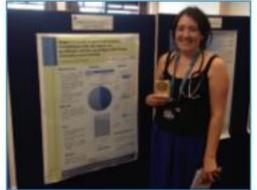
## MCHFT 10th Anniversary Exposition

26th June 2015









**Book of Abstracts** 

"Delivering Quality"

# Leighton Exposition Book of Abstracts

'Delivering Quality'

26<sup>th</sup> June 2015

### **Acknowledgements**

## Mid Cheshire Hospitals NHS Foundation Trust (MCHFT)

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#### MCHFT Financial Support/Sponsors

Research and Development Charitable Funds

## **'Delivering Quality'**

26th June 2015 : 10:00 - 15:00

Postgraduate Medical Centre, Leighton Hospital, Crewe

#### **PROGRAMME**

09:00	Registration
10:00	<ul><li>Welcome &amp; Official Opening of the Exposition:</li><li>Dennis Dunn, Chairman, MCHFT</li></ul>
10:15	Introduction of Adjudication Panel:  • Julie Smith, Director of Nursing & Quality, MCHFT
	<ul> <li>Dr. Gladys Onambele-Pearson, Health, Exercise &amp; Active Living Research Centre Lead, MMU</li> </ul>
	Mandy Smith, Quality Improvement Facilitator, HQIP
10:30	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**

#### 2014 EVIDENCING QUALITY

1st "Codeine as Analgesia Post-Tonsillectomy in Paediatric Patients: An

Audit of Practice"
Wilson L & Greene M

2nd "Sepsis in Acute Surgical Admissions – Compliance With the Sepsis

Six Guidelines and Its Correlation With 30-day Morbidity and

Mortality"

Gerakopoulos S, Balance L, Slavin J

**3rd** "The Urgent Care Centre at MCHFT, The IV @ Home for Cellulitis

Pathway"

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

**Student** "Audit of Blood Glucose Monitoring and Insulin Dose Adjustment in

Patients with Diabetes" Butler R & Ritchings A

#### 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

"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

"Communication Friendly Environments – Promoting Autonomy and 1st Access for People with Memory and Cognitive Impairment" Learoyd J & Dementia Care Pathway Group "The Effect of Consultant Caseload on re-Operation for Recurrence 2nd following Inguinal Hernia Repair in England" El-Dhuwaib Y, David G, Corless DJ & Slavin JP "Medicines Reconciliation on Admission at a District General 3rd Hospital" Ritchings A, Thomas K, Bradbury C & Allen T "Admissions for IV Antibiotics in Children with Cystic Fibrosis – H.C. 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 "Patient Satisfaction - Post Stapled Haemorrhoidopexy in a District 2nd General Hospital" Ved A & Chowdhary S "Implementation of Healthcare Recommendations Arising from the 3rd Victoria Climbie Inquiry 2003" Pugh RE, Gardner S & Rozzell M "The Challenge and Evidence Based Solution of the Management of Student 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

#### LIST OF ABSTRACTS

- 1 Registered Nurses' Attitudes to Pressure Ulcer Prevention within a Paediatric Setting
- 2 Introduction of Échelle Douleur Inconfort Nouveau-Né, Neonatal Pain and Discomfort Scale (EDIN) Pain Assessment Tool on NICU
- 3 Advancing Quality Alliance (AQuA) Improvement Methodology Improving the Computed Tomography (CT) Pathway
- 4 Clinical Audit of End of Life Care for Anticipated Deaths at MCHFT
- 5 Preferred Place of Care Audit for Patients Referred to the Specialist Palliative Care Team
- 6 Rapid Discharge Policy for Patients at the End of Life Care
- 7 The Effect of Compression Gloves in Hand Osteoarthritis: A Pre-Post-Test Trial (1)
- 8 Audit of Acute Coronary Syndrome in Leighton Hospital
- 9 Reducing Abdominoperineal Resection Rate for Rectal Cancer Treatment at MCHFT
- Outcome of Non-Invasive Ventilation (NIV) in Non-COPD Patients with Acute Type 2 Respiratory Failure (at2rf)
- 11 Back to the Future? Testing Hearing After Neonatal Meningitis
- 12 Improving Quality in the Newborn Hearing Screening Service for Mid Cheshire Hospitals NHS Foundation Trust
- 13 Clinical Audit of Arterial Blood Gas Requests
- 14 An Audit on the Completion of Orthopaedic Operation Pathway Booklets
- 15 Stress Echocardiography A Service Evaluation of a New Service
- 16 Student Quality Ambassadors and the 15 Step Challenge
- 17 Clinical Outcomes of Aflibercept in Wet Age Related Macular Degeneration (AMD)
- 18 Improving Quality in Prostate Cancer Care
- 19 Efficacy of Selective Laser Trabeculoplasty (SLT) in Lowering Intraocular Pressure (IOP)

- 20 Elimination of Hospital Acquired Moisture Lesions
- The Effect of Compression Gloves on Hand Osteoarthritis, Inflammatory Arthritis / Rheumatoid Arthritis: A Pre-Post-Test Trial
- The Management and Pathway of Cases of Malignancy of Unknown Origin in 2014
- 23 Intraoperative Complications of Cataract Surgery: Risk Stratification
- 24 Re-audit of Inpatient Cannulation How Much Scanner Time is Lost?
- Follow Up After Curative Intent Resection of Colorectal Cancer at a District General Hospital
- The Effect of Self-management Counselling Provided by the Pharmacy Department at Leighton Hospital
- 27 Differential Diagnosis: The Impact of Documentation of Diagnoses and Coding on in-hospital Mortality Risk *Abstract withdrawn*
- 28 A Service to Admire: A New Delivery Model for Current Awareness Services
- 30 Novel Compression Method for Patients with Chronic Venous Insufficiency with Leg Ulcers
- 31 Invasive Prenatal Diagnosis Outcomes Audit at a District General Hospital
- A Randomised Clinical Trial (RCT) Of Intrapartum Fetal Monitoring with Computer Analysis and Alerts Versus Previously Available Monitoring Aspiring to be Instrumental in the Evaluation of Technology at Start of Life
- Admissions

  Audit of Analgesia and Fluid Maintenance in Acute Paediatric Surgical Admissions
- 34 Low Histological Confirmation Rate in a District General Hospital (DGM) Exploring the Reasons Why
- Observational Study of Outpatient Hysteroscopy Outcomes Amongst Postmenopausal Women in a UK District General Hospital
- 36 Audit of Returned and Wasted Medicines
- 37 Audit of EBUS-TBNA Specimen Reporting at Cheshire Pathology Services
- 38 Cost Effective Methods of Management of Paediatric Femoral Shaft Fractures in a District General Hospital
- 39 Is Our Management of Gonorrhoea According to BASHH Guidelines?

40 Ultrasound Guided Foam Sclerotherapy for Venous Disease: The First Years' Experience 41 Handover of Responsibility for Patients in the Post Anaesthesia Care Unit 42 Self-identified Learning Needs in Urology for Non-Urology Trainees 43 Obstetric Medicine 44 Audit of Electronic Discharge Prescription Quality 45 Non-Medical Prescriber (NMP) Pharmacist Prescribing Pilot 46 Audit of Accuracy of Medication History Taking Performed by Doctors Compared to Pharmacy 47 Are Cholesterol Levels Being Checked and Managed Appropriately in Type 2 Diabetes in Primary Care? 48 Detecting Vitamin D Insufficiency: Surrogates are Not Good Enough 49 Thyroid Function Test (TFT) Testing Must Be Rationalised: Evidence from UK **Primary Care** Urgent Care Streaming Function – Delivering Quality 50 51 Reducing the Rate of Emergency Presentation in Lung Cancer 52 Is It Time from "Referral to Diagnosis" in Lung Cancer Pathway Affected by Diagnostic Test Delays? 53 Reducing the Rate of Emergency Presentation in Lung Cancer Day Case Laparoscopic Cholecystectomy: Quality Improvement Project 54

Trabeculectomy – Outcome and Complications

55

## REGISTERED NURSES' ATTITUDES TO PRESSURE ULCER PREVENTION WITHIN A PAEDIATRIC SETTING

#### **Author:**

Barnett M, Practice Education Facilitator, MCHFT

#### **Background/Introduction/Aims:**

Registered nurses should provide pressure area attention to babies, children and young people in their care. Evidence-based guidelines, policies and strategies have been developed to promote pressure ulcer prevention. However, it has been found that compliance with these measures is reliant upon staff attitudes. The aim of this research study is to explore qualified paediatric staff nurses attitudes to pressure ulcer prevention in an acute paediatric clinical setting.

#### Methodology:

Six qualified paediatric nurses, with a minimum of five years post-registration experience, working on an acute paediatric unit participated in the study. Each participant agreed to a semi-structured interview and qualitative data analysis methods were utilised throughout the study.

#### **Results:**

The adoption of pressure ulcer prevention strategies is dependent upon staff knowledge, time, workload and culture of the clinical area. As a group, paediatric patients are not perceived as being at risk of pressure damage because they are young and mainly active. Not all participants were aware of the structured risk assessment tool currently in place on the paediatric unit. This lack of awareness was explained by qualified nurses' perception that pressure area care was considered a low priority and not as important as other aspects of nursing care.

#### **Conclusions/Recommendations:**

Most qualified paediatric nurses regard pressure ulcer prevention as a low priority unless the babies, children and young people have special needs, orthopaedic conditions or are immobile for long periods of time. Even then pressure ulcer prevention tends to be a reactive rather than proactive activity.

Prevention measures, including the Braden Q risk assessment tool must be instigated proactively on admission and not after the development of a pressure ulcer. To achieve and maintain these goals, the process of change must be driven by strong leadership within the clinical division. It is recommended that these leaders of change utilise the champion model, whereby informal leaders are identified to train and educate staff to promote evidence-based practices.

#### **Actions taken:**

The paediatric unit in this study has staff who are engaged in the change process through their current link roles with tissue viability and education. The staff promote the importance of pressure ulcer prevention as a fundamental aspect of paediatric nursing care.

A mini risk assessment tool is being developed for the Emergency Department, Paediatric Assessment and Day Case Unit.

## INTRODUCTION OF ÉCHELLE DOULEUR INCONFORT NOUVEAU-NÉ, NEONATAL PAIN AND DISCOMFORT SCALE (EDIN) PAIN ASSESSMENT TOOL ON NICU

#### Author(s):

Barker R, Neonatal Practice Education Facilitator, Neonatal Intensive Care Unit (NICU), MCHFT

#### **Background/Introduction/Aims:**

In the past neonatal pain has been a subject of considerable controversy. Pain is a highly subjective experience, the non-verbal neonate was believed to be incapable of expressing pain, and it was believed that the neonate had no memory of pain. Increasing evidence from research indicates that the neonate, including preterm infants, have a central nervous system (CNS) which is more mature than previously thought. The neonatal unit environment is painful and exerts significant stresses on the neonatal CNS. The neonatal unit did not use a recognised neonatal pain assessment tool; the aim was to introduce a recognised tool and educate staff on how to use it. A further aim was to create a guide for staff and parents on interventions to relieve pain and distress.

#### Methodology:

After carrying out research on neonatal pain assessment tools, the Échelle Douleur Inconfort Nouveau-Né, Neonatal pain and discomfort scale (EDIN) was introduced. Along with this, a bedside guide was created, which gave examples of behaviours to look for if a neonate is experiencing pain. Furthermore it also contained a care plan with interventions that the nurse could implement to relieve pain and distress. This included simple measures such as repositioning, containment holding and non-nutritive sucking (non-pharmacological methods) to the pharmacological management of pain, such as the use of oral sucrose, paracetamol and IV morphine and the indications for the use of these medications. Nursing staff were educated on how to use this tool along with the bedside guide. A Standard Operating Procedure (SOP) was produced on the use of Amethocaine gel (Ametop) as a local anaesthetic for lumbar punctures to support the pharmacological methods of pain relief, and a parent information guide on pain created.

#### **Results:**

Staff can use the EDIN tool to accurately assess pain, and intervene appropriately.

#### Conclusions/Recommendations:

Not only has the introduction of this tool had a positive effect on the care of the patients, but it has also provided further encouragement to staff to include parents in all aspects of the care of their baby, thereby building on the family centred philosophy of care which is fundamental to the neonatal unit.

#### **Actions taken:**

- Introduction of EDIN tool to NICU
- Handy bedside guide for staff to use, including interventions that could be used to relieve pain and distress
- Parent information leaflet on neonatal pain
- SOP on use of Amethocaine gel (Ametop)

## ADVANCING QUALITY ALLIANCE (AQUA) IMPROVEMENT METHODOLOGY – IMPROVING THE COMPUTED TOMOGRAPHY (CT) PATHWAY

#### Author(s):

Hamman S, Professional Lead Diagnostic & Clinical Support Services (D&CSS), Coombes S, Head of Integrated Governance (IG), MCHFT

#### **Background/Introduction/Aims:**

There have been a number of over-exposure incidents for patients undergoing a CT scan, which have resulted in numerous Root Cause Analyses and production of the consequential Action Plans. Despite this, incidents continued to happen which suggested that actions to date had been implemented around single events without regard for previous incidents and little involvement from the teams concerned. This project was undertaken to establish an understanding of the entire process with the CT team and agree an improved process to prevent breaches of patient safety.

#### Methodology:

The AQuA Improvement methodology was instigated and a driver diagram drafted to outline the steps involved with the aim of eradicating over-exposure in CT. Following meetings within the CT department, with representation from the Divisional Associate Medical Director, the Professional Lead, the Head of IG, a range of CT staff levels from clinic and administration, the Divisional Risk & Governance Manager and the Divisional Clinical Audit Facilitator; a Process Mapping exercise was instigated along with Clinical Audits to provide snapshots followed by Re-audits to confirm the results.

#### Results:

The project identified a culture existed that accepted poor practice including:

- Request cards accepted via numerous routes rather than a standard method
- Lack of empowerment of junior staff to question incomplete request cards
- CT Checklist was used generically instead of for specific groups of patients
- Poor compliance of the CT Red Stamp on Request cards
- Lack of challenge when interruptions were made during CT imaging sessions

#### **Conclusions/Recommendations:**

A streamlined and standardised process of requesting, confirming and conducting CT scans has been established, which continues to be reviewed via the "Plan, Do, Study, Act" (PDSA) cycle. Staff have been empowered to ensure the process is fully adopted and we are seeing a reduction in the number of events reported.

#### **Actions taken:**

- Locked post boxes on the wall outside the CT/MRI Rooms for messages and an alternative method of fielding telephone calls in the department
- Department Meeting to communicate the progress of the CT Process Mapping Exercise and emphasise everybody's role to challenge/query decisions made by others if they are uncertain as to the reason for it
- Amend the CT Checklist for use with Outpatient scans and CT scans with contrast

#### CLINICAL AUDIT OF END OF LIFE CARE FOR ANTICIPATED DEATHS AT MCHFT

#### Author(s):

Edwards C & Fullerton L, Macmillan Specialist Palliative Care Team, MCHFT Estcourt K, End of Life Partnership Platt R, Clinical Audit Department, MCHFT

#### **Background/Introduction/Aims:**

The Leadership Alliance for Care of the Dying: One Chance to get it Right (2014) sets out the approach to caring for dying people that health and care organisations should adopt. It identifies the five priorities for care that are important when it is thought that a person may die within the next few days or hours. Following recommendations made within the Liverpool Care Pathway (LCP) Review 'More Care, Less Pathway' advising that local areas should develop 'individualised care plans' to replace the LCP, the Care Plan for End of Life was implemented within MCHFT on 1st July 2014 and focused on the five priorities.

