. When risk factors develop in labour, continuous Electronic Fetal monitoring (EFM) is recommended. (NICE 2007)
Within the Mid Cheshire NHS Foundation Trust, the local guideline for Continuous Electronic Fetal monitoring (EFM) provides guidance on monitoring the fetal heart rate in labour and interpretation of the cardiotocograph (CTG). Continuous CTG should be offered and recommended to women with high-risk pregnancies for which CTG is indicated and when Syntocinon is being used for induction or augmentation of labour. In order for the maternity unit to obtain level 3 in its assessment, the NHS litigation Authority (NHSLA) Maternity Clinical Negligence Scheme for Trusts (CNST) standards required that 'Continuous Electronic Fetal Monitoring in labour' be audited.

Methodology:
This was a retrospective audit of all women who have delivered and required continuous electronic fetal monitoring in labour between 1st February and 31st January 2014. Sample size n=3000 of which 1% were selected, therefore total sample size n=30. The data was collected by a midwife from maternal health records and entered onto an excel spread sheet and analysed by the Clinical Audit Facilitator.

Results:
The previous audit recommended that aspects of our local guideline were amended to reflect current clinical practice; attention to detail in documentation needed to be improved as data was not always recorded on a sticker at the commencement of the CTG. Overall compliance with documentation on commencement and completion of CTG's has improved.
Documentation of referrals and plans when tracings are deemed pathological and suspicious could be improved.

Conclusions/Recommendations:
Laminated reminders have been placed on all CTG machines in clinical areas to remind staff to complete the documentation and will be followed by Re-audit allowing time for implementation of the new guideline published in January 2014.

Abstract 36

RE-AUDIT OF MECONIUM STAINED LIQUOR

Author(s):
Price E, Dunn J, Sawyer R, Cunningham S (Obstetrics & Gynaeocology), Rozzell M (Clinical Audit) MCHFT

Background/Introduction/Aims:
This audit was conducted as part of the monitoring requirements in order to comply with the level 3 minimum requirements for the National Health Service Litigation Authority (NHSLA) Clinical Negligence Scheme for Trusts (CNST) within the Maternity Unit of MCHFT.
The audit aims to monitor compliance with Local and National Guidelines on the documented management of a new-born with meconium stained liquor at delivery, to identify any deficiences and to implement an action plan.

Methodology:
Retrospective audit of health records between 1st March 3013 and 28th February 2014, 196 new-borns with significant meconium stained liquor present at delivery were identified, of which 15 babies were chosen to give an audit sample to identify any potential issues. Data was collected and entered onto an Excel spread sheet by the Midwife and analysed by the Clinical Audit Facilitator.

Results:
This audit has highlighted that compliance with the guidelines during delivery of the baby is very good with 4 out of the 5 minimum requirements being met 100% of the time. By managing these babies correctly admission to the neonatal unit was prevented in all of the 15 cases audited. However, compliance with the neonatal observations requires improvement.

Conclusions/Recommendations:
During the previous audit it was noted that MCHFT Guidelines did not reflect recommendations the NICE guideline 'Intrapartum Care: Care of Healthy Women and their babies during Childbirth' (2007), regarding the observation of the babies.
A risk assessment of the discrepancy was carried out and escalated through the Obstetric and Paediatric Governance Committees to the Strategic Integrated Governance Committee, where it was agreed that it was acceptable to deviate from the NICE guidance and continue with local policy which is practicable to the current clinical situation and has not posed any significant risk to the baby. It was also agreed that the guideline could be amended to state that the observations should be performed at approximately 1 hour of age and then approximately 2 hourly, with a caveat of a 10 minute grace period.

Abstract 37

THE SCOURGE OF LIPIDS: LIPID MODIFICATION FOR SECONDARY PREVENTION OF CARDIOVASCULAR DISEASE A CLINICAL AUDIT

Author(s
Chukwu CA, Trelawny JM (Emergency Division) MCHFT

Background/Introduction/Aims:
Cardiovascular Disease (CVD) is the leading cause of death in the UK (32% of all deaths in UK). Arteriosclerosis is the underlying pathology for CVDs and there is a strong correlation between arteriosclerosis and cholesterol level. Statins have been shown to significantly lower LDL cholesterol level and improve mortality in patients with established CVDs. Evidence shows that <30% of eligible patients receive Statins for lipid modification (Heart, 2004).
The aim of the audit was to assess current practices of lipid modification in patients with established CVD against the recommendations in the NICE guidelines (CG67). The objective was to determine the proportion of eligible patients with established CVD who are receiving statins for lipid modification.
The standard according to the National Institute of Health and Care Excellence (NICE) Clinical guidance 67 issue date may 2008, reissued march 2010 states that statins should be offered to all patients with clinical evidence of stable CVD and the accepted target was 80% compliance.

Methodology:
Retrospective analysis of patient records attending Cardiology out-patient clinic in the months of November and December 2013. Records reviewed included ICS clinic letters, discharge letters and EMIS GP records.
Patients included had established CVD such as stroke, peripheral vascular disease, ischaemic heart disease and diabetes with one other cardiovascular risk factor.
Excluded are patients with known allergy or intolerance to statins or where statins are contraindicated. Sampling method was by convenience sampling of patients attending cardiology out-patients clinic. Fifty one patients were identified as eligible for lipid modification but one patient had intolerance to simvastatin.

Results:
The mean age of the patients was 73.4 years (range 53-93) and 28/50 (56%) were male. Statins were prescribed for 42/50 (84%) of the eligible patients. 26/28 (92%) of the eligible male patients had a statin prescription while 16/22 (72.7%) of the eligible female patients had a statin prescritions.

