

Abstracts

Annual Trainee Doctors' Prize Day, Thursday 2nd November 2018.

Postgraduate Medical Centre,
Belfast City Hospital.



ORAL PRESENTATION

Hypothermia Induced Pancreatitis: An Atypical Aetiology

Shane Caldwell, Jamie Clements, Ian McAllister

Introduction: Pancreatitis is a common condition on the acute general surgical take. Common aetiologies in the UK include gallstones, alcohol excess and iatrogenesis. Hypothermia is scarcely documented in literature among the rarer causes of pancreatitis, and whilst little scientific literature exists to support this clinical observation, this case adds to the growing evidence for hypothermia as a clinically relevant risk factor for acute pancreatitis.

Discussion: We present the clinical course of a 44 year-old male open water swimmer who was admitted to ICU for mechanical ventilation in view of hypoxic respiratory failure and severe hypothermia (27°C). Following cardiorespiratory stabilisation and uncomplicated extubation, the patient complained of sudden, severe epigastric pain, refractory to strong opiate analgesia. CT images were in keeping with acute pancreatitis. The patient was managed conservatively at ward level and made an uncomplicated recovery prior to discharge. Thorough clinical history and biochemical testing excluded all other typical aetiologies of acute pancreatitis. This case is unique from previous reports in literature, where the relationship between hypothermia and pancreatitis has been more ambiguous. It is essential to be vigilant in hypothermic patients and remember this uncommon link, as diagnostic delay may lead to serious local or systemic complications of pancreatitis.

Mid-regional proadrenomedullin in the diagnosis of bacterial infections in children: a diagnostic accuracy study

Dr Michael Corr, Dr Thomas Waterfield, Dr James McKenna, Dr Derek Fairley, Professor Michael Shields

Introduction: Differentiating between a bacterial infection and a self-limiting viral illness is challenging. Adrenomedullin (ADM) has many physiological roles and is reported to rise during severe infection. The novel biomarker Mid-regional proadrenomedullin (MR-proADM) is produced during the synthesis of ADM. It proportionally represents the level of ADM and is easier to measure.

Aims: To assess the diagnostic accuracy of MR-pro-ADM in detecting bacterial infection in febrile children presenting to the Royal Belfast Hospital for Sick Children Emergency Department (ED) with a non-blanching rash.

Methods: Prospective diagnostic accuracy study. Samples tested using the BRAHMS MR-proADM assay on Samsung LABGEO IB10® analyser.

Results: 39 patients underwent MR-proADM testing. In all but 2 patients the MR-proADM was under 0.70nmol/l. The two patients with elevated MR-proADM levels were found to have sepsis and tonsillitis. At 0.70nmol/l cut-off MR-proADM demonstrated a sensitivity of 0.11 (95% Confidence Interval 0.02 to 0.35) and a specificity of 1.0 (95% Confidence Interval 0.80 to 1.0) for bacterial infection.

Discussion: MR-proADM is highly specific for bacterial infections but lacks sensitivity. Given the physiological roles of ADM it maybe that MR-proADM is better suited as a prognostic marker of sepsis rather than as a diagnostic marker of bacterial infection.

Development of a Neonatal Intubation Flowchart

Dr Simon Jackson, Dr David Cummins, Dr Ben McNaughten, Dr Alison Walker

Introduction: In a neonatal emergency, if intubation is indicated, it is imperative the correct equipment is collected promptly. Currently no neonatal intubation equipment guide exists.

Aims: This study aimed to develop a Neonatal Intubation Flowchart (NIF) and test effectiveness of NIF 1 and NIF 2.

Methodology: A prototype NIF was created (NIF 1). Using a simulation, a control group (n = 21) was compared to an intervention group (n = 24), employing NIF 1. These cohorts consisted of paediatricians, neonatal nurses and midwives. The outcomes measured were Percentage of Correct Equipment (PCE) collected and Time Duration (TD) to collect equipment. An improved NIF 2 was created and the simulation was repeated to an intervention group (n= 28) utilising NIF 2.

Results: Between the control, NIF 1 and NIF 2, the PCE results were 59%, 87% and 96% respectively. The TD of the control, NIF 1 and NIF 2 showed a median of 90 seconds



(Interquartile Range (IQR): 70.5 - 121.5), 140 seconds (IQR: 99.5 - 182) and 60 seconds (IQR: 53.5 - 73.5).

Discussion: The NIF 2 improves intubation equipment collection, within a quicker time. Quicker and effective preparation aids quicker intubation which may limit hypoxic brain injuries.

Investigating the antimicrobial efficacy of MSCs as a potential novel therapy for *Mycobacterium avium* pulmonary infection.