A clinical audit was undertaken to evaluate the provision for End of Life Care at MCHFT for adults whose deaths were anticipated. The results were used to evaluate the local delivery of the 'Five Priorities for Care of the Dying Person' and examine how successful the implementation of the Care Plan for End of Life has been since it was introduced on 1<sup>st</sup> July, 2014.

#### Methodology:

- Retrospective review of case-notes for adult patient deaths in January 2015 by Macmillan Clinical Nurse Specialists (CNSs) and End of Life Facilitator
- Records reviewed by Macmillan CNSs and End of Life Facilitator using a paper data collection tool & entered into Excel Spreadsheet

#### Results:

- Figures demonstrate that 58% of patients who had an anticipated death were on the Care Plan at the time of death
- The use of individualised care plans helps to focus care around the needs of the patient and their family and provides the documentation and evidence that we are doing so

#### Conclusions/Recommendations:

- There is a continued need to provide high quality palliative care training for all staff within all clinical areas, with a strong focus on good communication skills
- We strongly believe that high quality care consists of the five priorities for end of life care being embedded within everybody's clinical practice

#### Actions taken:

- Working collaboratively with the End of life Partnership to provide high quality palliative care education.
- Review the layout and content of the Care Plan for End of Life
- Participate in the National End of Life Care Audit 2015 to allow national benchmarking

## PREFERRED PLACE OF CARE AUDIT FOR PATIENTS REFERRED TO THE SPECIALIST PALLIATIVE CARE TEAM

#### Author(s):

Edwards C & Fullerton L, Macmillan Specialist Palliative Care Team, MCHFT

#### **Background/Introduction/Aims:**

Preferred Place of Care (PPC) is a phrase which is used and understood to mean the stated preferred place of death of someone who is chronically ill and expected to die. It is important that people have a choice of where they receive care and support when they are coming to the end of their life. The 2008 Department of Health End of Life Care Strategy stated that "people's needs, priorities and preferences for end of life care are identified, documented, reviewed, respected and acted upon wherever possible". The aims of this audit were:

- To identify if discussions around preferred place of care were documented for patients referred to the hospital specialist palliative care team
- To identify if the patients last stated preferred place of care was achieved or not

#### Methodology:

- A retrospective audit was conducted on the documentation of the discussion of preferred place of care for all patients (n=67) referred to the hospital palliative care team. Also of the compliance with PPC wishes for those who died (n=55) during the three month audit period (Nov 2014 Jan 2015)
- Data was collected by examining the CNS contacts on the database used, which is the Somerset Cancer Registry

#### Results:

- PPC wishes were ascertained for 100% of the patients seen by the team
- The PPC was achieved for 93% of patients seen by the specialist palliative care team
- Of the 3 patients (7%) who died and did not achieve their PPC all were waiting for a nursing home bed but died before a bed became available

#### Conclusions/Recommendations:

- All patients seen by the specialist palliative care teams had their wishes ascertained and a large percentage of patients were able to achieve their preferred place of care
- Feedback of audit results

#### Important considerations:

- Overemphasis on place of death rather than quality of care or experience
- Is preferred place of care the same as preferred place of death?
- Patient choice is important but there are other relevant considerations (clinical need, feasibility, justice)
- Place may not be the most important priority for the patient –
   "How we die, not where we die"

#### RAPID DISCHARGE POLICY FOR PATIENTS AT THE END OF LIFE CARE

#### Author(s):

Edwards C & Fullerton L, Macmillan Specialist Palliative Care Team, MCHFT

#### **Background/Introduction/Aims:**

The Department of Health's End of Life Strategy (2008) is clear that people at the end of life should be able to make choices about their place of death.

It recommended that a Rapid Discharge Pathway be available to enable patients to be discharged from the acute hospital to home in the last hours /days of life. The aims of the audit were:

- To identify the number of patients who were rapidly discharged to their preferred place of care (PCC)
- To identify how quickly the rapid discharge was achieved
- To identify the length of time the patient spent in their PPC prior to death

#### Methodology:

- A retrospective audit was conducted on all rapid discharges for patients at end of life between 1<sup>st</sup> April 2014 and 31<sup>st</sup> March 2015 (n = 37)
- Data was collected from each set of Rapid Discharge documentation

#### Results:

- During the 12 month period the Rapid Discharge Policy was utilised 37 times
- 28 patients were rapidly discharged to their own home to die, 5 to a hospice and 4 to a nursing home
- 15 of these patients were discharged on the same day as the decision to discharge was made
- 10 patients were discharged the following day
- 4 patients were discharged within 48hrs of the decision to discharge
- A further 7 patients were discharged to their preferred place of care between 3 days and 7 days after the decision to discharge
- 1 Patient waited 20 days between decision to discharge and actual discharge due to very complex needs
- The length of time that patients were able to spend at their PPC before they died ranged from 15 minutes to 35 days
- The total number of days patients were able to spend at their PPC before death was 371 days, which would have otherwise been spent within the acute hospital setting
- The mean length of time each patient was able to spend at their PPC was 10 days

#### **Conclusions/Recommendations:**

- The rapid discharge policy enabled 37 patients to die in their preferred place of care
- Its use reduces length of stay in hospital
- Collaborative working with the integrated discharge team is an essential part of practice
- Feedback of Audit Results

#### THE EFFECT OF COMPRESSION GLOVES IN HAND OSTEOARTHRITIS: A PRE-POST-TEST TRIAL

#### Author(s):

Prior Y, OT Rheumatology, Research Fellow, Hammond A, Professor of Rheumatology Rehabilitation, University of Salford

Walker N, OT Rheumatology, Coleclough J, OT Rheumatology, MCHFT

#### Background/Introduction/Aims:

Compression gloves are used in Hand Osteoarthritis (HOA) to reduce pain, stiffness and improve hand function. The aim was to evaluate effects of compression gloves on hand pain, stiffness and function.

#### Methodology:

A pre-post-test trial was conducted. Participants were recruited from 10 Rheumatology Occupational Therapy (OT) departments. Assessments at 0 and 4 weeks included: hand pain on activity and at night, hand stiffness; hand activity; Grip Ability Test; and composite finger flexion to distal wrist crease. OT assessors were trained in standardised hand assessment. All participants received Isotoner gloves. Data was analysed using paired t-tests and effect sizes calculated using eta-squared.

#### Results:

30 people with HOA participated: 28 women, 2 men; average age = 61.23(SD 8.35) years; time since diagnosis 4.71(Standard Deviation (SD) 6.47) years. Hand pain on activity (0-10): mean 7.30 (SD 1.61) at baseline and 6.22 (1.99) at 4 weeks (p=0.008) with effect size=0.24; Hand pain at night: 6.56 (2.10) at baseline and 4.19(2.20) at 4 weeks (p=0.000) with effect size=0.45; Hand stiffness: 7.22 (1.74) at baseline and 5.85 (2.14) at 4 weeks (p=0.01) with effect size=0.44; Maphand: 25.33 (7.08) at baseline and 24.03 (7.87) at 4 weeks (p=0.14) with effect size=0.07; GAT: 40.05 (12.04) at baseline and 33.14 (13.10) at 4 weeks (p=0.000) with effect size=0.50; CFF Index (ems): 6.84 (2.17) at baseline and 6.44 (2.33) at 4 weeks (p=0.05) with effect size=0.14; and CFF Middle (ems): 5.72 (2.23) at baseline and 5.29 (2.25) at 4 weeks (p=0.03) with effect size=0.17.

#### **Conclusions/Recommendations:**

This study demonstrates, for the first time, that compression gloves used by people with HOA led to significant improvements in pain during the day and night, stiffness, hand function and finger motion, with moderate to large effect sizes. A randomised controlled trial needs to be conducted, including longer follow-up.

#### **Actions taken:**

In May 2014 an application was made to National Institute Health Research (NIHR) Research for patient benefit (RfPB) to fund the conduct of a multi-centre Randomised Controlled Trial (RCT), and was successful in acquiring £325,000. The trial will commence on 1<sup>st</sup> June 2015 and expected to last 30 months.

#### **AUDIT OF ACUTE CORONARY SYNDROME IN LEIGHTON HOSPITAL**

#### Author(s):

Loganathan T, Damania A, Mann P, Estcourt A, Prime L, Cardiology Department, MCHFT

#### **Background/Introduction/Aims:**

Acute Coronary Syndrome (ACS) is one of the major causes of mortality and morbidity in the United Kingdom. Management of ACS includes the administration of medications to reduce the clot, coronary angiography to visualise the area of coronary occlusion and insertion of coronary stents to enable effective blood flow to the heart. The National Institute for Health and Care Excellence (NICE) have set out quality indicators for management of ACS to improve levels of mortality amongst patients with ACS, to reduce the length of hospital stay and to reduce incidence of further ACS. The audit performed was to compare these quality standards set out in the NICE guidelines with the local management of ACS in Leighton Hospital.

#### Methodology:

A total of 39 patient notes with a diagnosis of ACS between April 2014 and September 2014 were reviewed. The management of ACS of these 39 patients were reviewed against the 6 quality standards set out in the NICE guidelines for ACS QS68. The results were then analysed and illustrated with graphs with Microsoft Excel.

#### Results:

The audit showed that around 89.7% of patients had a prompt diagnosis of ACS. Only 25.6% of patients reviewed had a risk assessment based on GRACE score for severity of ACS. For the patients who were clinically stable only around 30.8% had primary coronary intervention (PCI) to enable revascularisation of the heart within 72 hours. Amongst the clinically unstable patients, only 7.7% of suitable patients had PCI within 72 hours.

#### **Conclusions/Recommendations:**

The audit concluded that ACS management in Leighton Hospital has to be improved in certain areas to meet national standards. A re-audit of the ACS management in Leighton Hospital is needed to reassess the improvement after changes of ACS management in Leighton Hospital.

#### Actions taken:

Review of the ACS proforma to improve diagnosis and management. Review the case notes of clinically unstable patients who have not received PCI within 72 hours to access the cause for delay in treatment.

## REDUCING ABDOMINOPERINEAL RESECTION RATE FOR RECTAL CANCER TREATMENT AT MCHFT

#### Author(s):

Kazem,M A, Specialist Doctor, Ghazal A, Education Fellow, Khan A U, Consultant, MCHFT

#### Background:

Abdominoperineal resection (AP resection) is considered treatment of choice for very low rectal cancer. However this procedure has significantly higher morbidity than other operations for rectal cancer and leaves the patient with a permanent stoma.

There has been a shift towards reducing the rate of AP resections in the last few years, and the ACPGBI guidelines for the management of colorectal cancer published in 2007 recommended a rate less than 30%. An audit of our practice treating rectal cancer at MCHFT between 2007 and 2010 showed that our AP resection rate was 31%, and only 87.5 % of these patients had MRI rectum prior to surgery as part of the staging process. Following this audit an action plan was put in place to reduce the resection rate and improve the adherence to the staging process.

#### Aims:

To assess the improvement in our practice following the implementation of the action plan to reduce the AP resection rate for rectal cancer at MCHFT.

#### Methodology:

Retrospective re-audit of our surgical management of rectal cancer between 2011 and 2013 was performed. Patients were identified from a list retrieved from the information department, following which case notes, discharge letters, radiology reports, histology reports and outpatient correspondence were reviewed.

#### Results:

During the audit period 70 patients had a resection for rectal cancer, out of these only 17 had AP resection reducing the AP resection rate to 24.8% from 31% in the previous audit. 100% of patients undergoing an AP resection had staging MRI rectum compared to 87.5% in the previous audit, and all patients were discussed in the colorectal MDT which has not changed from the previous audit.

Dr C McBain from Christie hospital joined our colorectal MDT via video link to discuss rectal cancer cases, and Mr Hardman has been offering local resection (Transanal Endoscopic Operation, TEO) for benign low rectal lesion with a plan to develop the service to include early low rectal cancer.

#### **Conclusions:**

Through the introduction of MRI of the rectum to all patients, TEO to early stage low rectal cancer, Regional MDT meetings for rectal cancer cases, and second opinions in border-line cases, we have managed to reduce our AP resection rate to adhere with the ACPGBI guidelines, and at the same time we have improved the staging process for low rectal cancer patients by offering MRI pelvis to all of them.

## OUTCOME OF NON INVASIVE VENTILATION (NIV) IN NON-COPD PATIENTS WITH ACUTE TYPE 2 RESPIRATORY FAILURE (aT2RF)

#### Author(s):

Kasolo Y, Ozcan O, Brockelby C, Kazmi C, Respiratory Medicine, MCHFT

#### Background/Introduction/Aims:

Current guidelines recommend use of NIV in aT2RF with Chronic Obstructive Pulmonary Disease (COPD). Studies show that patients with no history of COPD also benefit from NIV when presenting in aT2RF. We sought to establish the efficacy of NIV in such patients in a district general hospital.

#### **Methodology:**

We retrospectively identified 152 patients who received Bi-level NIV over 9 months. 137 excluded (90 wrongly coded, 47 COPD). Parameters assessed included admission diagnosis, co-morbidities, treatment, admission outcome and 30 day survival.

#### **Results:**

Fifteen patients (8 females) were included in study. The mean age (SD) was 75(11) years. 7/15 (47%) were discharged and survived beyond 30 days. The range of diagnoses in the survival group included obesity hypoventilation syndrome, congestive cardiac failure, pneumonia, supraglottitis and exacerbation of asthma. In the mortality group, all but one of the patients died from pneumonia.

#### Conclusions/Recommendations:

Our results show that non-COPD elderly patients with pneumonia and aT2RF have poor prognosis despite treatment with NIV. However, NIV remains a beneficial treatment in non-COPD patients with aT2RF due to other causes. Small sample size was a limitation; we feel that a prospective study over an extended time period would be beneficial and useful in truly demonstrating the use of NIV in non-COPD patients.

#### **Actions taken:**

To re-audit prospectively over a longer time period to truly ascertain how much a burden NIV has on the Respiratory department here at Leighton Hospital. Since the majority of NIV was delivered on Ward 5 it is important to evaluate whether more Level 2 beds are needed to facilitate this. (The majority of patients who had NIV were deemed unsuitable for Level 3 care).

#### BACK TO THE FUTURE? - TESTING HEARING AFTER NEONATAL MENINGITIS

#### Author(s):

Lumley S, Thomson A, Paediatric Department, MCHFT

#### Background/Introduction/Aims:

One in 7 survivors of bacterial meningitis (BM) has a sensory disability, usually deafness, which may have an aggressive course. We aimed to check if we meet NICE TEG (Topic Expert Group) standard 13 in neonates. This requires an audiological assessment (AA) after BM *either* before discharge from hospital *or* within 4 weeks of being fit to undergo testing.