Conclusions/Recommendations:
The audit shows a good practice of lipid modification. However this might be due to the nature of the sample population being patients seen in the cardiology clinics by cardiologists. The audit also shows that men are more likely to receive lipid modifying medications than women.

Abstract 38

THE OSCE AS AN ASSESSMENT OF LEARNING NEEDS AND PROGRESS FOR MANCHESTER MEDICAL STUDENTS AT MCHFT

Author(s):
Anwar, N A (Postgraduate Medical Centre) MCHFT

Background/Introduction/Aims:
Every academic year, third-year Manchester medical students under the Heart, Lungs and Blood module undergo seven-week placements in MCHFT on a rotational basis. Every cohort of students would receive fixed teaching sessions with a designated Education Fellow alongside clinical placements in Cardiology, Respiratory, Care of the Elderly or Anaesthetics. The lack of a placement syllabus and the newly-created post of Education Fellow made the scope of fixed teaching sessions challenging to define. Formative Objective Structured Clinical Examinations (OSCE) were conducted at the beginning and end of three placements to determine the focus of a teaching programme. The aims were: 1. To develop a teaching programme based on student's learning needs. 2. To enable students to direct their learning based on identified knowledge gaps. 3. To assess their learning progress at the end of the placement.

Methodology:
23 students on three separate placements have undergone this process. Multiple OSCE scenarios involving clinical skills and data interpretation were developed based on real-life practice and available texts. Senior medical students and junior doctors were recruited on a voluntary basis using an online booking system. The OSCEs were conducted as per the Manchester Medical School format. Clinical stations were marked by junior doctors using a combination of criterion-based and global marking schemes. Feedback was given immediately after student's performance. Data interpretation stations involved a combination of written questions. Student's perception of their own performance was recorded on global marking scales. Written feedback on quality of the OSCEs was collected from all participants. Comparison was made between scores at the beginning and end of placements. Gaps in student's knowledge were identified to inform the focus of their fixed teaching programme.

Results:
Written feedback from students has shown that the OSCE have enabled them to self-direct their learning based on knowledge gaps identified. However, students clinical, perceived and data interpretation scores did not show significant differences pre and post placement. Student's perceived scores have been lower than actual scores received.

Conclusions/Recommendations:
The OSCE is a useful tool for assessing learning needs and progress in clinical placements. Quantitative data on student performance may not necessarily be a good predictor of student's progress. Qualitative data on knowledge gaps and student feedback were more valuable in developing a placement curriculum. A new Heart, Lungs and Blood Module Placement Guide was written based on the results of these formative OSCEs.

Abstract 39

AUDIT OF THE EFFICACY OF SAEBO UPPER LIMB SPLINTS FOR USE WITH STROKE PATIENTS

Author(s):
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Background/Introduction/Aims:
SaeboFlex is a dynamic hand splint that can incorporate the use of a patients hand in upper limb function. Following a three week trial of three patients attending a SaeboFlex exercise groups twice a week, clinical benefits could be seen. Funding was gained for a hospital kit, with the aim to establish effective use of the splints within the clinical service and how best this could be delivered.

Methodology:
Inclusion criteria: Admitted with a stroke to Ward 6; had 15 degrees shoulder flexion/abduction/extension; had no cognitive impairment.
18 patients were identified between 20th March 2012 and 18th September 2012. Data for 5 patients was omitted due to not completing the course of treatment, either because they died or were medically unable to continue.
Initial data was collected for the ARAT outcome measure, but adandoned due to cost of purchasing necessary equipment. The Motor Assessment Scale (MAS) was identified as a suitable alternative and was carried out on initial SaeboFlex assessment and on completion of use. The MAS assesses essential components required to perform functional tasks, including getting out of bed, dynamic sitting and standing balance, with a separate section for upperlimb function. The total scores and upper limb scores were recorded.
Patients received a tailored exercise treatment session for a minimum of twice a week, where medically able. Treatment was stopped when clinically indicated or on discharge/transfer off the ward.

Results:
The mean initial total limb MAS was 15.6 out of 54, the mean discharge MAS was 31.6 out of 54, showing an improvement of a score of 16. The initial upper limb MAS was 4 out of 24, the discharge was 10.6 out of 24, showing an improvement score of 6.6.

Conclusions/Recommendations:
The use of SaeboFlex provides a useful adjunct to Stroke therapy input, where benefits can be seen for upper limb function, proximal recovery, improved attention, dynamic sitting balance and dynamic standing balance. Exercises should be created and progressed specifically to patient's needs, where patients are carefully monitored for adverse effects, and abnormal movement patterns. The SaeboFlex can be used alongside or as preparation for other treatment interventions.
Recommendations are:

- To establish criteria for suitability of patients to use the SaeboFlex
- To ensure physiotherapists and occupational therapists within the stroke team are trained to assess, fit and use the SaeboFlex

Abstract 40

NATIONAL SECONDARY CARE CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) AUDIT 2014: HOW IS MID CHESHIRE DOING?

Author(s):
Anwar N A, Morgan K, Fullerton D G (Medicine), White H (Clinical Audit) MCHFT

Background/Introduction/Aims:
COPD is the second most common cause of emergency admission and the fifth biggest cause of death in the UK. Effective management of this condition not only improves patient's quality of life but also reduces hospital costs and rates of admissions. The aims of this audit were to assess the management of COPD exacerbation at MCHFT and to contribute to the National British Thoracic Society (BTS)/ Royal College of Physicians (RCP) COPD secondary care audit programme 2014.

Methodology:
82 case notes of patients admitted with a first exacerbation of COPD between February and April 2014 were reviewed retrospectively. Data were collected using the National COPD audit tool and entered onto the BTS online database. A summary report was generated from the BTS database electronically, prior to the publication of the national report in early 2015.

Results:
Most patients received oral antibiotics and steroids within 24 hours of admission (80.5% and 79.3% respectively). Only 34.1% of patients had the fraction of inspired oxygen documented along with their arterial blood gas results. Oxygen was only prescribed for 32.9% of patients. More than half of patients did not have spirometry recorded in the last five years (69.5%). The majority of patients had their Body Mass Indices (BMI) and estimated MRC dyspnoea score recorded in the notes, however, most patients (73.8%) did not have a record of decision on ceiling of care. 49.4% of patients were ex-smokers. Of the 26 patients who were current smokers, 34.6% received smoking cessation advice. Only 6.1% of patients were assessed and referred for pulmonary rehabilitation. 47.6% of patients were reviewed and discharged under the Supported Early Discharge service.

Conclusions/Recommendations:
Most patients received recommended treatments for exacerbation of COPD within 24 hours of admission. Unfortunately, a high proportion of patients did not have oxygen prescribed nor were their ceiling of care documented. Patients' BMI, level of dyspnoea, exercise tolerance and severity of airway obstruction are important in determining prognosis in COPD. The fraction of inspired oxygen must be documented with arterial blood gas results. More patients should receive smoking cessation advice and be considered for pulmonary rehabilitation referral where appropriate. The Supported Early Discharge service should be considered for all cases of exacerbation of COPD.

Abstract 41

RE-AUDIT OF WHO SURGICAL SAFETY CHECKLIST

Author(s):
M Brown, E Quinn, Dawn Clarke (Theatres), T Sellors (Clinical Audit) MCHFT

Background/Introduction/Aims:
The World Health Organisation (WHO) Surgical Safety Checklist is used in any operating theatre environment. It is a tool for the relevant clinical teams to improve the safety of surgery, by reducing deaths and complications. In June 2008, the WHO launched a second Global Patient Safety Challenge, 'Safe Surgery Saves Lives' to reduce the number of surgical deaths across the world of which the checklist is part of the initiative. Organisations are required to:

- Ensure an executive and clinical lead are identified in order to implement the surgical safety checklist within the organisation
- Ensure the checklist is completed for every patient undergoing a surgical procedure (including local anaesthetics)
- Ensure that the use of the checklist is entered in the clinical notes or electronic record by a registered member of the team

Methodology:

- Prospective collection of data between 27/08/2013 and 31/03/2014, assessed monthly
- Observational data from WHO Surgical Safety Checklist within Inpatient Theatre and Treatment Centre Theatres for Surgery, Gynaecology, Urology, Orthopaedics, Ophthalmology and ENT

Results:
During the period of the audit compliance has improved:

- Sign in - increased from 86% to 95%
- Time out - increased from 89% to 95%
- Sign out - increased from 80% to 89%
- Proposed procedure - increased from 80% to 98%
- Actual procedure - increased from 80% to 90%

Although results improved month on month overall, some specialties did not achieve consistent compliance in all criterion.

Conclusions/Recommendations:
Improved compliance has been achieved through;

- Dissemination of audit and videos of 'How to' and 'How not to' do the WHO check list at Speciality Audit Meetings
- Monthly learning summary to all specialities, identifying the reasons and support required for specialties that were non-compliant
- Continued to support for theatre staff in clinical environment to achieve consistent delivery of required compliance
- Enlisting support from Clinical Leads and Consultant teams to lead on compliance with policy and delivery of checklist in clinical areas. This will

continue until the new Theatreman system is fully implemented ensuring compliance electronically

Abstract 42

CORNEAL TRANSPLANT UPDATE AUDIT

Author(s):
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Background/Introduction/Aims:
Corneal transplant graft surgery is used for several sight threatening corneal diseases(eg pseudophakic bullous keratopathy and keratoconus). In the UK, approximately 2500 corneal grafts are performed each year and these are registered with NHS Blood and Transplant (NHSBT). Postoperative outcome data, including visual acuity, refraction, rejection episodes, graft failures and other complications are collected using NHSBT data collection tools. Using this data we can compare outcomes to similarly sized units nationally, identify where improvement is required and implement the necessary changes and re-audit to assess impact of change.

Methodology:
This was a retrospective audit with data sourced from patients notes and NHSBT data return pro formas. The inclusion criteria was all grafts performed at MCHFT between January 1999 and January 2012 and registered with the NHSBT with at least 12 month partial or complete follow up data. A case note review was used to populate any partially completed patient data in the NHSBT excel database file with a total patient sample size n=73. Data was analysed by the project team in consultation with the consultant leads for the project.

Results:
Over the last 13 years 73 transplants have been performed. At MCHFT 80% less than 6/18 and 39% less than 6/60. MCHFT results compared to national values (supplied in brackets). Post transplant visual acuity at 2 years are 6/12 or better 46% (57%), 6/18-6/60 30% (30%) and 6/60 or worse 20% (15%).
Post transplant astigmatism at 2 years, 40% (30%) with less than 3.0D of astigmatism. Graft survival rate at MCHFT 83% (92%) graft survival at 5 years. Rejection episodes over 6 years 15% (10%).
Areas that were poor and require attention include NHSBT follow up data forms (collection tool) return rate at MCHFT for 1 year = 76% (95%), 2 years = 72% (93%), 5 years = 67% (88%) and the lost to follow up rate at MCHFT was 24% (9%).