#### Methodology:

32 case notes from neonates discharged with a diagnosis of meningitis between April 2013 and January 2014 were examined retrospectively. Microsoft Excel was used to analyse the data.

#### **Results: Meeting standards and Audiological Assessment Results**

- No neonate had an AA before discharge, as babies are too ill to leave the unit before this date
- All 32 neonates were offered an AA within 4 weeks of discharge;
  - o 31/32 (94%) neonates were tested
  - 1 family postponed the offered appointment
- 30/32 (94%) passed their AA
  - o 2/32 (6%) failed their first AA, but passed their re-test
  - 2/32 (6%) had mild hearing loss, normal on re-test
     But neither had proven meningitis (1 probable, 1 none)

#### BUT:

- Only 1/32 had confirmed; 15/32 had probable; 4/32 had possible Meningitis: 12/32 did not have meningitis by strict criteria
- Delayed or 'failed' (bloody) Lumbar puncture (LPs) are main source of diagnostic confusion

#### Conclusions/Recommendations

- We met the NICE standard (the baby with proven meningitis had an AA)
- We revealed the extent of 'False positive' diagnoses of meningitis
- We shall refer all cases of <u>proven</u> neonatal meningitis for AA
- We shall assess other cases for referral individually

#### Actions

• To reduce 'false positive' LPs we have bought an LP simulator model

## IMPROVING QUALITY IN THE NEWBORN HEARING SCREENING SERVICE FOR MID CHESHIRE HOSPITALS FOUNDATION TRUST

#### Author(s):

Lamens S, Local Manager, Newborn Hearing Screening Programme, Warren L, Associate Specialist in Paediatrics, Paediatric Audiology, MCHFT

#### **Background/Introduction/Aims:**

Aims: 1) To monitor the Newborn Hearing Screening Service quality 2) To carry out a parental satisfaction survey 3) To address areas required for improvement

UK babies receive a hearing screening test during the post-natal period. The National Quality Standards for the Newborn Hearing Screening Programme is to achieve >95% of screens completed by 4 weeks (Key Performance Indicator 1). Prior to the screen being carried out, it is important that the screener explains the reasons for the screen and obtains informed consent. After the screen is complete, it is equally important that the parent understands the result and the reason that any follow-up may need to be arranged. Excellent interaction and communication between the screener and the parent is vital for achieving a high uptake of the screen.

#### Methodology:

77 Parental Newborn Hearing Screening Service Satisfaction Surveys were handed to parents post hearing screen in 2014 and returned anonymously. The results were analysed by the MCHFT Patient Experience Team.

#### **Results:**

- 100% of parents confirmed that the results were explained in a way they could understand and felt they were treated with dignity and respect
- 99% of parents confirmed that they were told what would happen next
- 96% of parents felt: they were informed about the service prior to the screen, verbal
  consent was obtained appropriately; they were given information regarding the use
  and monitoring of data and the screener had a friendly and approachable manner
- 89% rated the hearing screening experience as excellent, 9% as very good and 1.5% as good
- 66% said they would be extremely likely, 33% would be likely to recommend Leighton Hospital to friends and family

#### **Conclusions/Recommendations:**

Outcome results were excellent showing an extremely high level of parental satisfaction with the Newborn Hearing Screening Team. The following areas have been addressed:

- 1. To improve parental knowledge prior to the hearing screen being carried out, we have reintroduced midwifery training updates as part of their mandatory training
- 2. To improve understanding of consent and data storage we are making available consent /information leaflets in additional languages
- 3. Screeners are regularly assessed with regard to their patient interaction and we are highlighting the importance of a friendly and approachable manner to enable parents to feel at ease

#### CLINICAL AUDIT OF ARTERIAL BLOOD GAS REQUESTS

#### Author(s):

Ellerton L, General Surgery, Norman-Bruce H, Respiratory Medicine, Robinson S, Biochemistry, MCHFT

#### Background/Introduction/Aims:

Arterial blood gasses (ABG) are frequently used in acute phases of assessment and management to assess the oxygenation and other critical parameters of a patient's blood. Critically ill patients often have varying levels of hypothermia or hyperthermia, which affects the partial pressures and subsequent pH of the blood. The laboratory is able adjust for these changes when processing if data is provided. Assessing an ABG result without the physiological parameters to contextualize the data is difficult. It can make the uncomfortable test misleading and impact clinical decision making.

Currently clinical data can only be recorded electronically in comments section when requesting alongside multiple other tests. Our main aim was to audit the current adherence to the ABG Standard Operating Procedures (SOP) documents

#### Methodology:

This was a local audit using retrospective data provided by laboratory staff at Leighton Hospital. Raw data of 246 ABG results were collected during three consecutive weeks in February 2015. Data analysis was performed by one author and verified by the second for accuracy. The data analysis was produced in Microsoft Excel.

ABG results in this audit included only the ABG requests that are sent to the main laboratory. This audit does not include ABGs performed using the equipment of specialist departments, such as Neonatal Intensive Care Unit (NICU), Intensive Care, and Accident & Emergency, or clinician requests taken to these departments for processing.

#### Results:

246 samples received were received of these 33 were stated as venous samples and excluded (104 "not specified"). During the three week period, the Acute Medical Unit (AMU) requested the most ABGs (53, 24.89%). Overall, 123 (57.75%) of the samples received had a specified FiO2. Only 14 had a specified temperature (6.57%) whilst 3 additional requests documented "afebrile" (1.41%).

#### Conclusions/Recommendations:

A majority of clinicians were recording FiO2 on the ABG requests, although there is a significant minority of clinicians who did not. The proportion of clinicians that record sample type and patient temperature is notably small, and leaves considerable room for improvement.

The results demonstrate insufficient documentation of clinical data for ABG requests overall. Therefore, the introduction of adjustments to the ABG requesting software, followed by a re-audit, was recommended.

#### **Actions taken:**

The introduction of a reminder window that requires completion of all relevant data before the ABG request can be submitted was implemented in May 2015.

## AN AUDIT ON THE COMPLETION OF ORTHOPAEDIC OPERATION PATHWAY BOOKLETS

#### Author(s):

Franklin M D, Anwar F, Pegg D J, Orthopaedics, MCHFT

#### **Background/Introduction/Aims:**

Following a General Medical Council request for a series of operative notes it was noted that whilst the pathway booklets are bound and have patient demographic details on the cover, the presence of demographic data on the operative notes themselves varied. Our registered audit aimed to determine if the Trauma & Orthopaedic Department's patient pathway booklets for Neck of Femur Fracture, Total Hip Replacements and Total Knee Replacements are adherent to the Royal College of Surgeons of England (RCSE) Guidelines for Clinicians on Medical Records and Notes, 1994.

#### Methodology:

All booklets in use for inpatients on wards 9 and 15 (elective and trauma respectively) over a 7 day period in April 2015 were reviewed using a standardised data collection proforma.

#### Results:

28 booklets were reviewed in total (9 trauma, 19 elective). 100% had patient demographic labels on the front cover; however over a third (36%) of operation notes had no patient demographic details. 1 booklet was missing patient demographic details on the anaesthetic record. 50% of operation notes had no diagnosis, 5 did not mention a plan for venous thromboembolism (VTE) prophylaxis. Two of the operative notes were deemed illegible.

#### **Conclusions/Recommendations:**

Compared to the Royal College of Surgeons of England guidance we fall short on our operative note documentation. The most concerning issue is the lack of demographic data on the operative note, which is of huge clinical and legal import.

#### **Actions taken:**

The audit is to be presented at the departmental audit meeting on Tues 19<sup>th</sup> May. A re-audit will follow a period of departmental education.

#### STRESS ECHOCARDIOGRAPHY - AN EVALUATION OF A NEW SERVICE

#### Author(s):

Hewitt J, Chief Clinical Physiologist, Shaw A, Senior Cardiac Physiologist, Cardio-Respiratory Department, Dave A, Specialty Doctor in Cardiology, Duckett S G, (Lead Cardiologist), Emergency Care Division, MCHFT

#### **Background/Introduction/Aims:**

Stress echocardiography (SE) is used to assess patients for evidence of myocardial ischaemia. The National Institute for Health and Care Excellence (NICE) recommends SE for the assessment of patients with new onset chest pain with intermediate risk of coronary artery disease (CAD). CAD score 30-60%. SE can also be used to assess patients with valvular pathology as well as stratify risk prior to major surgery.

Prior to the start of the SE service in July 2013, patients travelled to University Hospital North Midlands (UHNM) to be investigated. This delayed a vital diagnostic test, therefore it affected patient care.

We performed a service evaluation of the SE service.

#### Methodology:

All patients are recorded on a SE database and we used this to evaluate patients that have had a SE since the start of the service to end of April 2015. We particularly looked at referral source, appropriateness, waiting times, and outcomes.

#### Results:

Since the start of the service, 505 SE have been performed. Monthly referral rates have progressively increased with 235 referrals from rapid access Chest Pain Clinic, 263 from the Cardiology Outpatient Department and 6 inpatients. 92% of referrals were for assessment of ischaemia, 5.5% for viability and 2.5% for valve assessments. There was a low complication rate of 0.2% which included developing atrial fibrillation, hypotension, bradycardia and transient ST elevation.

Of the 466 patients which were referred for ischaemia assessment, 68 (14.6%) patients were reported as showing ischaemia. 55 had coronary angiography (52 invasive angiography, 3 CT coronary angiography). 45 (82%) of these patients had significant CAD.

#### **Conclusions/Recommendations:**

The SE service is a safe effective service with low complication rates. It allows patients to have an important diagnostic test performed locally and has developed the Cardiology Department at Leighton Hospital. The service is expanding rapidly and provides a solid platform in the management of CAD. It allows clinicians to make appropriate management decisions with regards to referring patients for possible revascularisation.

## Abstract 16 Student Entry

#### STUDENT QUALITY AMBASSADORS AND THE 15 STEPS CHALLENGE

#### Author(s):

Hensman L, Student Nurse and Student Quality Ambassador, University of Chester, MCHFT

#### **Background/Introduction/Aims:**

Student Quality Ambassadors (SQAs) are a North West regional wide scheme that encourages Higher Education Institutes and service provider organisations to work in partnership. The aim is to develop initiatives that focus on promoting quality care and compassion within the healthcare and social sector. There is a strong and supportive working relationship with senior members of the Trust and a shared vision: to improve and influence the quality of patient care.

#### Methodology:

The SQAs introduced the use of the '15 Steps Challenges' quality tool, originally designed by the NHS Institute for Innovation and Improvement. The tool has been revised locally to suit the Trust and to avoid duplication with other audit activity in the Trust. SQAs are seen as a fresh pair of eyes and see the clinical area from the patient perspective highlighting high quality patient care and raising areas for discussion and further development. A rota was created for visiting clinical areas throughout the Trust. By the end of December 2014, 16 wards had been visited. A report of findings was produced for each area for consideration. Clinical areas are revisited after 3 months to evaluate what changes have taken place. Measuring the impact of the 15 steps can be hard to quantify, therefore the focus was on qualitative evidence. There is an ethos of 'being open and honest' within the Trust and the SQAs have had the opportunity to discuss the care witnessed with the Quality Team at the time, or in the subsequent debrief.

#### Results:

As a result of the 15 Steps Challenges, improvements have been made to the patient garden areas, clinic rooms and staff areas. An example of positive feedback received is 'even small changes we are able to make have a huge impact on staff moral and the experience patients and their relatives receive'.

#### Conclusions/Recommendations:

The relationship the SQAs have built with the Trust is profoundly supportive and encouraging. SQAs contribute towards the motivation to strive for greater quality in the care delivered to patients and the understanding that all members within an organisation, such as Mid Cheshire Hospitals Foundation Trust, have the opportunity to shape the future of healthcare. The 15 steps have helped the SQAs better understand how change affects staff and patient groups. It has also taught the reality of prioritising resources in the NHS; not just monetary value but conflicting cultures, attitudes and beliefs.

## CLINICAL OUTCOMES OF AFLIBERCEPT IN WET AGE RELATED MACULAR DEGENERATION (AMD)

#### Author(s):

Damani A, Ophthalmology, Loganathan T, Cardiology, Khan A, Ophthalmology, Kotamarthi V, Ophthalmology, MCHFT

#### Background/Introduction/Aims:

Wet age related macular degeneration (AMD) is a progressive condition whereby vision deteriorates secondary to neovascularisation and fibrosis in the macula. Anti-vascular endothelial growth factor drugs aim to halt the neovascularisation process thereby limiting the progression of the condition. Aflibercept is a relatively new drug licensed for use in wet AMD. There is limited literature following the VIEW 1 and VIEW 2 trials to demonstrate its clinical experience. We therefore aim to evaluate the clinical outcomes of patients who have had Aflibercept at our hospital.

#### Methodology:

We conducted a retrospective review of eyes that have been treated with Aflibercept between July 2013 and May 2014. Pre-injection and post-loading data, as well as those followed up for 1 year in this period were shortlisted. Patients were loaded with 3 injections at monthly intervals and reviewed at 2 months after loading. Pre-injection, post-loading and 1 year visual acuities (VA) and central sub-field thicknesses (CST) were reviewed and compared.

#### Results:

21% of eyes were new, previously untreated. The average number of injections required in 1 year was 6 for both previously treated and untreated eyes. 96% of eyes showed stability or improved VA in both groups; a higher margin of improved VA (gain of at least 15 letters) in the naïve group. The paired sample t-test showed that statistical significance (p=<0.05) was achieved for improved CST at 1 year.

#### **Conclusions/Recommendations:**

Early clinical experience shows that Aflibercept reduces CST at 1 year in wet AMD and offers structural improvement. This drug provides an opportunity for clinical improvement in wet AMD that requires fewer clinic visits as patients can be reviewed bimonthly, therefore reducing the burden on the patient as well as the ophthalmic clinic.

#### **Actions taken:**

Findings have been presented at the departmental audit meeting. Timeline of delivery of the loading doses and documentation of VA and CST has been conveyed to both clinical and managerial staff to consolidate knowledge of the administration regime and appointment handling. This will be re-audited next year to monitor progress.

#### IMPROVING QUALITY IN PROSTATE CANCER CARE

#### Author(s):

Meir J, Adamson V, Hough C, Mansfield C, Everall L, Bennion C, Clinical Trials & Oncology Reseach Department, MCHFT

#### **Background/Introduction/Aims:**

The Clinical Trials and Oncology Research Department at MCHFT offers a broad portfolio of National Institute for Health Research (NIHR) & commercial trials to our patients. The STAMPEDE trial (<a href="www.stampedetrial.org">www.stampedetrial.org</a>) is a multi-arm, multi-stage randomised controlled trial (RCT) that recruits men with newly diagnosed or rapidly relapsing prostate cancer (PCa) that is metastatic (M1) or high-risk locally advanced, all commencing long-term androgen deprivation therapy (ADT) for the first time. This is now the largest therapeutic RCT in PCa looking at improving life expectancy and quality of life in this patient population.