Conclusions/Recommendations:
At MCHFT we have acceptable rejection and graft survival rates. Guidelines for corneal graft surgery have been devised which details the timing of refraction and suture removal. Instructions regarding appropriate Optometry visits following removal of sutures were included. New trainees have been made aware of the importance of completing the NHSBT forms. A formal record of which grafts are discharged to satellite unit for follow up has been established.

Abstract 43

TRANSANAL HAEMORRHOIDAL DE-ARTERIALISATION RE-AUDIT: CHANGING TRENDS IN HAEMORRHOID SURGERY

Author(s):
Fretwell V, Khan A (Colorectal) MCHFT, Butler J (Colorectal) Countess of Chester Hospital

Background/Introduction/Aims:
Transanal haemorrhoidal dearterilaisation (THD) is a non-excisional approach to the treatment of haemorrhoids. The technique has been employed at MCHFT for 5 years. Initial audit results indicated it to be an efficacious technique with low recurrence rates. We present a re-audit since discontinuation of routine follow up.

Methodology:
Data was prospectively collected between February 2009 (original audit) and February 2014 for a single Consultant Colorectal Surgeon. The re-audit period was October 2012 to December 2013. Data collected included grade of haemorrhoids, previous treatments, performance of haemorrhoidopexy or other procedure, post operative complications including pain and the need for repeat procedures.

Results:
One hundred and ninety five patients were included (M:F 107:88, median age 51). 63% had grade 3 haemorrhoids with 76% having had rubber band ligation previously. 60 patients had THD alone and in 128 it was combined with haemorrhoidopexy. Routine post operative outpatient follow up was discontinued after February 2012 due to favourable results (92% asymptomatic at 2 months).
Overall 6 patients had post operative pain requiring morphine administration in the recovery room, 1 patient was re-admitted with bleeding, 5 patients required further surgery and 3 had recurrence of minor symptoms not requiring further surgery. The subsequent re-audit showed the cessation of follow up to be safe as there were no readmissions and no repeat procedures in the first 4 months post operatively.

Conclusions/Recommendations:
The THD procedure is a new but safe, cost efficient and effective treatment for grade 2 and 3 haemorrhoids and with considerably lower morbidity than traditional open haemorrhoidectomy.

Abstract 44

ONCE-DAILY GENTAMICIN PRESCRIBING RE-AUDIT AT MID CHESHIRE HOSPITALS NHS FOUNDATION TRUST (MCHFT)

Author(s):
Wilkinson L, Woolley E (Pharmacy) MCHFT

Background/Introduction/Aims:
Gentamicin is widely used throughout MCHFT but despite its advantages it can have detrimental side effects such as nephrotoxicity and ototoxicity. To avoid these side effects gentamicin is often given following a once daily dosing regime in which high peak concentrations are achieved but also allows for low trough concentrations so that accumulation of the drug is less likely and requires less frequent administration times and simpler monitoring. Gentamicin is often dosed and monitored incorrectly increasing the risk of complications and also means infections may be treated inefficiently.
This audit assesses the dosing and monitoring of gentamicin, and whether it was being administered within 2 hours of the time the dose was due (in accordance with the critical medicine section of the Medicines Policy). The success of a new prescription and monitoring chart, implemented since the previous audit, in improving patient safety of gentamicin prescribing, was also be evaluated.

Methodology:
This was a prospective audit and included 25 patients admitted to MCHFT prescribed gentamicin between 04/02/2014 and 15/03/2014. Exclusion criteria included: infective endocarditis, extensive burns, eGFR<25ml/min, paediatric and maternity patients. Patients were identified using KeaVT pathology system and followed up using medication prescription charts, once daily gentamicin prescription charts, patient notes and the pathology system. Microsoft Excel was used for data analysis.

Results:
All 25 patients were prescribed once daily gentamicin on the correct chart. 80% of patients were prescribed the correct dose of gentamicin. 80% of patients prescribed once daily gentamicin were monitored correctly. 89% of gentamicin doses were administered within 2 hours of when they were due.

Conclusions/Recommendations:
Overall there has been an improvement in gentamicin prescribing since the 2013 audit. This can most likely be attributed to the new prescription chart. Key recommendations:
1) Ideal body weight dosing needs to be reinforced by ward pharmacists to the doctors
2) Ward managers, their nursing staff and doctors need the importance of gentamicin levels being taken 6-14 hours post-dose reiterating
3) Ward managers need the importance of the critical medicines policy reiterating
4) Continue to perform competency based teaching around gentamicin prescribing and monitoring to all F1 doctors on induction
5) Highlight these issues in the pharmacy weekly meeting so that all pharmacists are aware of the required improvements

Abstract 45

AUDIT OF TRANSURETHRAL RESECTION OF BLADDER TUMOUR (TURBT) & BLADDER BIOPSY SPECIMEN REQUEST CARDS

Author(s):
Iskender M, Nasir N (Histopathology), Patel C, Mukherjee R (Urology) MCHFT

Background/Introduction/Aims:
In order for histopathologists to accurately process bladder tumour and biopsy specimens, the Royal College of Pathologists has published guidelines on clinical information required on the specimen request form. The aims of this study are to, retrospectively, audit whether these guidelines are being adhered to at Mid Cheshire Hospitals NHS Foundation Trust (MCHFT).

Methodology:
Retrospective analysis of 60 consecutive specimen request forms between November 2013 and February 2014, using an audit tool reflecting the Royal College of Pathologists guidelines: Dataset for tumours of the urinary collecting system. Demographic, tumour characteristics (size, number, location, description, previous biopsy info, 1st repeat biopsy, previous treatment) and legibility was expected on ALL 60 forms.

Results:
Demographic data was generally well provided (first name, surname, date of birth - 100%; Hospital ID - 98%; date - 93%). However, tumour characteristics were not provided to the expected percentage (description - 78%; 1st/repeat biopsy, previous treatment - 72%; previous biopsy information - 70%; number of tumours - 53%; location of tumour - 38%).

Conclusions/Recommendations:
The current histopathology specimen request cards for urological biopsies contain a free text box for clinicians to fill in. Our audit shows that this leads to a variation in the information provided depending on the clinician completing the card. We propose using a separate sticker that has the required information printed on as a reminder to clinicians. The sticker is stuck onto the current specimen request cards in the free text box. Once implemented, the process will then be re-audited to assess the efficacy of this simple recommendation.

Abstract 46

OUTCOME FOLLOWING EMERGENCY LAPAROTOMY: HOW DOES A DISTRICT GENERAL HOSPITAL COMPARE TO NATIONAL AUDIT AND GUIDANCE

Author(s):
Buckley KA (General Surgery) University Hospital Aintree, Hardman J (General Surgery) MCHFT

Background/Introduction/Aims:
The study aimed to assess outcome in patients undergoing emergency laparotomy in a district general hospital and compare practice to guidance from the Royal College of Surgeons (RCS) and to the first report of the UK Emergency Laparotomy Network (ELN).

Methodology:
The case notes of patients undergoing emergency laparotomy over a four month period from April to July 2012 were examined retrospectively. Information was gathered regarding the patient's predicted outcome using the P-POSSUM score. This allowed comparison to the actual outcome using the post-operative morbidity score (POMS) at day seven and 30 day mortality. The quality of patient care at the time of operation was assessed with regard to consultant input in high risk patients (predicted mortality ≥5%). The use of post-operative critical care was recorded.

Results:
41 patients underwent 43 laparotomies in the study period. Mean predicted mortality was 8.9%, actual 30 day mortality was 9.3% (4 patients) the O:E ratio was 1.04 (30 day mortality from the ELN was 14.9%). POMS showed that there were 43 complications in 18 patients at day seven (41.8%) vs. a predicted morbidity of 58.4% (O:E ratio 0.72). 18 patients (41%) had a predicted mortality of ≥5% and were considered "high risk". All high risk patients had consultant surgeon input at the time of operation, 38% had consultant anaesthetic input. 83% of high risk patients were admitted to critical care post op. In the low risk group 24% were admitted to critical care.

Conclusions/Recommendations:
Mortality was as predicted according to the P-POSSUM and compared well to the national average. Post-operative morbidity was also better than predicted. There was appropriate involvement by Consultant Surgeons. Appropriate use was made of critical care facilities, but the fact that not all high risk patients were admitted to critical care may reflect a lack of facilities.

Abstract 47

INCIDENCE & MANAGEMENT OF UPPER LIMB DEEP VEIN THROMBOSIS: AN AUDIT

Author(s):
Cozon C, Corfield L, de Burlet K (Surgery) MCHFT

Background/Introduction/Aims:
Upper limb DVT is rare, accounting for 4% of all DVT; usually presenting with a painful swollen arm, although often initially mistaken for cellulitis. Diagnosis is via venous duplex ultrasound. Current guidelines recommend all patients with a diagnosis of upper limb DVT should be referred to Vascular Surgery. The aim of this study was to assess the incidence of upper limb DVT within Mid Cheshire Hospitals NHS Foundation Trust (MCHFT) and whether these patients were subsequently referred to Vascular Surgery.

Methodology:
A retrospective audit was conducted of all patients diagnosed with upper limb DVT via a positive venous duplex, from 1st April 2012 to 1st April 2013. Patient demographic, aetiology, treatment and whether referral was made to Vascular Surgery were noted.

Results:
60 patients were investigated with venous duplex for clinical suspicions of upper limb DVT; of these, 11 patients were confirmed upper limb DVT. 4 of the confirmed patients had secondary causes for their DVT (all being concurrent malignancy) and 7 patients presented with primary DVT. Of those with primary DVT: 2 had thoracic outlet obstruction, 4 had no cause identified and 1 presented 2 days following major trauma.
Only 2 of the 11 patients were acutely referred to Vascular Surgery; of which one underwent thrombectomy, and the other thoracic outlet decompression. One further patient, with recurrent DVT, whilst not referred acutely to Vascular Surgery, was already known to the service due to thoracic outlet syndrome and was further managed by the haematologists. 8 of the 11 patients were anti-coagulated.

Conclusions/Recommendations:
Referral to Vascular Surgery, as stipulated in the guidelines, only happened in a minority of cases. As upper limb DVT is rare, clinicians are likely unaware of the necessity for this. This should be reinforced to all clinicians and radiographers performing venous duplex ultrasound. Awareness could also be raised by staff in the Anti-coagulant Clinic, who could advise referring clinicians upon receipt of a patient with upper limb DVT, should they be otherwise unaware of this need.

Abstract 48

IMPROVING OUTCOMES IN WOMEN OF ADVANCED MATERNAL AGE: MATERNITY SERVICE USERS ARE CREATING NEW CHALLENGES

Author(s):
Dixon C, Brown J (Midwifery Research) MCHFT

Background/Introduction/Aims:
Across the UK the average age of childbearing is rising and this creates new challenges for services in the NHS. The Reproductive Health Research Team is helping to support clinical trials to develop the evidence base to meet these new challenges. One example of this diverse portfolio is the Manchester Advanced Maternal Age Study (MAMAS) trial: Identification of Biochemical Mechanisms Underlying Vulnerability to Stillbirth. It aims to explore the risk factors for childbirth by obtaining specimens of blood to measure hormones and markers of inflammation and oxidative stress in the blood of women of advanced maternal compared to those of optimal childbearing age.