#### Methodology:

Prostate cancer accounts for around one fifth of all cancers among men. In the UK there are around 25,000 new cases of prostate cancer each year, and around 10,000 deaths (*CRUK*, 2014). Men with high risk prostate cancer or metastatic cancer are usually given hormone therapy; this is often effective for a short time at stopping the tumour growing. However in most cases over time the tumour will start to grow again. The aim of this trial is to try to prevent the tumour re-growth by adding other treatments to the hormone therapy, focusing on quality of life and increasing life expectancy. The trial previously tested abiraterone alone, celecoxib, docetaxel and/or zoledronic acid and it is currently using abiraterone and enzalutamide in combination with hormone therapy or radiotherapy (newly diagnosed metastatic patients only) in combination with hormone therapy.

#### Results:

Trial data will mature, on current projections in the second quarter of 2015. To date (May 2015) 3,984 men have been recruited to STAMPEDE since opening, including a control arm cohort of 682 M1 men with newly-diagnosed disease. 41 patients have so far been recruited into the trial at MCHFT.

#### Conclusions/Recommendations:

The primary outcome measure of the STAMPEDE trial is overall survival, because improved survival is the key to developing clear clinical guidelines. The Independent Data Monitoring Committee (IDMC) have highlighted STAMPEDE's achievement as an outstanding example of clinical research that is expected to yield important practice-changing results for patients based on mature, high quality data.

Taking part in this research contributes to improving healthcare and quality for our patients.

## Abstract 19 Student Entry

## EFFICACY OF SELECTIVE LASER TRABECULOPLASTY (SLT) IN LOWERING INTRAOCULAR PRESSURE (IOP)

#### Author(s):

Ashgar A, Job Vellaniparambil R, Nguyen D, Hafeez A, Nanchahal A, Tsokolas G, Eye Care Centre, MCHFT

#### **Background/Introduction/Aims:**

Selective Laser Trabeculoplasty (SLT) is a procedure, which aims to reduce intraocular pressure (IOP) and prevent progression of glaucoma. It was introduced at the Eye Care Centre in August 2012. Our audit was performed in order to assess the efficacy of SLT and compare it with Argon Laser Trabeculoplasty (ALT). The main objective of this audit was to confirm the efficacy of SLT. We were aiming to achieve a 20% decrease in the IOP at 6 weeks, 6 months and 12 months after the procedure. We were aiming to compare our results at Leighton Hospital with the results of a randomised clinical trial performed by Damji et al., British Journal of Ophthalmology 2006;90:1490-1494. This one year randomised trial compared the outcome between SLT and ALT.

#### Methodology:

A retrospective collection of clinical data was performed. Main sources were the patients notes and also Medisoft, which is the electronic system used at the Eye Care Centre. The data collected was from the 1<sup>st</sup> of August 2012 until the 31<sup>st</sup> of December 2012. We identified 54 eyes which had SLT during that period, but we excluded 11 eyes as they were from Macclesfield District General Hospital. Analysis was done on Excel.

#### **Results:**

27 eyes (63%) of the sample showed a 20% decrease in IOP at 6 weeks. Only 11 eyes had 12 month post procedure visit and of these, 10 eyes (91%) had 20% decrease in IOP at 12 months. 11 cases needed further glaucoma procedures (SLT-10 and Trabeculectomy-1). From our audit, the efficacy of SLT is confirmed and the outcome is comparable with the result of Damji et al.

#### **Conclusions/Recommendations:**

At present, no change in clinical practice is required based on our project findings. However, we are aiming to re-audit in about 3 years to close the loop and also to present our long-term result of comparison between SLT and ALT.

#### **ELIMINATION OF HOSPITAL ACQUIRED MOISTURE LESIONS**

#### Author(s):

Shenton R, Patient Safety Lead, Integrated Governance Hartley J, Deputy Director of Nursing & Quality, Corporate Wilkinson R, Matron, Division of Medicine & Emergency Care, MCHFT

#### **Background/Introduction/Aims:**

In 2014, the Pressure Ulcer Committee undertook a number of projects to reduce the incidence of hospital acquired pressure ulcers. From this work it was identified that a number of patients were being harmed as a result of developing a moisture lesion during their hospital admission. As part the Advancing Quality Alliance (AQuA) quality improvement programme, a project was undertaken to review moisture lesions. As a result, Pressure Ulcer Committee became the Skin Care Committee (SCC) and expanded their remit to focus resources on eliminating hospital acquired moisture lesions by August 2015.

#### Methodology:

As part of the project, a driver diagram was devised. The primary drivers were:

- Effective Clinical Care
- Education
- Effective skin care products

The driver diagram was presented at SCC and projects under the secondary drivers were developed using the Plan, Do, Study, Act (PDSA) methodology. Outcome, balancing and process measures were developed to monitor the impact of the work being undertaken, which are now reviewed monthly by the SCC.

#### **Results:**

The SCC has seen a decrease in the number of hospital acquired moisture lesions over the last 12 months. In quarter 4 of 2014/2015, 65 hospital acquired moisture lesions were reported compared to 87 in quarter 3 of 2014/2015. This is a 25% decrease.

#### Conclusions/Recommendations:

The work undertaken to date has resulted in the decrease in hospital acquired moisture lesions, however further work is required to achieve the project aim. The SCC will now focus on auditing the work undertaken to date to ensure continued success and will progress further projects in line with the secondary drivers.

#### Actions taken:

The Skin Bundle was reviewed to include guidance on the identification and treatment of moisture lesions and a continence care flowchart. An education programme was delivered to the skin care link nurses on the prevention, identification and treatment of moisture lesions, which was then rolled out to clinical staff. The skin care products in use were reviewed and a PDSA for the removal of soap from in-patient areas undertaken to improve skin pH and the implementation of an appropriate skin cleansing product.

## THE EFFECT OF COMPRESSION GLOVES IN INFLAMMATORY ARTHRITIS AND RHEUMATOID ARTHRITIS: A PRE-POST-TEST TRIAL

#### Author(s):

Prior Y, OT Rheumatology, Research Fellow, Hammond A, Professor of Rheumatology Rehabilitation, University of Salford

Walker N, OT Rheumatology, Coleclough J, OT Rheumatology MCHFT

#### **Background/Introduction/Aims:**

Compression gloves are increasingly provided by occupational therapists (OTs) to people with rheumatoid arthritis (RA) but effects on hand symptoms and function is unclear. This study aimed to evaluate compression gloves' effects on hand symptoms and function, to assist planning a randomised controlled trial.

#### Methodology:

A pre-post-test study was conducted. Participants were recruited from 10 Rheumatology OT departments; had recent onset inflammatory arthritis (IA)/RA, or RA; no steroid injections in 4/52; and no new/changed medication in 12/52, unless recent-onset IA/RA. Participants wore right and/or left Isotoner ¾ finger gloves, day and/or night as required. Assessments were conducted at 0 and 4 weeks.

#### Results:

41 participated (early IA/RA = 14; RA = 27): 33 women, 8 men; average age = 59.10 Standardised Deviation (SD) 12.54) years; time since diagnosis 2.33 (Interquartile Range (IQR) 0.23-8.5) years; 7 (early IA) had medication changes in 12/52. Early IA and RA results were combined as similar. Hand pain on activity (0-10): mean 5.69 (SD 2.13) at baseline and 4.67 (2.32) at 4 weeks (p=0.006) with effect size=0.18; Hand pain at night: 4.26 (3.26) at baseline and 3.41 (2.30) at 4 weeks (p=0.03) with effect size=0.12; Hand stiffness: 4.26 (3.26) at baseline and 3.92 (2.25) at 4 weeks (p=0.001) with effect size=0.33; 2nd proximal interphalangeal joint (PIPJ) circumference (cm): 6.66 (0.58) at baseline and 6.57 (0.55) at 4 weeks (p=0.03) with effect size=0.12; CFF Middle (cms): 5.45 (1.66) at baseline and 4.88 (1.35) at 4 weeks (p=0.002) with effect size=0.23; MAP-HAND: 21.91 (7.83) at baseline and 19.78 (7.36) at 4 weeks (p=0.002) with effect size=0.23; and Gripability test (GAT): 39.44 (20.82) at baseline and 32.73 (2.86) at 4 weeks (p=0.005) with effect size=0.20.

#### **Conclusions/Recommendations:**

Compression gloves led to significant improvements in: pain, stiffness, swelling, finger flexion and hand function with moderate to large effect sizes, although PIPJ swelling changes were small.

#### **Actions taken:**

In May 2014 an application was made to National Institute of Health Research (NIHR) Research for patients benefits (RfPB) to fund the conduct of a multi-centre Randomised controlled trial (RCT) and we were successful in acquiring £325,000. The trial will commence on 1st June 2015 and expected to last 30 months.

## THE MANAGEMENT AND PATHWAY OF CASES OF MALIGNANCY OF UNKNOWN ORIGIN (MUO) IN 2014

#### Author(s):

Latham S, Horsley L, Lloyd S, Mulroy K, Acute Oncology Nurses Macmillan Unit, MCHFT

#### Background/Introduction/Aims:

In England and Wales, over 10,000 cases of Cancer Unknown Primary (CUP) occur annually and it is the fourth most common cause of cancer death. These patients often suffer problems and delays with their diagnosis and management compared to patients where the primary site is evident or highly probable at presentation. The aims of this audit were to obtain a snapshot of the current management of these patients prior to the implementation of a MCHFT CUP pathway, this included:

- 1. Identification the incidence of MUO/CUP referred to the Appropriate Oncologist Team (AOT) and/or Specialist palliative Care team at MCHFT for 2014
- 2. Source of referral, time to referral and Appropriate Oncologist (AO) review
- 3. Assess the appropriate use of additional investigations
- 4. Review current Multi-Disciplinary Team (MDT) referral system for MUO/CUP and assess if fit for purpose

#### Methodology:

Data from 39 adult patients with MUO or CUP referred to the AOT or palliative care team between 1st March 2014 and 31<sup>st</sup> October 2014. Results were recorded on a Microsoft Excel package from the patient's medical notes, Somerset cancer database, and MCHFT electronic results system.

#### Results:

Thirty nine patients with MUO or CUP were referred to the AOT within the specified time period. On average referrals were received 5.1 days from admission and 84% of patients were reviewed within 24 hours of referral. 97% of patients received a diagnostic CT scan and 54% patients received a biopsy. Of the biopsies requested 19% were inappropriate. 98% of patients were discussed at a site specific MDT and only 5% patients were discussed at more than one MDT. The inappropriate use of tumour markers CA19.9 and CEA was common. The average length of stay for MUO patients was 11.5 days

#### **Conclusions/Recommendations:**

A number of patients were investigated inappropriately with biopsies and tumour markers. We recommend the early involvement of the AOT with patients who have suspected MUO or CUP to help reduce inappropriate investigations and length of stay.

#### **Actions taken:**

A MCHFT pathway for CUP and MUO has been developed to help streamline the pathway for patients within our trust. This audit will be repeated following the introduction of this pathway.

## INTRAOPERATIVE COMPLICATIONS OF CATARACT SURGERY: RISK STRATIFICATION

#### Author(s):

Damani A, Ophthalmology, Kotamarthi V, Ophthalmology, MCHFT

#### Background/Introduction/Aims:

Cataract surgery is the most commonly performed elective surgical procedure conducted in the NHS. With longevity increasing and consequentially more people being affected by cataracts, it is essential to ensure that good outcomes are achievable to maintain and improve quality of life. Patients at risk of poor visual outcomes or intraoperative complications need to be identified at the earliest opportunity in order to optimise their management. We aim to audit the intraoperative complication rate at Leighton Hospital and compare this to the national benchmark as outlined by the National Cataract Dataset for cataract surgery.

#### Methodology:

We looked at all cataract surgeries performed at Leighton Hospital from April 2013 to May 2014 via Medisoft electronic records. The frequency of procedures and intraoperative complications were identified and classified into the nature of the complication: posterior capsular rupture with or without vitreous loss, zonule dialysis, endothelial damage, nuclear drop and corneal abrasion. This was compared to the National Cataract Dataset (NCD) which was a multicentre, prospective review conducted in the UK looking at 55,567 cataract operations.

#### Results:

We performed 2452 cataract operations. Intraoperative complications were experienced in n=84 (3.45%, NCD 4.64%). These included posterior capsular rupture (1.48%, NCD 1.92%), zonule dialysis (0.74%, NCD 0.46%), endothelial damage (0.49%, NCD 0.25%), nuclear drop (0.16%, NCD 0.18%), corneal abrasion (0.16%, NCD 0.31%), other (0.42%, NCD 1.52%). Although our total intraoperative complication rate falls within the national benchmark, there is still room for improvement.

#### **Conclusions/Recommendations:**

Performance of cataract surgery at Leighton hospital is in line with the standards set out in the NCD. Although our total intraoperative complication rate falls within these benchmark standards, we can still improve our outcomes by continually improving our performance. Recognition of patients at risk of intraoperative complications is poor. By improving the identification process of risk factors evidenced in the NCD that contribute to poor outcomes, we will be able to adequately advise patients at the point of listing as well as ensuring that all appropriate investigations and consenting procedures are in place.

#### **Actions taken:**

A new cataract surgery pro forma is being trialled that will identify patients at risk of developing intraoperative complications.

#### RE-AUDIT OF INPATIENT CANNULATION - HOW MUCH SCANNER TIME IS LOST?

#### Author(s):

De A, Blakeman J, Webb E, Pisulak K, Medical Imaging, MCHFT

#### Background/Introduction/Aims:

Cannulation is a pre-requisite for all patients attending Medical Imaging for a CT scan with Intra-venous (IV) contrast. Cannulation may be distressing and, for an inpatient, may be better performed by the caring clinical team on the ward. If there is no preparation, it prolongs the time the patient is on the scan table, which in a busy service may compromise throughput of patients in the department and the compliance of the patient during the scan. The project aimed to determine how much time was lost due to cannulation being performed in the Medical Imaging Department and reduce this by dissemination of the results to wards and specialties.

#### Methodology:

The pre-cannulation of patients having CT scans with IV contrast was reviewed for all those attending Monday to Friday between 9am and 5pm from 3rd February, 2014 to 7th March, 2014. Data was collected by a variety of staff designations by completing a questionnaire at the time of each scan.

#### Results:

Despite the result of 75% not being compliant with the target of 100%, an improvement was made from the previous project result of 60%. However, patient data was not captured for all patients attending, due to staff rotation.

#### **Conclusions/Recommendations:**

- E-mail to be sent to wards regarding the importance of patients attending CT with a functioning cannula
- A dedicated radiographer to fill the forms at time of re-audit in order to improve accuracy of data collection

#### **Actions taken:**

As well as e-mailing wards and specialties, as per the first recommendation; the topic has been re-assessed as part of two AQuA Quality Improvement projects. The first initiated improved communication between the Medical Imaging department and wards, whilst the latter resulted in a poster informing patients and staff on Wards how to prepare for CT scans.