Methodology:
The MAMAS trial is a multi-centre observational trial with a sample size of 450. Women will be grouped into three age groups: (i) 20-30 years, (ii) 35-39 years, (iii) 40+ years. This enables a comparison between the advanced maternal age groups (35+) with the optimal age group. Blood samples are collected from participants in the third trimester of pregnancy: at 28-32 weeks and 36-40 weeks. The research midwife also completes a questionnaire to gather relevant lifestyle information and records birth outcomes.

Results:
Embedding research into the culture of the unit benefits our patients both in the direct opportunities to participate and in the longer term has the advantage of improving quality through robust evidence supporting practice.
The MAMAS study will identify potential mechanisms linking advanced maternal age to stillbirth. Understanding how advanced maternal age predisposes to stillbirth will enable identification of women at high risk and improved targeting of maternity care to reduce poor maternal and perinatal outcomes.

Conclusions/Recommendations:
The Royal College of Obstetricians and Gynaecologists (2009) recommends that women complete their families between the ages of twenty and thirty five due to research suggesting poor obstetric and perinatal outcomes outside this range. However, it could be argued that this is not a realistic option for many women in today's society. Offering women the opportunity to be involved in relevent research is responsive to this change in our culture.

Abstract 49

SECONDARY PREVENTION IN POST MYOCARDIAL INFARCTION (MI) PATIENTS IN MID CHESHIRE HOSPITALS FOUNDATION TRUST: BASED ON AUDIT STUDIES FOR COMPLIANCE OF NICE GUIDELINES

Author(s):
Dave A, Trelawny J (Cardiology) MCHFT

Background/Introduction/Aims:
NICE guidelines offer comprehensive advice on prevention of secondary MI and progression of vascular disease in those who have already had an MI in the past. The aim of this audit, which was followed by a re-audit, was to assess our trust's compliance with these guidelines on the 5 key criteria defined by NICE

Methodology:
Data on admissions to MCHFT with confirmed diagnosis of Myocardial Infarction (MI) was collected prospectively. Both the original audit (January 13-March 13) and re-audit (December 13-March 14) had a sample size of 50 patients. Data was extracted from the Myocardial Ischemia National Audit Project (MINAP), patient administration records and eDischarges. Non-spontaneuos MI was excluded (e.g: periprocedural MI and non-atherosclerotic MI).

Results:
The initial audit demonstrated 100% compliance with documentation of diagnosis of MI on discharge summaries and assessment for further cardiovascular revascularization by cardiologists. More than 90% compliance was observed for other criteria such as advice on referral to cardiac rehabilitation, dietary restrictions and smoking cessation. There was also >95% compliance with prescribing guidance. The two most significant shortcomings highlighted in the initial audit were the poor documentation of advice on secondary prevention (4%) and failure to prescribe aldosterone antagonists in Left Ventricular (LV) dysfunction post MI (55%). Teaching and awareness sessions were organised to address these shortcomings, however an amendment to the e-discharge template could not be implemented due to financial constraints. Progress was re-assessed after 6 months; the re-audit confirmed continued high compliance with documentation of diagnosis, prescription of combination of drugs post MI, as well as referrals for cardiac revascularization and post MI advice. The re-audit further indicated an improvement in prescribing aldosterone antagonists in post MI patients with LV dysfunction or features of congestive cardiac failure (an improvement of 18% from the initial audit). However, the documentation of advice on secondary prevention in e-discharges continued to remain low with only a slight improvement (10% in re-audit as opposed to 4% in the initial audit).

Conclusions/Recommendations:
The audit and re-audit conducted at MCHFT over a period of 12 months reflects high compliance with NICE guidelines on most criteria. There has also been an improvement in the rate of prescription of drugs in LV dysfunction post MI but there remains an unmet need to improve documentation of management plan for advice on secondary prevention in discharge summaries. The result from MINAP also suggests that our trust

is doing better than nationally in prescribing statins Beta blockers and Clopidogrel and slightly below national average in prescribing ACE inhibitors.

Abstract 50

A BASELINE AUDIT INVESTIGATING AREAS OF IMPROVEMENT FOR AN ENHANCED RECOVERY IN OBSTETRICS FOLLOWING EMERGENCY CAESAREAN SECTION

Author(s):
Edmondson P, Preston H, Wilson L, Gudimetla V (Anaesthetics) MCHFT

Background/Introduction/Aims:
Enhanced recovery in colorectal and orthopaedic surgery is well established in this trust, furthermore, elective caesarean section (CS) will be adhering to this process in the future. It has been accredited with improving outcomes and reducing inpatient stay nationally. Although difficult to implement in an emergency population group we believe certain aspects of the elective enhanced recovery protocol could be used to improve our current service. Therefore, a baseline audit was undertaken to highlight areas of improvement needed.

Methodology:
Between December 2013 and March 2014 data was collected on women undergoing category 1-3 emergency CS (ECS). Data was collected using a questionnaire tool that was filled in by anaesthetic, obstetric and midwifery teams. The majority of data was collected retrospectively. The main outcomes analysed were fasting times prior and post theatre, time to catheter removal, time to mobilise and length of stay. Patients were also asked about satisfaction and quality of pain relief post-operatively.

Results:
Data from 25 patients was collected and analysed. The mean age of the population was 31.2 years with an mean BMI of 25.9kg/m2. Of these 25 ECS there was a ratio of 6:14:5 for category 1:2:3 respectively. The majority of ECS were carried out for failure to progress with pathological CTG following in second place. Mean fasting times pre-operatively were 2.75 hours for fluids and 9.23 hours for solids. Post-operative fasting was 4.22 hours for fluid and 14.28 hours for solids. 64% of patients received spinal anaesthesia, 20% general anaesthesia, and 16% had an epidural top-up. 12% of patients had Flowtrons during the procedure and 92% received antibiotics. The mean time to catheter removal was 22.09 hours and 20.24 hours for mobilisation. Mean time to discharge from ECS was 73.62 hours. 65% of patient reported that the quality of analgesia was good and 76% were satisfied with the analgesia prescribed.

Conclusions/Recommendations:
This audit has highlighted several areas of improvement in our ECS population. Including starting oral diet post-operatively earlier, catheter removal at a maximum of 12 hours and encouraging patient mobilisation. We believe the use of leg bags for catheters will encourage mobilisation prior to catheter removal. Water and biscuits is to be available in recovery to encourage oral diet.
Although pre-operative education regarding ECS is difficult, we believe a post-operative information sheet regarding expectations would be helpful. Along with the implementation of enhanced recovery for elective CS we believe we will be improving patient safety, outcome and satisfaction.

Abstract 51

THE URGENT CARE CENTRE (UCC) AT MCHFT
THE ACUTE FLANK PAIN (SUGGESTIVE OF RENAL COLIC) PATHWAY

Author(s):
Tildsley D, Farrington M, Couper K, Brunt E, Slater R, Bickley R, Butler-Barnes J, Brown T, Muirhead R, Hammond E, Chapple S, Lockett C, Chishti Z, Lam C, Roughsedge N, Billington C, Davies M, Burns L (MCHFT)

Background/Introduction/Aims:
This Nurse Practitioner/ Nurse-led Pathway with UCC General Practitioner (GP) support was established in February 2013. Patients can be referred through GPs, Emergency Department (ED), or Secondary Care; patients who walk-in to ED presenting with acute flank pain are assessed by the Urgent Care Centre Streaming Nurse. The service aims to provide a safe, patient centered alternative to hospital admission for patients presenting with acute flank pain suggestive of renal colic.

Methodology:
Pain levels are assessed and analgesia prescribed and administered as appropriate. Urgent bloods are taken and the service has access to Urgent CT-KUB scans and reporting. Results are then reviewed and if they fulfil discharge criteria, To Take Out (TTO) medication is prescribed and out-patient follow-up arranged. If discharge criteria are not met, an acute referral to Urology is made. Quality of service is evidenced by a survey of patient satisfaction, saved hospital admissions and bed day reductions.

Results:
In 2013, based on a 2.1 day average length of stay 58.8 bed days were saved. In a 2013 survey of the service, 100% of patients felt that their expectations were met, 100% would use it again. 100% felt that information given was appropriate, clear and easy to follow, the service was rated as excellent, with one comment being that it was "difficult, but given the excellent service I would imagine that it was better than the alternatives".

Conclusions/Recommendations:
The introduction of the pathway has saved on admissions and bed days, and has improved the patient journey. Most patients would choose not to be admitted, with a preference to rest, eat and sleep in their own environment.

Abstract 52

THE URGENT CARE CENTRE (UCC) AT MCHFT DEEP VEIN THROMBOSIS PATHWAY

Author(s):
Tildsley D, Farrington M, Couper K, Brunt E, Slater R, Bickley R, Butler-Barnes J, Brown T, Muirhead R, Hammond E, Chapple S, Lockett C, Chishti Z, Lam C, Roughsedge N, Billington C, Davies M, Burns L (MCHFT)

Background/Introduction/Aims:
The Urgent Care Centre (UCC) has a fully adopted Community Deep Vein Thrombosis (DVT) Pathway, which has been operational since 2009. It is a Nurse Practitioner/ Nurse led service with UCC General Practitioner (GP) support, which provides a seamless patient journey from presentation to definitive management plan in partnership with Primary and Secondary Care services. There has been a year on year increase in the number of patients treated in the community with an identified DVT, with a mean of 75 patients seen per month.

Methodology:
Patients are referred to UCC by their GP, Emergency Department (ED) or secondary care, or may self-refer eg. a walk-in patient presenting with calf pain. There is capacity for 7 Doppler ultrasound scan slots per day Monday to Friday, with 2 additional slots where patients can be commenced on enoxaparin and return the following day for a scan. Most patients are seen, treated and discharged within a few hours on the same day of referral. Quality of the service is evidenced by patient satisfaction questionnaires, admissions saved and bed day reductions.

Results:
In 2013, 1012 patients were seen and treated on this Pathway. Based on an average length of hospital stay of 6.4 days, 6163.2 bed days were saved. Patient satisfication questionnaires from 80 service users who attended the DVT clinic during 2013, indicated that 69% of patients felt that the service was excellent, 28% very good and 3% fair, no patients felt that it was poor. 100% felt that their privacy and dignity were respected, 100% were happy with the communication and information given, 100% felt that they were involved with decisions about care and treatment, 95% would recommend the service, 60% rated the service and quality of care received as excellent, 32% very good, 8% good and none fair or poor.

Conclusions/Recommendations:
The introduction of the pathway has helped to save on admissions and bed days. This has enabled patients to continue with normal daily activities and improved the overall patient journey and satisfaction, as most prefer not to be admitted.