# FOLLOW UP AFTER CURATIVE INTENT RESECTION OF COLORECTAL CANCER AT A DISTRICT GENERAL HOSPITAL

# Author(s):

Ellerton L, Jones R, Hardman J, General Surgery, MCHFT

# **Background/Introduction/Aims:**

One of the main aims of follow-up after surgery for colorectal cancer is to improve survival by identifying treatable recurrence. Although the National Institute for Health and Care Excellence (NICE) recently published CG131 (in December 2014) as guidance, optimal follow up protocol remains unclear. This audit aims to evaluate the effectiveness of carcinoembryonic antigen (CEA) tests, computerised tomography (CT) scans and clinical review (CR) in detecting treatable recurrent disease.

# Methodology:

A retrospective note review of all curative intent (R0) colorectal resections between January 2009 and January 2011 at Leighton Hospital was undertaken. Patients were identified using the Somerset MDT dataset and recurrence identified by CT/CEA/colonoscopy reports and clinical note review.

#### Results:

132 patients identified with 118 eligible for analysis. Three patients died within 30 days of surgery (2.5%). For remaining 115 patients, median follow up was 36.0 months. 26 patients (22.6%) developed recurrence; median disease free survival 45.8 months. 17 patients (14.7%) died of recurrence; median overall survival 49.3 months. Of the 26 recurrences detected: 24 (92.4%) identified by scheduled CT, 6 (23.1%) had symptoms at clinical review (recurrence confirmed on scheduled CT) and 2 (7.7%) had raised CEA but normal CT (recurrence identified on next scheduled CT).

CT: sensitivity 24/26 (92.3%), specificity 24/24 (100%). CEA: sensitivity 15/26 (57.7%), specificity 15/15 (100%). CR: sensitivity 6/26 (23.0%), specificity 6/22 (27.2%). 8 (30.7%) had surgically treatable recurrence (Median time 18.9 months); all surgically treatable recurrences identified by CT.

#### **Conclusions/Recommendations:**

From the data collected, clinical review offered no benefit in the detection of recurrent disease. Therefore, CR could be removed from follow-up protocols without any reduction in the detection of recurrent cancer and would remain NICE CG131 compliant<sup>1</sup>. This would save £1400 per patient over 5 years. The department is currently looking into the possibility of having nurse led CR in the future.

#### **Actions taken:**

The department is currently assessing the possibility of specialist nurse led CR.

<sup>&</sup>lt;sup>1</sup> NICE. Colorectal cancer: the diagnosis and management of colorectal cancer. https://www.nice.org.uk/guidance/cg131 (accessed 01/01/15)

# Abstract 26 Student Entry

# THE EFFECT OF SELF-MANAGEMENT COUNSELLING PROVIDED BY THE PHARMACY DEPARTMENT AT LEIGHTON HOSPITAL

# Author(s):

Staite L, Tinsley S, Dawes S, Ritchings A; Pharmacy, MCHFT

# **Background/Introduction/Aims:**

Mid Cheshire Hospitals NHS Foundation Trust agreed a Commissioning for Quality and Innovation (CQUIN) to develop and carry out counselling for Diabetic and Parkinson's patients. This was set up to provide education and information to help enable self-management of their condition, with a long term potential of reducing hospitalisation. This stage of the project involved undertaking patient counselling and recording patient feedback about the education they had received.

### Methodology:

Suitable in-patients were identified by pharmacists and invited to take part in the study. A patient information leaflet was given to aid the patients with deciding whether they wanted to take part. Patients were asked to fill out a pre-questionnaire to obtain a base line level of knowledge before the counselling was delivered by the pharmacist. After the counselling, the patient was interviewed about their experience. Two questioning tools were used. The first tool was used to help structure and facilitate the interview; the second tool was designed to allow direct comparison with the pre-questionnaire. Anonymised quotes from the patients were recorded throughout the interview by an observer to allow the interviewer to focus on the patient.

### **Results:**

The results from the pre- and post-questionnaires showed improvement in all aspects of knowledge based statements, except for lifestyle changes which stayed relatively consistent. The biggest area of improvement was seen in awareness of patient groups and support available. Feedback from the interviews showed that the pharmacists were seen in a positive light and that patients felt at ease to ask questions. They also mentioned that the information was useful and they appreciated the dedicated time given.

#### Conclusions/Recommendations:

This project has shown a positive impact on patient knowledge in a variety of areas that are vital for enabling patients to manage their own long term health conditions. Future recommendations would be to use the 'making every contact count' framework to address the possible lifestyle changes patients can take to improve their health and wellbeing. Also a similar service should be set up for other health conditions to benefit a wider range of patients.

#### **Actions taken:**

This project has been presented to the North West Region Pre-Registration Pharmacists Event. To continue providing this service and continue to develop to include other health care conditions.

# DIFFERENTIAL DIAGNOSIS: THE IMPACT OF DOCUMENTATION OF DIAGNOSES AND CODING ON IN-HOSPITAL MORTALITY RISK

# Author(s):

Damani A, FY2, Robinson C, GPST1, Mann P, Consultant Cardiologist, MCHFT

# **ABSTRACT WITHDRAWN**

# A SERVICE TO ADMIRE: A NEW DELIVERY MODEL FOR CURRENT AWARENESS SERVICES

# Author(s):

Lamb K, Evidence Services, North West Commissioning Support Unit, Dagnall C, Information & Knowledge Services, Wrightington, Wigan & Leigh NHS Foundation Trust and Smith S, JET Library, Mid Cheshire Hospitals NHS Foundation Trust

# **Background/Introduction/Aims:**

The delivery of current awareness bulletins is a core service offered by Health Library and Knowledge Services (LKS) across England and Wales and is one the criteria of the Library Quality Assurance Framework. Reviewing news feeds, bulletins and searching the latest literature for updates is a very labour intensive process and adds strain to small LKS teams covering a wide range of specialities. The purpose of the ADMIRE (A Documentary Management Information Repository of Evidence) Project is to reduce the duplication of effort to create a pool of information which could be tailored to the individual needs of local organisations.

# Methodology:

The initial discussion around the duplication of effort was first raised and discussed on the North West Health Libraries LIHNN email list where services shared examples of local practice for delivering news bulletins to service managers. A meeting was held of LKS staff engaged in this activity, to review current services. The North West Commissioning Support Unit agreed to host a communal blog to act as a repository. The LKS compared their lists of monitored information sources; then specific resources were allocated to individuals, with a back-up person allocated for holiday cover. The person responsible for monitoring a specific feed; adds key articles, news and reports to the blog with an accompanying summary.

#### **Results:**

This had the instant effect of reducing the number of resources reviewed by each service and freeing staff time for further project work. It provides a resource which can be copied and tailored for local purposes. It has been of particularly value to smaller library services with only one or two members of staff who would not normally be able to offer the service.

#### Actions taken:

Training is currently being rolled out to other LKS within the North West region. It is expected that further libraries will come on board the ADMIRE Group to further reduce the workload. The region will be entering this project into the National Sally Hernando Awards with the hope that this will provide a model framework to expand to other more specialised bulletins and updates.

# NOVEL COMPRESSION METHOD FOR PATIENTS WITH CHRONIC VENOUS INSUFFICIENCY WITH LEG ULCERS

# Author(s):

Patullo L, Outpatient Sister, Platt R, Clinical Audit, Bessant G, General and Vascular Surgical Registrar, Rajagopalan S & Corfield L, Consultant Vascular Surgeons, MCHFT

# **Background/Introduction/Aims:**

Chronic venous insufficiency (CVI) with leg ulcers are a significant workload to hospital and community practitioners. Compression therapy is offered to heal these ulcers but compliance is suboptimal in at-least a third of patients. We piloted the Juxtacure device in patients who had failed to progress with other compression modalities due to compliance.

# Methodology:

Serial patients attending the vascular outpatients with non-healing venous ulcers despite the standard treatment were prospectively recruited to have the Juxtacure. Site, size, and amount of exudate of the venous ulcers were documented on index visit and follow-up visits up to a year.

#### Results:

Ten patients were offered the Juxtacure compression therapy on clinical diagnosis of CVI. 80% of patients had improved healing of wound surface area and 90% had reduction in wound exudate. All patients' self-reported high compliance compared to their previous conventional therapy. Complete healing time was reduced compared to previous treatment.

### **Conclusions/Recommendations:**

Early results in this pilot study suggested high compliance and good wound healing. While this is a small group pragmatic prospective study, it suggests that Juxtacure could be offered to wider group of patients, avoiding compliance issues with conventional therapy. Self-application minimises the human and material costs compared with other therapies. We are hopeful that the introduction of this device combined with on-going audit and evaluation will provide an evidence supported improvement in the care of patients at Mid Cheshire trust suffering from venous ulcer disease.

#### Actions taken:

Use of the JuxtaCure device is being continued in appropriate patients, with measurements in wound healing and patient compliance recorded following its use.

# INVASIVE PRENATAL DIAGNOSIS OUTCOMES AUDIT AT A DISTRICT GENERAL HOSPITAL

# Author(s):

McGuinness N, Obstetrics and Gynaecology, Women's Division, MCHFT

# Background/Introduction/Aims:

Invasive prenatal diagnosis is offered to around 5% of pregnant population for a variety of reasons; the most common being a high risk downs syndrome screening result. This allows karyotyping of fetus to allow reproductive choices, but does have a risk of pregnancy loss. It was our aim to audit this unit's activity and outcomes, to share data, not only with patients to allow for better counselling but to compare to other hospitals in Mersey Region.

# Methodology:

This was a retrospective audit carried out electronically using the maternity database Medway alongside with Vuepoint the ultrasound reporting system. 50 cases were identified from the period June 2013 to August 2014 to allow pregnancy outcome data to be collected. This was compared to suggested audit standards proposed by the Royal College of Obstetricians and Gynaecologists Greentop Guideline 2010.

#### Results:

Our complication rate was low. There were 2 pregnancy losses but these were more than 2 weeks after the invasive procedure and not thought to have been caused by invasive testing. Procedures were carried out to nationally accepted standards.

#### **Conclusions/Recommendations:**

Invasive prenatal testing continues to be practised at Leighton and outcome data shows this is a safe procedure, with few complications. The unit's activity presently supports this continued service. There is some suggestion that larger centres have improved outcomes nationally but from our data there is evidence to support that it should be done locally making it more convenient for women without compromising care

#### **Actions taken:**

Feedback has been given to staff working within fetal medicine and other obstetric consultants

Data has been shared regionally to compare outcomes with other trusts.

# A RANDOMISED CLINICAL TRIAL (RCT) OF INTRAPARTUM FETAL MONITORING WITH COMPUTER ANALYSIS AND ALERTS VERSUS PREVIOUSLY AVAILABLE MONITORING – ASPIRING TO BE INSTRUMENTAL IN THE EVALUATION OF THE TECHNOLOGY AT START OF LIFE

#### **Authors:**

Dixon C, Brown J, Research Midwives, MCHFT

# **Background/Introduction/Aims:**

Cardiotocographic (CTG) monitoring remains the basis of intrapartum surveillance in high risk units, but its interpretation by healthcare professionals lacks reproducibility and the technology has not been shown to improve clinically important outcomes. The interpretation of the CTG remains its main weakness. A program for computerised analysis of intrapartum fetal signals, incorporating real-time alerts for healthcare professionals, was developed in Porto, Portugal. There was a need to determine whether this technology can result in better perinatal outcomes. This pragmatic multicentre RCT was facilitated in five hospitals in the United Kingdom including Mid Cheshire Hospital Foundation Trust (MCHFT).

# Methodology:

Women identified as high risk were approached in triage or on the labour ward and given information on participating in the study. If women wished to participate consent was obtained and they were enrolled in the study. The programme would then randomise the participant to monitoring with analysis and alerts (intervention arm) or without the alerts (control arm). The clinical assessment of the CTG remained the responsibility of the professional.

#### Results:

Of the 7730 patients who were enrolled, there were no statistically significant differences in study outcomes, with the exception of a 7% increased rate of instrumental vaginal delivery in the experimental arm that only barely reaches statistical significance. There were no differences in low Apgars, perinatal death (only one case), Hypoxic Ischemic Encephalopathy (HIE), caesarean section, caesarean section for non-reassuring fetal state, instrumental vaginal delivery for non-reassuring fetal state, NICU admissions, moderate and severe acidemia, and FBS use.

#### Conclusions/Recommendations:

Access to computer analysis of CTG resulted in the lowest incidence of newborn metabolic acidosis ever reported in RCTs, but the difference was not statistically significant. The incidence of the primary outcome was much lower than expected, suggesting that the study was underpowered to detect such differences. Intervention rates<FBS use, low apgars, academia, NICU admission, HIE and perinatal death were similar in both arms.

#### **Actions taken:**

The results will be shared with all the staff on the maternity unit. The research findings were recently presented at the ECIC 2015 Conference and are now awaiting scientific review of the results and publication.

# AUDIT OF ANALGESIA AND FLUID MAINTENANCE IN ACUTE PAEDIATRIC SURGICAL ADMISSIONS

# Author(s):

Bessant G, O'Shea K, Holmes D, Foundation and Specialist Trainee's. Hanafy M, Consultant Surgeon, General Surgical Division, MCHFT

# **Background/Introduction/Aims:**

Several national guidelines for the perioperative and acute care of surgical patients were released around the same time including: Ensuring the provision of general paediatric surgery in the district general hospital children's surgical forum (RCS England, 2010) and Standards for Children's Surgery, Children's Surgical Forum (RCS England). As an acute trust admitting general surgical paediatric patients under the care of teams with limited experience of elective paediatric work there should be a keen focus on ensuring high levels of audit of practice.

# Methodology:

First audit data included August 2012-13 and re-audit data 2013-14. Retrospective audit of notes was undertaken. Targets were set in line with local and national guidelines in three key areas: Time to theatre; appropriate monitoring and prescription of analgesia; and appropriate monitoring and prescription of fluid therapy. All standards had a >90% target of compliance.

#### Results:

The percentage of children operated on from decision to operate improved from 72% to 82% but there was appropriate and complete documentation in only 50% of these cases which meant this target was missed. The percentage of children receiving appropriate fluid management throughout their stay increased from 32% to 78% and so although short of target this showed significant improvement. Unfortunately those patients who received adequate analgesia for the entire part of their stay fell from 88% to 78%.

#### Conclusions/Recommendations:

The improvement in fluid prescription appears to be largely based on improved education and these lessons learnt can be further improved on in the coming year and transposed to the area of analgesia where standards have slipped. It has been further highlighted that paediatric cases should continue carry a particular weighting on the NCEPOD acute surgical list.

#### Actions taken:

Members of the Paediatric and Surgical teams agreed to collaborate on a formal analgesia pathway similar to that already established in the Medicine division. The audit will be ongoing every year but the standards set will take into account the upcoming changes in NICE guidance expected in autumn 2015. Paediatric analgesia has recently been a teaching topic within the weekly surgical department meetings. Paediatric subjects will be regularly included within these teaching sessions.

# LOW HISTOLOGICAL CONFIRMATION RATE IN A DISTRICT GENERAL HOSPITAL (DGH) – EXPLORING THE REASONS WHY

# Author(s):

Huxley M, Macmillan Service Improvement Manager, Stubbs S, Macmillan Lung Cancer Clinical Nurse Specialist, Kazmi S, Consultant Respiratory Medicine, MCHFT

# **Background/Introduction/Aims:**

The National Lung Cancer Audit Data (LUCADA) standard for achieving histological confirmation is 75%. Following the 2013 LUCADA audit, our District General Hospital (DGH) fell below this standard with a score of 65.6%. We wanted to understand the reasons why histological confirmation was not achieved and to identify any discrepancies in the data recorded on the SOMERSET database.

# Methodology:

Retrospective analysis of all diagnosed patients on the 2013 LUCADA database was carried out. There were inaccuracies noted in the recorded SOMERSET data that identified 35 (46%) patients with no histological confirmation. Following data correction a total of 30 (39%) patients were included in the audit as having no histological confirmation.

#### Results:

# Achieving histological diagnosis in lung cancer

Histology diagnosis confirmed – n=46, 60.5%. Histology test non-diagnostic n=5, 6.6%. Histology at Tertiary Centre n=3, 3.9%. Lesion not amenable to biopsy n=3, 3.9%. Patient declined n=7, 9.2%. Unfit for histology diagnostics n=12, 15.8%. Total n=76, 100%.

#### Conclusions/Recommendations:

The LUCADA dataset provides a measurable standard for lung cancer care. We fell below this standard in the 2013 audit, however clear reasons for not meeting this standard have been identified. 19 (25%) of patients either declined or were unfit for further diagnostic tests. A review of the 12 (15.8%) patients deemed unfit for investigations proved that this was due to late presentation or poor performance status. We are undertaking a programme of work with primary care to increase the number of patients whose symptoms are spotted and investigated earlier which will help to improve patient outcomes.

#### **Actions taken:**

Interventions for improvement include a programme of work with health care professionals in primary care to increase the number of patients whose symptoms are spotted and investigated earlier. We have also engaged with public health to raise awareness of the signs and symptoms of lung cancer within our locality.

# OBSERVATIONAL STUDY OF OUTPATIENT HYSTEROSCOPY OUTCOMES AMONGST POSTMENOPAUSAL WOMEN IN A UK DISTRICT GENERAL HOSPITAL

# Author(s):

Ankers D P T, Swaminathan A, Coughlin L B, Women's, Children's and Sexual Health Division, Mid Cheshire Hospitals NHS Foundation Trust

# **Background/Introduction/Aims:**

Outpatient hysteroscopy is a well-established technique for the investigation of postmenopausal bleeding. The appropriate use of miniature sized hysteroscopes can allow good visualisation of the endometrial cavity, facilitate image guided biopsy, polypectomy and also avoid the risks of general anaesthesia.

# Methodology:

Retrospective review of case notes of patients undergoing hysteroscopy for postmenopausal bleeding (PMB), over an 18 month period between February 2013 to March 2014 and September 2014 to February 2015. Cases were identified via hospital information services department.

#### Results:

89/90 patients who had undergone hysteroscopy had postmenopausal bleeding. 81/90 patients had an endometrial thickness above 3mm not on hormone replacement therapy. There was a 97.5% success rate of outpatient hysteroscopy during the sample period. The rate of malignancy identified on histology was 14/90 (15.5%), with 5/14 (35%) highlighting endometrial adenocarcinoma. There was also one case of carcinosarcoma and papillary serous carcinoma during this timeframe.

#### Conclusions/Recommendations:

Our results indicate that most patients had an appropriate endometrial thickness for hysteroscopic assessment. We also found that our rate of malignancies identified from endometrial sampling is comparable with other research. Further investigation is required to study prevalence of rarer malignancies such as carcinosarcoma.

#### **AUDIT OF RETURNED AND WASTED MEDICINES**

#### Author(s):

Williams A, Ritchings A, Pharmacy Department, MCHFT.

# **Background/Introduction/Aims:**

Medicines are supplied daily to wards on a named patient basis, with medicines that are no longer required returned to pharmacy. If appropriate, the returned medicines are returned to pharmacy stock; otherwise they are considered not suitable for re-use and destroyed. Currently, only packs containing full strips of medicines are returned, meaning that some medicines are destroyed for preventable reasons, such as incomplete strips within an otherwise suitable pack.

# Methodology:

Data was processed retrospectively, during two days, sorting returned medicines, in March 2015. Medicines were deemed suitable to return to stock if they met the criteria listed in the Pharmacy Standard Operating Procedures (SOP). All medicines that were deemed unsuitable for returning to stock were sent to waste and the reason why they could not be returned was annotated. A spreadsheet was used to calculate the savings made by returning medicines to pharmacy stock. The potential savings that could be made from reuse of medicines currently being destroyed, for a preventable reasons was also calculated. Medicines that were not issued by MCHFT, which were not labelled, or where unsuitable for re-use were destroyed as these medicines cannot be re-dispensed to another patient.

#### Results:

- 46% of medicines returned to pharmacy were returned to stock
- £790.60 was saved during the course of the audit by returning medicines to pharmacy stock
- 54% of medicines which were not returned to stock, had potential to be re-dispensed
- £492.35 could have been saved by returning medicines that were unnecessarily sent to waste, making a total potential saving of £1282.95

#### **Conclusions/Recommendations:**

In conclusion it was established that more medicines could be and should be returned to stock in order to be re-used and dispensed for another patient at a later date in order to ensure less wastage of stock and monetary savings.

#### Actions taken:

In order to achieve the recommendation, the following was discussed:

- 1) Increasing the use of tamper evident tape on all appropriate medicines that do not have a sealed box or where the seal is broken to label the inner container
- 2) Reviewing of the quantities of liquids dispensed where possible pack down to an appropriate quantity such as the course length
- 3) Amending the SOP in order that part strips may be returned, providing that the batch number, expiry and name of preparation are still visible

# AUDIT OF EBUS-TBNA SPECIMEN REPORTING AT CHESHIRE PATHOLOGY SERVICES

# Author(s):

Dallmann A, FY2 Histopathology, Dey D, Consultant Histopathology, Nasir N, Consultant Histopathology, Mid Cheshire Hospitals NHS Hospital Trust

# **Background/Introduction/Aims:**

Endobronchial Ultrasound Guided Transbronchial Needle Aspiration (EBUS-TBNA) is a relatively new technique used for diagnosis of hilar and mediastinal nodal disease. The department commenced reporting EBUS-TBNA specimens in February 2014. The aims of this study were to assess reporting standards of EBUS specimens, and whether the current sampling methods result in sufficient cellular material for definite diagnosis and subtyping.

#### Methodology:

A total of 73 specimens were received from Macclesfield Hospital and processed using the split sample needle rinse cell block (NR-CB) technique without rapid onsite evaluation (ROSE). Relevant data was obtained through Win Path, searching for "bronchopulmonary node" specimens between February 2014 and February 2015. Individual records were collated in an excel spreadsheet and further analysed. The audit standard was 'Reporting EBUS-TBNA' in the Diagnostic Cytology Reporting Standard Operating Procedure, which is based on The British Society for Clinical Cytology code of practice – fine needle aspiration cytology (2009) and Royal College of Pathologists Dataset for lung cancer histopathology reports May 2014.

#### Results:

Average turnaround time for cytology reports was 4.9 calendar days, whereas for cell block reports 5.5. Reported findings were; negative 32%, insufficient 3%, inconclusive (ASCUS) 8%, malignant 54%, granulomatous inflammation 3%. Of the 40 malignant cases: small cell lung cancer 12%, primary lung adenocarcinoma 21%, metastatic breast adenocarcinoma 1%, metastatic or primary lung adenocarcinoma 3%, squamous cell carcinoma 11%, nonsmall cell carcinoma – not otherwise specified (NSCLC-NOS) 5%, Hodgkin's lymphoma 1%. Of the 27 negative thin prep cytology cases, further cell block analysis in 3 cases showed 1 adenocarcinoma, 1 small cell carcinoma and 1 sarcoid.

### **Conclusions:**

Despite not having ROSE, 97% of the samples provided sufficient amount of diagnostic cellular material, enabling us to give a diagnostic opinion in 89% of cases. Tumour subtyping was provided in all relevant cases. Our NSCLC-NOS rate is well below the nationally accepted upper limit. Inconclusive rate is low 8%. Our turnaround times are satisfactory. Reflex epidermal growth factor receptor mutation (EGFR) testing is requested in all appropriate adenocarcinoma cases, paving the way for personalised treatment.

#### **Recommendations:**

Discuss with the respiratory team different sample collection methods for cell block formation which increase cellular yield. Departmental training on 'How to Report EBUS Specimens', to include handouts and multi-head review of previously reported cases. Design a template report for EBUS cases to standardise reporting. Laminate a flowchart outlining sequence of requesting immunohistochemistry tests.

# COST EFFECTIVE METHODS OF MANAGEMENT OF PAEDIATRIC FEMORAL SHAFT FRACTURES IN A DISTRICT GENERAL HOSPITAL

# Author(s):

Reddy G, Nagy M, Pegg D, Department of Trauma & Orthopaedics, MCHFT

# Background/Introduction/Aims:

Paediatric femoral shaft fractures are common and require a hospital admission. The preferred method of treatment is non-operative with either a Thomas or Tobruk split. This involves an extended inpatient hospital stay. Children have the advantage of high potential of bone healing and followed by remodelling. Alder Hey Hospital is the regional tertiary paediatric hospital for Mersey area. They have implemented a Hospital at Home service and also published the results, showing the cost effectiveness and improvements to patient satisfaction. The aim was to assess whether the implementation of the Alder Hey Hospital model of Hospital at Home service would create cost savings at Mid Cheshire Hospitals NHS Foundation Trust (MCHFT).

# Methodology:

We conducted a retrospective review of all consecutive patients younger than 10 years presenting to Leighton Hospital with femoral shaft fractures in the past 8 years.

#### Results:

We identified 40 patients (13 girls, 27 boys); average age was 4.2 years (0.2-10.6 years). Mechanism of injury included trips and slips (13), fall from height (10), sport related (8), unwitnessed (3), non- accidental (1), metabolic causes (2), other (3). Analysis of the radiographs showed midshaft fracture in 28, proximal third in 9 and distal third in 3 cases. Fracture management was conservative in 37 cases and three patients underwent operative fixation. Complications included 4 cases of mild skin problems related to traction. Average length of hospitalization was 25 days (range, 3-73 days). Three patients were transferred for management to a tertiary centre. Outpatient follow up was required in all cases until fracture union was evident on radiographs. Three patients underwent removal of metalwork as a day case procedure. All fractures united and all patients regained normal function.

#### Conclusions/Recommendations:

Majority of paediatric femoral shaft fractures can be managed conservatively with a very low complication rate however, long hospitalization is required. At Alder Hey Hospital the average inpatient stay for these fractures are 10 days and patient will be seen once a week at home by a nurse practitioner, delivering the treatment at home. Compared with Alder Hey our patients spent an average 15 additional inpatient hospital days. NICE quote the figure of average paediatric inpatient costs of £652 pounds per day. If the Hospital at Home service were implemented the Trust could save £37,466.00P per year. Also the patients and their families will have the option of receiving treatment in their own home rather than a prolonged hospital stay.

#### IS OUR MANAGEMENT OF GONORRHOEA ACCORDING TO BASHH GUIDELINES?

# Author(s):

Wood M, Consultant, Jadun A, SAS, Buhorah D, FY2, Sexual Health, MCHFT

# **Background/Introduction/Aims:**

This study was undertaken in order to assess whether our current practices meet with current gonorrhoea BASHH guidelines:

- To ensure whether all patients identified with gonorrhoea should have partner notification carried out according to the published standards of the BASHH Clinical Standards Unit.
- 2) To ensure that cultures are taken in all cases patients identified with gonorrhoea.
- 3) To ensure that all patients with gonorrhoea receive first-line treatment or the reasons for not doing so documented.

# Methodology:

Retrospective study of patients identified with gonorrhoea during the period between January 2014 and Dec 2014. Sample size n=58. Data was collected in Genital Urinary Medicine (GUM) clinic. All data was recorded in a proforma.

#### Results:

- 1) 100% in partner notification, with patients identified with gonorrhoea.
- 2) 98% compliance in cultures taken in patients identified with gonorrhoea.
- 3) 100% compliance for first-line treatment in patients identified with gonorrhoea.

#### **Conclusions/Recommendations:**

Education of staff as regards to cultures taken to be documented in all cases.

#### **Actions taken:**

Learning summary sent out to all staff at Sexual Health Clinic.

# ULTRASOUND GUIDED FOAM SCLEROTHERAPY FOR VENOUS DISEASE: THE FIRST YEAR'S EXPERIENCE

# Author(s):

Bessant B, Corfield L, General and Vascular Surgery, Mid Cheshire Hospitals NHS Foundation Trust

# **Background/Introduction/Aims:**

The treatment of symptomatic varicose veins has changed radically in recent years since the introduction of a range of endovenous options. One such treatment is ultrasound guided foam sclerotherapy (UGFS) which has been recommended by NICE in suitable cases. UGFS avoids the need for general anaesthetic, can be undertaken as an 'office' procedure and can treat veins not easily treated by surgery.

# Methodology:

UGFS was introduced to the Trust in 2014 by the vascular team. The indications and outcomes for treating patients in 2014 were kept on a prospective database and this patient series is presented here.

#### Results:

26 patients underwent UGFS in 2014. The majority of these patients had healed or current venous ulceration or significant venous skin change (haemosiderin deposition or lipodermatosclerosis). 11 of the 26 patients had UGFS for recurrent varicose veins, a condition that carries significant risks if treated by conventional surgery. All procedures were technically successful with no immediate complications. 2 patients had skin staining on follow-up (a frequent consequence of UGFS) and 2 patients had an area of thrombophlebitis (again an expected consequence of UGFS) aspirated for symptomatic relief.

#### **Conclusions/Recommendations:**

The outcomes of this procedure during its first year in the Trust are good, with no significant complications. There will be future audit of the outcomes of foam sclerotherapy against established success and complication rates in line with the principles of full clinical governance.

#### Actions taken:

Adding this to the other available treatment modalities for venous disease (a high quality stocking and compression garment fitting service, open venous surgery and radiofrequency ablation) which are used at Leighton Hospital has enabled the provision of a high quality venous service.

# HANDOVER OF RESPONSIBILITY FOR PATIENTS IN THE POST ANAESTHESIA CARE UNIT

# Author(s):

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# **Background/Introduction/Aims:**

Post Anaesthesia Care Unit (PACU) staff rely on information from anaesthetists and theatre staff to guide patient care. PACU staff reported that this information is not always handed over comprehensively. We wished to assess how well we are doing at handing over patients.

# Methodology:

Two doctors spent a week in PACU and spoke to staff shortly after they had received handover, asking specific questions about what information had, or had not, been handed over.

#### Results:

We recorded data for 114 patients. In many cases, important information was not handed over to PACU staff, including the patient's name, operation, past medical history and the plan for postoperative care.

#### Conclusions/Recommendations:

The importance of clear and comprehensive handover needs to be stressed. Possible solutions to this problem include a formal handover checklist which could be incorporated into the surgical care pathway.