Abstract 53

THE URGENT CARE CENTRE AT MCHFT
THE IV @ HOME FOR CELLULITIS PATHWAY

Author(s):
Tildsley D, Farrington M, Couper K, Brunt E, Slater R, Bickley R, Butler-Barnes J, Brown T, Muirhead R, Hammond E, Chapple S, Lockett C, Chishti Z, Lam C, Roughsedge N, Billington C, Davies M, Burns L (MCHFT)

Background/Introduction/Aims:
The service was established in 2011, to provide a safe alternative to hospital admission for patients requiring intravenous (IV) antibiotic therapy in a primary care setting for patients with cellulitis. This is a Nurse Practitioner/Nurse led service with Urgent Care Centre General Practitioner (GP) support.

Methodology:
Patients can be refered by their GP, through the Emergency Departmental (ED), secondary care or walk-in patients. Quality of service is evidenced through patient satisfaction questionnaires, and savings on hospital admissions and bed day reductions.

Results:
In 2013, 66 patients were seen and treated within this Pathway. Based on an average 5 day length of stay, 255 bed days were saved. An analysis of 34 patient statisfaction evalutions of those treated consecutively on this Pathway during that time found that ; 97% of patients found the treatment met expectations;100% would use the service again; 100% felt that information given was appropriate, clear and easy to follow; 100% were happy with the support given; 100% preferred having treatment at home to being admitted; 80% felt the service was excellent, 17% very good, 3% good and none felt that it was poor; 100% felt that they were treated with respect for privacy and dignity.

Conclusions/Recommendations:
Extremely positive patient satisfaction questionnaire responses and feedback were received. This was largely the result of the pathway allowing patients to remain in their own environment and carry on with normal activities, including work if they were well enough. Admissions and bed days were saved and overall improvements made to the patient journey.

Abstract 54

24 HOUR PERIOPERATIVE MORTALITY IN HIP HEMIARTHROPLASTY - CEMENTED VERSUS UN-CEMENTED

Author(s):
Ramavath A L, Miller D (Trauma and Orthopaedics) MCHFT

Background/Introduction/Aims:
Hemiarthroplasty is the treatment of choice for the displaced intracapsular femoral neck fracture in elderly patients. Cemented hip implants have shown advantage of better mobility and reduced postoperative pain 2 (injury) in displaced femoral neck proximal fractures. In the literature there have been a number of cases with haemodynamic and cardiovascular instability and deaths following use of cemented implant in hip fracture patients. We compare
immediate 24-hour perioperative mortality in cemented and un-cemented hip hemiarthroplasty patients treated in district general hospital.

Methodology:
Mortality data of all hip hemiarthroplasty was obtained from Information Services for the period of January 2007 to December 2012. We retrospectively reviewed the case records of all patients who died within 24 hrs of surgery, recording age, gender, side, co-morbidities, seniority of operating surgeon and anaesthetist, blood pressure (BP) recording during cementation and post mortem report for cause of death.

Results:
A total of 11 patients were identified with 24hr perioperative death (PoD) over a72 month period, making the 24 hour overall PoD rate 2.3% (11/474). 7 patients died following cemented and 4 were after un-cemented. There were two cases of intra-operative deaths following cemented hemiarthroplasty. All cemented hemiarthroplasty patients (PoD-1.47%) had a significant drop of blood pressure (BP) after cementation and no significant drop in uncemented group (PoD - 0.8%) during surgery. There was no association with surgeon or anaesthetic seniority with mortality in either group. Average surgical time for cemented was 68 minutes and for un-cemented was 33 minutes. All patients had significant cardio pulmonary co-morbidities. 82% (9/11) of patients who died had an MI; of the rest, 1/11 died of a fat embolism (PE) and 1/11 from bronchopneumonia.

Conclusions/Recommendations:
There is 2.3% risk of 24-hour perioperative death after hip hemiarthroplasty in our hospital. There was a higher risk of PoD in cemented group compared to uncemented group. We recommend careful consideration of use of cement followed by good surgical technique in patients with multiple comorbidities or consider other options.

Abstract 55

SHOULD WE USE A CT, MRI OR OUTLET RADIOGRAPH TO IMAGE THE ACROMION?

Author(s):
Ramavath A, Holland P, Miller D (Trauma and Orthopaedics) MCHFT

Background/Introduction/Aims:
This study investigates if CT and MRI scans are more sensitive at identifying hooked and curved acromions than an outlet radiograph.

Methodology:
The images of patients who underwent a CT scan or MRI scan of the shoulder in addition to an outlet radiograph were identified. There were 100 consecutive patients in the CT group and 100 consecutive patients in the MRI group.
The outlet radiographs, CT scans and MRI scans were all reviewed by two assessors. The acromion was classified according to Bigliani's classification. The acromion was classified as curved if it was down sloping in the middle third. The acromion was classified as hooked if it was down sloping in the anterior third.

Results:
In the CT group on the outlet radiograph 59 acromions were flat, 22 acromions were curved and 19 acromions were hooked. On the CT scan 35 acromions were flat, 25 acromions were curved and 40 acromions were hooked ($P<0.05$).
In the MRI group on the outlet radiograph 33 acromions were flat, 33 acromions were curved and 34 acromions were hooked. On the MRI scan 11 acromions were flat, 19 acromions were curved and 70 acromions were hooked ($P<0.05$).

Conclusions/Recommendations:
A CT scan or MRI scan can often demonstrate a curved or hooked acromion that cannot be seen on an outlet radiograph. This may explain why patients with a flat acromion on an outlet radiograph can suffer with subacromial impingement that is successfully treated by partial resection of the acromion. Surgeons should not decide against the surgical treatment of subacromial impingement based on the absence of a hooked or curved acromion on an outlet radiograph.

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