#### **Actions taken:**

Any improvements in this area can only happen with the support of anaesthetists and theatre staff. This project will be presented at the anaesthetic audit meeting and we will seek consensus on how best to address the issues raised.

### SELF- IDENTIFIED LEARNING NEEDS IN UROLOGY FOR NON- UROLOGY TRAINEES

# Author(s):

Lyttle M, McKernan G, Mukherjee R, Department of Urology, Mid Cheshire Hospitals NHS Foundation Trust

# **Background/Introduction/Aims:**

Anecdotally junior doctors have considerably less experience managing Urology problems than other acute specialities. This, coupled with non-resident middle grade cover, could potentially be detrimental to patient care. The aims of the project are to allow self-identification of learning needs in Urology and express preferences regarding the mode of teaching to address these.

# Methodology:

We developed a questionnaire using SurveyMonkey distributing to all FY1s, FY2s and core surgical trainees within our Trust (N=52).

#### Results:

We had 24 respondents (46%). Of these, 88% (N=21) felt they had insufficient exposure to Urology as an undergraduate. Only 8% (N=2) felt they had enough high quality postgraduate education in Urology. When asked about their confidence to manage on-call and ward-based Urology problems, none felt fully confident and 25% (N=6) felt they needed help with most Urology problems they encountered. All felt extra Urology training would be helpful, 79% (N=19) believed this would improve patient care. Most respondents would prefer that Urology education be delivered through existing teaching days. Lack of time was the commonest perceived barrier to delivery of training (46%, N=11).

#### Conclusions/Recommendations:

This study supports the suggestion that junior doctors have limited knowledge of Urology and would welcome Urology education. An important perceived benefit of Urology education is improved patient care.

#### **Actions taken:**

We are developing a teaching programme to cover the learning needs identified.

We hope that junior doctor engagement in such a programme will be high due to it being developed specifically to address self-identified learning needs of trainees. This will be delivered in a format to support the preferred learning style of attendees. We will re-audit to complete the audit cycle.

#### **OBSTETRIC MEDICINE**

# Author(s):

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# **Background/Introduction/Aims:**

Women suffering from chronic inflammatory conditions such as rheumatoid arthritis, ankylosing spondylitis and systemic lupus erythematosus face an ethical dilemma when found/desire to be pregnant. Current guidelines by the Royal College of Obstetrics and Gynaecology (RCOG) state that all DMARDs are to be discontinued 6-12 months prior to conception and stopped at once when found pregnant. Due to the ethical implications there is limited evidence available, therefore worldwide only a few case studies have been published to demonstrate the potential risks/side effects associated with DMARDs.

# Methodology:

A retrospective case analysis of 14 women found to be on biological agents during the first trimester of pregnancy. Maternal and fetal well-being parameters were analysed. A systematic literature review was carried out and outcomes were compared.

#### Results:

We found fourteen live births all with normal APGAR scores and average birth weights with no fetal abnormalities. There is a slight tendency for earlier gestational age and expected birth weights.

### **Conclusions/Recommendations:**

Overall the case series reveals no maternal/fetal complications associated with the use of biological agents during the 1st trimester of pregnancy. We strongly recommend national joint care between the medical and obstetric profession to ensure optimal care for maternal and fetal wellbeing. There is a need to emphasis early on preconception counselling, structured advice on choice of contraception and a universally accessible data base of retrospective case reviews.

#### **ABSTRACT 44**

#### AUDIT OF ELECTRONIC DISCHARGE PRESCRIPTION QUALITY

# Author(s):

Ritchings A, Jones T, Pharmacy, MCHFT

# Background/Introduction/Aims:

At MCHFT electronic discharge letters are written by prescribers. The letter contains inpatient episode details including; medication prescribed for discharge, allergies, and medication changes during hospital admission. The electronic discharge system is setup in such a way that all discharge letters with a full list of medication must be authorised by a pharmacist prior to the letter being released to the patient or GP. The purpose of pharmacist authorisation is to ensure accuracy and safety of prescribed medication.

Unauthorised discharge letters which need to be checked are given to pharmacy. Once checks have been completed, an authorised version of the letter is attached to the unauthorised version. Pharmacy holds copies of all authorised discharge letters. Pharmacists routinely are required to make amendments to discharge letters. These may be minor such as inclusion of additional medication-related information to aid patient and GP or major such as incorrect medications or incorrect doses.

The audit has been undertaken to quantify the number of changes made to discharge letters by pharmacists after the letter has been written by a prescriber.

# Methodology:

Discharge prescriptions checked between 01/01/2015 and 10/01/2015 were included. All electronic discharge prescriptions stored within pharmacy, containing both authorised and unauthorised copies, during this time period were included. Hand-written discharge letters, paediatric discharge letters and electronic discharge letters not including both authorised and unauthorised copies were excluded. Using a data collection form, discharge prescriptions were retrospectively reviewed by a pharmacy technician. The data was verified by a pharmacist who categorised the interventions made.

# Results:

- Percentage of electronic discharge prescriptions that were written correctly and required no pharmacy intervention – 19 out of 53 (36%)
- Total prescriptions requiring pharmacy intervention 34 out of 53 (64%)
- Total prescriptions requiring 1 or more intervention classified as major 26 out of 53 (49%)

#### Conclusions/Recommendations:

36% of electronic discharge letters containing a full medication section were written to a suitable and safe standard. Of the discharge letters which required intervention 49% contained 1 or more major intervention. Recommendation – Independent prescribing pharmacists to be considered to contribute towards the discharge process.

#### **Actions taken:**

Inclusion of audit results within discharge independent prescribing pharmacist business case.

# NON-MEDICAL PRESCRIBER (NMP) PHARMACIST PRESCRIBING PILOT

# Author(s):

Newman K, Pharmacist, Pharmacy, MCHFT

# **Background/Introduction/Aims:**

Discharge prescriptions or 'to take outs' (TTOs) are routinely written by doctors. Previous audits have shown that the quality of electronic discharge prescriptions is poor and often it can take time for medication to be ready for discharge. An 8-week pilot study was proposed for an NMP pharmacist transcribing TTO medication on discharge letters compared to letters written by a doctor. All patients with TTOs written by a pharmacist would also receive counselling on their discharge medications from them.

The objectives were:

- To determine if an NMP pharmacist can reduce time taken for TTOs to be ready for discharge
- To determine if fewer prescribing errors occurred on TTOs written by an NMP pharmacist

# Methodology:

The NMP pharmacist transcribed TTOs for all patients on Ward 5 from 9/3/15 to 30/4/15, on weekdays between the hours of 9am and 5pm where possible. Data was also collected for respiratory patients on wards 5 & 7 who had TTOs prescribed by a doctor between 23/2/15 and 30/4/15.

#### Results:

230 TTOs were audited; 115 written by the NMP pharmacist and 115 written by a doctor. 35% of TTOs written by the pharmacist had medicines ready in advance of the day of discharge, compared to 7% of TTOs written by doctors. 53% of patients had their TTO medicines ready for discharge within 2 hours of being told they could go home when the pharmacist wrote them, in comparison to 15% of patients when written by a doctor. Of the TTOs written by the pharmacist, 2 contained one error each. 62 of the doctor-written TTOs contained between one and six errors.

#### **Conclusions/Recommendations:**

The results show that an NMP pharmacist transcribing greatly reduces the time taken to complete TTOs in comparison to doctors writing them. Fewer errors are made on the TTOs, reducing the time taken for the dispensary pharmacist to clinically check since fewer amendments are required and there is no need to contact a doctor. The time taken for TTOs written by the pharmacist to be ready could be reduced further if a second pharmacist was available to clinically check the TTOs as they are written – often the dispensary pharmacist was busy with outpatient work.

#### **Actions taken:**

This project is to form part of a business case for non-medical prescribing pharmacists to regularly transcribe TTOs.

# Abstract 46 Student Entry

# AUDIT OF ACCURACY OF MEDICATION HISTORY TAKING PERFORMED BY DOCTORS COMPARED TO PHARMACY

# Author(s):

Talbot R, Ritchings A, Pharmacy Department, MCHFT

# **Background/Introduction/Aims:**

Upon admission, a doctor firstly performs a medication history to prescribe medication on the prescription chart. When a pharmacist or pharmacy technician carries out medication reconciliation, where possible, a minimum of two sources are used to gather the medication history which may be more accurate. The aims of the audit is to establish the percentage of accurately prescribed medicines and critical medicines (MCHFT medicines policy) following medication histories taken by a clerking doctor and to establish the percentage of medicines that were unintentionally omitted following a patient being admitted to hospital.

# Methodology:

A pilot audit was conducted for two days in February 2015 including 28 patients on the Acute Medical Unit (AMU). Following the pilot, five further days of data collection occurred. 97 patients on the Acute Medical and Surgical Units, who had medicine reconciliation completed by a member of the pharmacy team were included. Prescription charts were reviewed and compared to the patient case notes. The results were recorded using the data collection tool documenting the number of correctly prescribed medicines, incorrectly prescribed medicines, completion of patient's allergies and critical medicines prescribed or incorrectly prescribed. The percentage of the incorrectly prescribed items was calculated.

#### **Results:**

- A potential total of 758 medicines could have been prescribed, with 487 (64%) of these prescribed correctly and 271 (36%) medicines prescribed incorrectly or unintentionally omitted
- 112 (15%) critical medicines were prescribed, 25 (22%) of these had been prescribed incorrectly/ unintentionally omitted
- 94 patients (99%) did have allergy status documented

### **Conclusions/Recommendations:**

- The percentage of correctly prescribed medication by a clerking practitioner was 64%. The inaccuracies were found following pharmacy medication history taking and were amended
- Additional care must be taken when prescribing critical medication to ensure patient continuity of care and highlighted on the chart
- Doctors should fill in the proforma with medication as allocated in documentation. If the pages of the medical proformas were on the same double page then this could easily checked against
- Critical medications should be highlighted by pharmacist and ensured that these are prescribed
- Feedback to the pharmacist on the ward to ensure that these issues are identified to them

# ARE CHOLESTEROL LEVELS BEING CHECKED AND MANAGED APPROPRIATELY IN TYPE 2 DIABETES IN PRIMARY CARE?

# Author(s):

Livingston M, Walsall Manor Hospital, Robinson J, University of Nottingham, Brown C, Endocrinology MCHFT, Narayanan R, University of Manchester, Holland D, Keele University, Fryer A, University Hospital of North Staffordshire, Heald A, Endocrinology MCHFT / University of Manchester

# Background/Introduction/Aims:

People with type 2 diabetes mellitus (T2DM) have an increased risk of cardiovascular events. Current European and American T2DM guidelines recommend lipid-lowering treatment to reach designated cholesterol targets. To determine compliance with lipid management guidelines in a UK primary care setting.

# Methodology:

A retrospective study was performed in a representative sample from UK primary care across Central and Eastern Cheshire. Data were collected from 41 GP surgeries for all patients diagnosed with T2DM in 2010 (n=1,212; aged 40-85 years). Patients were followed up for 12 months after diagnosis, examining prescribed lipid-lowering therapy and serum total cholesterol levels.

#### **Results:**

Testing: Six months before diagnosis, 58.7% of patients had no record of a cholesterol test. By 12 months post-diagnosis, 8.5% of patients remained without a cholesterol check. *Prescribing:* Six months before diagnosis, 82.3% of patients were not on lipid-lowering therapy. At 12 months post-diagnosis, 39.9% were still not on treatment. 36.9% of study participants were treated with simvastatin 40 mg or equivalent by 12 months post-diagnosis.

Outcome: A significant proportion of patients (18.3%) on simvastatin 40 mg or equivalent still had a cholesterol >5.0 mmol/L at 12 months post-diagnosis. In all patients with cholesterol levels >5.0 mmol/L, there was no significant shift to a higher statin potency over time in spite of above target cholesterol levels, and by 12 months post-diagnosis, 53.9% of these were not even on therapy.

# **Conclusions/Recommendations:**

A significant number of T2DM patients were not prescribed lipid-lowering therapy or lacked incremental dose changes. Nationally agreed lipid management guidelines are not being followed and alternative systems to improve compliance should be developed.

### **Actions taken:**

This study illustrates an important gap in the education of clinicians with regard to CVD risk and prevention in patients with newly diagnosed T2DM. Clearly existing programmes on statin prescribing and monitoring of their impact are not bringing patients to internationally recommended targets. This highlights an important need for action to assist primary care clinicians in decision making concerning statin prescribing.

### DETECTING VITAMIN D INSUFFICIENCY: SURROGATES ARE NOT GOOD ENOUGH

# Author(s):

Heald A, MCHFT / University of Manchester, Anderson S, University of Manchester, Scargill J, Salford Royal Hospital, Short A, MCHFT, Fryer A, Keele University Donn R, University of Manchester

# **Background/Introduction/Aims:**

There is increasing evidence concerning potential adverse consequences of low Vitamin D levels on health. We assessed whether PTH levels / bone profile is sufficient to identify patients with Vitamin D insufficiency or deficiency, or whether Vitamin D should be measured directly.

# Methodology:

1560 serum specimens with requests for 25-hydroxy Vitamin D (25-OH Vitamin D), calcium, phosphate, parathyroid hormone (PTH), alkaline phosphatase (ALP), and creatinine on the same sample at Salford Royal Hospital from November 2010 to November 2012 were analysed.

#### Results:

The prevalence of total vitamin D insufficiency or deficiency (defined as total Vitamin D <50 nmol/L) was 62.9% (981/1560) overall, with men having higher proportions (67.2 vs 59.3 percent,  $\chi 2 = 8.78$ , P=0.003). There was no overall trend in mean serum adjusted calcium across categories of 25-OH Vitamin D status. However mean serum phosphate was significantly lower (F=6.53, P<0.0001) in participants with a 25-OH Vitamin D level below 50nmol/L. Even for patients with Vitamin D deficiency, a significant proportion of patients had PTH, calcium, phosphate and alkaline phosphatase levels within the laboratory normal range. For patients with Vitamin D <10nmol/l, 71.6% had a normal PTH, 89.8% had normal serum calcium, 84.9% had normal phosphate and 81.6% had a normal serum alkaline phosphatase. A higher Index of Multiple Deprivation (IMD) by quintile (higher quintiles associated with greater disadvantage) was associated with a greater likelihood of having a low Vitamin D score (quintile 3, odds ratio (OR) 1.50, 1.06 – 2.10; p=0.02, quintile 4 p=0.028, quintile 5 p=0.009) independent of age, gender and PTH.

#### **Conclusions/Recommendations:**

Although the rates of requesting of Vitamin D continue to rise with increasing awareness of the consequences of Vitamin D deficiency in bone health and other areas with attendant cost implications in our health system, our results indicate that any other parameter is currently **not** adequate for screening for Vitamin D deficiency. A higher index of multiple deprivation was associated with lower vitamin D levels with attendant implications for bone and cardiovascular health.

#### **Actions taken:**

Recommendation to all clinicians that if low Vitamin D levels are suspected, Vitamin D should be checked. Cheaper to measure surrogate markers are of no value.

# THYROID FUNCTION TESTING (TFT) MUST BE RATIONALISED: EVIDENCE FOR UK PRIMARY CARE

# Author(s):

Scargill J, Salford Royal Hospital, Holland D, Keele University, Livingstone M, Walsall Manor Hospital, Fryer A, University Hospital of North Staffordshire, Heald A, University of Manchester / MCHFT

# Background/Introduction/Aims:

With demand for pathology services steadily increasing year on year, requesting behaviour review is very pertinent. We retrospectively determined re-testing intervals in levothyroxine treated patients, to assess the effect of initial thyroid stimulating hormone (TSH) and free T4 concentration and source of the request on TFT retesting interval.

# **Methodology:**

All thyroid function tests performed by the Department of Clinical Biochemistry, Salford Royal NHS Foundation Trust from 1st January 2009 – 31st December 2012 (288,263 requests from 139,793 patients) were extracted from the department's LIMS software (TelePath, Clinisys).

#### Results:

The median TFT re-testing interval for all 54,894 tests on 13,297 patients on thyroxine therapy was 4.4 months (IQR 2.1-8.7 months), with peaks in TFT retesting evident at 1-2, 6 and 12 months. The re-test interval was much lower than recommended (52 weeks) for those with a normal at 30.3 weeks. Where TSH was elevated and free T4 was below the reference range test-test interval was much longer than is recommended (8 weeks) at 13.4 to 17.6 weeks, as was the interval when TSH was below and free T4 was above the normal range, at 16.7 to 25.6 weeks. A key finding of the study was that for 7096 patients in one year with normal range free T4 and elevated TSH the test-rest interval was significantly longer than the recommended 8 weeks – in other words these patients should have had an earlier check of their TFTs.

# **Conclusions/Recommendations:**

A large amount of variability in time to repeat TFTs in patients taking thyroxine has been observed across GP practices in contradistinction to guidance. We propose that direct requesting from the biochemistry laboratory (with a facility for clinician over-ride) may bring patients more quickly to target with their TSH levels and reduce costs.

#### **Actions taken:**

Direct requesting from the biochemistry laboratory (with a facility for clinician over-ride) may bring patients more quickly to target with their TSH levels and reduce costs in relation to unnecessary testing of TFTs when patients are already biochemically euthyroid. Such a change in practice has the potential to save money and improve patient outcomes.

# PHOSPHODIESTERASE TYPE -5 INHIBITOR USE IN TYPE 2 DIABETES IS ASSOCIATED WITH A REDUCTION IN ALL CAUSE MORTALITY

# Author(s):

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# **Background/Introduction/Aims:**

Phosphodiesterase type 5 inhibitors (PDE5i) are cardioprotective in animal models of acute myocardial infarction (MI) although few supporting clinical data are available. We sought to investigate whether PDE5i use in a cohort of patients with type 2 diabetes (T2DM), and therefore high attendant cardiovascular risk, was associated with altered mortality.

# Methodology:

Population based cohort study. The anonymised records of 5956 men (mean follow-up of 6.9 years) aged 40-89 years diagnosed with T2DM before 2007 were identified from 42 GP practices in Cheshire UK. Baseline clinical characteristics and PDE5i treatment data were obtained. All men had been treated with a PDE5i (Sildenafil, Vardenafil or Taladafil) for at least 3 months. We used hazard ratios (HR) from Cox regression models to describe the association between PDE5i use and all-cause mortality.

#### Results:

A lower percentage of deaths (18% versus 25%), and a significantly reduced risk of all-cause mortality from unadjusted Cox regressions [HR = 0.69 (95% confidence interval: 0.60, 0.79); P<0.0001], was observed amongst the 1,359 (22.8%) men prescribed a PDE5i, compared to those without such a prescription. This reduction in risk remained after adjusting for age, eGFR, smoking status, history of myocardial infarction, systolic blood pressure (per 5 mmHg), use of a statin, metformin, aspirin and beta-blockers: hazard ratio = 0.83 (0.70-0.98); p 0.038. The pattern of lower mortality (unadjusted HR = 0.69. P=0.009) was similar in those with a history of acute MI (25.7%, (49/191) versus 40.1% (337/840) deaths). After multiple adjustments, users of PDE5is were less likely to suffer an acute MI event (HR 0.74. P=0.036).

# **Conclusions/Recommendations:**

In a population of men with T2DM, on-demand use of PDE5is, even at low frequency was associated with decreased risk of both overall mortality and mortality in those with a history of AMI. Also MI was less common in PDE5i treated men. Further studies are required to characterise these potential cardio-protective effects. Further evidence is required to elucidate the role of PDE5is in cardioprotection. Nevertheless our findings provide strong evidence for PDE5 inhibitors acting to reduce mortality in type 2 diabetes mellitus.

#### **URGENT CARE STREAMING FUNCTION - DELIVERING QUALITY**

# Author(s):

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# **Background/Introduction/Aims:**

The Streaming function has been operational since the opening of the Urgent Care Centre (UCC) in 2009 and is operational between 0800-1800hrs. Clinical risk and assessment for all ambulant patients presenting to the Emergency Department (ED) is accepted by an autonomous Band 6 Primary Triage Nurse/Nurse Practitioner equipped with critical thinking and complex decision making skills. A rapid clinical assessment is made to ascertain whether patients need ED Triage, Straight to Minors (STM) (without the need for the patient to be reviewed by ED Triage), Urgent Care Centre, Back to GP (BTGP)/Dentist/other care provider or self-care. The initial aims of streaming are to rapidly assess patients and signpost to the most appropriate care. It is intended that this will lead to improved patient safety and flow, improvements to the initial "front of house" patient journey and optimised clinical capacity in the ED.

# Methodology:

Patient referrals were recorded over the period October 2014 to March 2015. The system was also tested as part of the perfect fortnight pilot in 2013 to assess time spent on triage.

#### Results:

Most recent data shows 31% of ED attendances were directed away from the acute ED to the UCC during operational hours. 34% went STM. Streaming diverts a further 8-12% BTGP or other care providers. In total, Streaming reduces the demand on ED Triage by a minimum of 73%. During a perfect fortnight pilot in 2013, the STM function saved 14 hours of triage time alone.

# **Conclusions/Recommendations:**

The streaming function is fundamental to the provision of a rapid front door clinical assessment. Streaming applies critical analysis to complex patient information or situations. Autonomous practitioners equipped with specialist theoretical knowledge and clinical rapidly and competencies are able safely to identify patients reauirina primary/urgent/immediate care. The streaming function determines the most appropriate area for a patient's treatment and facilitates patient flow through the ED. The streaming function optimises clinical capacity, avoids unnecessary congestion and has a positive impact upon ED patient waiting times.

# IS IT TIME FROM "REFERRAL TO DIAGNOSIS" IN LUNG CANCER PATHWAY AFFECTED BY DIAGNOSTIC TEST DELAYS?

# Author(s):

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# Background/Introduction/Aims:

UK Cancer Reform Strategy 2007 recommends that all patients referred with symptoms or signs suspicious of lung cancer are managed on a 62 day pathway, independent of referral. In 2013 our hospital failed to meet the national standard for the 62 day pathway and only achieved the standard for patients 'up-graded' onto a 62 day pathway. We aimed to analyse turnaround and reporting times for both internal and external diagnostic testing that affect "Referral to Diagnosis" period in the cancer pathway.

# Methodology:

A review of the turnaround times for diagnostic testing provided both locally and by external providers was undertaken. Data was extracted from the Somerset Cancer Register and the Trust's Patient Care System (PCS) and pathway breaches were analysed.

#### Results:

Results showed that 47% of CT scans, 548% of bronchoscopy, 25% of EBUS and 30% of PET/CT Scans were performed within 7 days of request. Review of breaches showed that 44% of the diagnostics undertaken within our Trust exceeded the 7 day turnaround time from request to being performed. 79% of the diagnostics performed by an external provider were performed more than 7 days after request.

#### **Conclusions/Recommendations:**

Our data revealed significant delays in patient pathways due to turnaround time for certain diagnostic testing. In nearly all patients that breach, external transfer for diagnostic tests has been made. We plan for local delivery of some of these diagnostics along with a change in the referral pathway to reduce delays in the cancer pathway. A streamlined diagnostic pathway with minimal delay is imperative in order to facilitate diagnosis and the start of treatment within the 62 day period.

# **Actions taken:**

A full review of the lung cancer diagnostic pathway has been undertaken. Interventions implemented to streamline the diagnostic pathway include; a new rapid access chest X-ray pathway, improvements in the turnaround times for diagnostics and reporting times, and local delivery of the more complex diagnostics historically undertaken within Tertiary Centres.

#### REDUCING THE RATE OF EMERGENCY PRESENTATION IN LUNG CANCER

# Author(s):

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# Background/Introduction/Aims:

The National Awareness and Early Diagnosis Initiative 2008 aims to promote earlier diagnosis of cancer improve cancer survival rates and reduce cancer mortality. In 2013, 41 new cancers were diagnosed as a result of an emergency presentation, 21% of the total diagnosed lung cancers. Patient contact with their GP surgery prior to their acute presentation was reviewed.

# **Methodology:**

A review was undertaken within secondary care and 6 GP Practices. A total of 16 patients were reviewed, just over a third of the total number of patients diagnosed. Case notes and electronic databases including SOMERSET and EMIS web were used to collect information.

#### Results:

Out of the 16 patients reviewed 13 (81%) were either a current or ex-smoker and the mean age of the 16 patients was 77. 9/16 (56%) patients had a Chest X-ray (CXR) within the 12 months prior to the emergency presentation and 14/16 (88%) patients had visited the GP in the previous 3 months. 8/16 (50%) patients were on the Chronic Obstructive Pulmonary Disease (COPD) Register and 5/16 (31%) patients were on the Gold Standard Framework (GSF) Register at the time of the acute presentation. 11/16 patients (69%) died within 12 months of presentation. 8/16 (50%) patients had stage IV disease and all had visited the Practice Nurse within the 3 months prior to the emergency presentation.

#### **Conclusions/Recommendations:**

Our data showed that over half of the patients who presented via this route had late stage disease and all of those patients with stage IV disease had contact with the GP Practice within the 3 months prior to emergency presentation. Healthcare professional and Public Health education is imperative to promote early presentation of lung cancer. A programme of education undertaken locally has helped to reduce the number of cancers diagnosed in 2014 to 13% (25).

#### **Actions taken:**

Interventions for improvement include; health care professional and public health education programmes and a new GP chest X-ray rapid access pathway. This same pathway will be used for a Self-referral for chest X-ray service delivered as part of a targeted campaign within an area with high incidences of lung cancer.

# DAY CASE LAPAROSCOPIC CHOLECYSTECTOMY: QUALITY IMPROVEMENT PROJECT

# Author(s):

Ballance L, McAvoy A, & Corless D, Mid Cheshire Hospitals NHS Foundation Trust

# **Background/Introduction/Aims:**

The cholecystectomy is one of the most commonly performed general surgical operations. NICE guidelines stated the need to offer a day-case service for people having a laparoscopic cholecystectomy as an elective planned procedure, unless their circumstances or clinical condition make an inpatient stay more appropriate. Our current practice is at 46% for day case laparoscopic cholecystectomies. Our primary outcome for this project is for 80% of all laparoscopic cholecystectomies to be a day case. Addressing this will improve the quality of care for biliary disease as a whole.

# Methodology:

The quality improvement project includes a variety of variable factors. To achieve our primary outcome, we broke down the patient journey into several stages and analysed each step to see how it could be improved. These included our "choose and book" system, the outpatient department and pre-operative assessment clinic and finally the theatre including staff, equipment and recovery.

#### **Results:**

This quality improvement project is on-going and still in progress. A laparoscopic cholecystectomy profile has been created for the "chose and book" system including eligibility criteria (BMI/co-morbidity, pancreatitis/ERCP) ensuring the correct patients are selected for laparoscopic cholecystectomies. The outpatient department has allowed adequate clinic time for a full "one stop clinic" allowing consent by the surgical team and then a pre-operative assessment all on one visit. A Laparoscopic cholecystectomy pathway has been created to facilitate documentation and improve the quality of care the patient receives. Theatre time has been extended and equipment standardised.

#### Conclusions/Recommendations:

A poor day case rate is an indication of a sub optimal service. NICE introduced guidelines to offer day-case laparoscopic cholecystectomy for people having it as an elective planned procedure, unless their circumstances or clinical condition make an inpatient stay more appropriate. We have begun to address this through our quality improvement project and aim for 80% of all laparoscopic cholecystectomies to be a day case.

### TRABECULECTOMY - OUTCOME AND COMPLICATIONS

# Author(s):

Dinsdale M, Nguyen D, Ophthalmology, MCHFT

# Background/Introduction/Aims:

Glaucoma is a condition in which raised (or sometimes normal) intraocular pressure (IOP) causes damage to the optic disc, leading to visual field defects, and potentially causing blindness. Therefore, the aim of treatment is to reduce IOP and preserve visual field. IOP can usually be controlled with pressure lowering medication, however this is not always enough and surgery is occasionally required, the gold standard for which is trabeculectomy. Defining 'success' of trabeculotomies is challenging as visual fields are often difficult to assess due to varying reliability, and also do not have an objective result, therefore success rates are often reflected in post-operative IOP. Therefore the aim of the project was to compare Mid Cheshire Hospitals Foundation Trust (MCHFT) results against the 2001 National Trabeculectomy Audit (NTA).

# Methodology:

This was a retrospective audit of 25 patients undergoing trabeculectomy at MCHFT between 01/08/2012-01/02/2014 with patients identified by the ICD-10 coding. A case note review was performed, the data collected in an Excel Spreadsheet and results measured and compared to Standards in the NTA (2001) as follows:

- Standard 1: IOP <21mmHg at 12 months</li>
- Standard 2: IOP <2/3 of the pre-operative IOP at 12 months
- Standard 3: Complication rate <40%</li>

#### Results:

- MCHT compared favourably with the NTA (2001) with IOP<21mmHg at 12 months 86% (MCHFT) v 84% (NTA) for unqualified patients (surgery no medication) and 95% (MCHFT) v 92% (NTA) for qualified (surgery with or without medication)
- IOP <2/3 of the pre-operative IOP at 12 months also compared favourably with 86% (MCHFT) v 66.6% (NTA) for unqualified and 91% v 71% for qualified
- MCHFT complication rate was very favourable at 24% in comparison to a 40% NTA rate

# **Conclusions/Recommendations:**

This audit demonstrates that the success rates following trabeculectomies at MCHFT are more successful than National data with regards to lowering IOP and complications. Therefore, recommendations for this audit are to ensure a continuing high quality of care and to ensure a continuous audit cycle to sustain success rates.

#### **Actions taken:**

- 1) Planned re-audit of trabeculectomies performed between February 2014 and May 2015 in 12 month's time (a total of 15)
- 2) To follow-up the patients in this cycle to get a 3 year and 5 year success rate



The Exposition Organising Committee would like to thank everybody involved for their help in making the 2016 Exposition possible.

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