Timothy Shaw, Gunnar Schroeder, Anna Krasnodembskaya and Cecilia O'Kane

Introduction: There is an urgent need to develop efficacious and tolerable therapies for *Mycobacterium avium* complex (MAC) pulmonary disease. Mesenchymal stromal cells (MSCs) have known antimicrobial properties against common bacteria but their effect on MAC species is not known.

Aims: To determine the effect of MSCs on intracellular and extracellular *M. avium*.

Methods: Human MSCs were infected with *M. avium* at a multiplicity of infection (MOI) of 2. Human monocyte-derived macrophages (MDMs) were also infected with *M. avium* at MOI of 2. After 4hrs, MSCs were added at a ratio of 1 MSC: 3 MDMs. After 24hrs and 72hrs, colony counts were performed on supernatants and cell lysates.

Results: MSCs reduced total bacterial counts of *M. avium* by 24% at 24hrs (from 295x10³/ml to 225x10³/ml, p<0.05) and 40% at 72hrs (from 403x10³/ml to 243x10³/ml, p<0.05). MSCs reduced total bacterial counts of *M. avium* in infected MDMs by >40% (from 381x10³/ml to 209x10³/ml, p<0.05) after 24hrs and >70% after 72hrs (from 1050x10³/ml to 314x10³/ml, p<0.05).

Discussion: MSCs have modest direct antimicrobial effect against MAC, but potently enhance their killing by macrophages. Mechanistic studies are required to understand their antimicrobial properties, with the aim of exploiting these therapeutically in pulmonary MAC disease.

Impact of an educational intervention on eye gaze behaviour in retinal image interpretation by Consultant and Trainee Ophthalmologists.

K Shirley, M Williams, N Parker, L McLaughlin, R Bond

Introduction: This study uses eye-tracking technology to objectively assess the differences in gaze behaviours between consultant and trainee ophthalmologists before and after a taught search strategy was introduced, while interpreting retinal images.

Methods: Nine trainee and 10 consultant ophthalmologists were asked to interpret 6 retinal images before and after watching a 5-minute tutorial that suggested a search strategy. Participants were asked to complete questionnaires of clinical signs seen, appropriate retinopathy grade, and confidence. Eye movements were tracked during each interpretation.

Results: Overall, trainees compared to consultants demonstrated more uncertain and unstructured gaze behaviours. Trainees eye gaze metrics compared to consultants included: longer interpretation time, 36.5s(SD=6.2) vs 31.4s(SD=4.2)(P=0.024), a higher visit count, 17.38visits(SD=5.13)vs 12.18visits (SD=2.64)(P=0.01), a higher proportion of fixation, 57.0%(SD=5)vs 50.5%(SD=5) (P=0.05) and a shorter time to first fixation, 0.232s(SD=0.10) vs 0.821sec(SD=0.77)(P=0.001), respectively. The teaching intervention did result in more focused gaze patterns in both groups. Pre-intervention and post-intervention mean proportion fixation on areas of interest were 38.6%(SD=6.8) and 51.8%(SD=13.9) for the trainee group, respectively, and 39.9%(SD=4.1)and 50.9%(SD=9.3) for the consultant group(P=0.01).

Conclusions: Consultants used a more systematic and efficient approach than trainees in interpreting images. After the introduction of a suggested search strategy, trainees showed trends towards the eye gaze behaviours of consultants. The implication is that eye tracking may have future use in teaching programmes and objectively assessing different teaching strategies.

POSTER PRESENTATIONS

BASIC SCIENCE

Investigating the effect of Zafirlukast on *Mycobacterium abscessus*

Dr David Johnston, CT1, Core Medicine

Introduction: *Mycobacterium abscessus* is an emerging multi-drug resistant pathogen, which is difficult to treat. There is a need for new antimicrobial strategies. Zafirlukast, a leukotriene receptor antagonist, inhibits growth of *Mycobacterium tuberculosis*, by inhibiting complexation between DNA and protein Lsr2. Lsr2 is present in *M. abscessus*.

Aims: We aimed to investigate the effect of Zafirlukast on extracellular and intracellular *M. abscessus* growth.

Methods: We examined Zafirlukast's effect on free growth of *M. abscessus*, and survival of *M. abscessus* in infected THP-1 cell line derived macrophages. We measured colony-forming units per millilitre in broth, or supernatants and lysates, at 24 and 72 hours. Also, we investigated whether Zafirlukast reduced inflammation as assessed by interleukin-8 secretion (measured by ELISA) by infected THP-1 derived macrophages. Results were analysed by Kruskal-Wallis and Dunn's tests.

Results: At 24 hours, 100µg/ml Zafirlukast reduced *M. abscessus* free growth by 62% (p=0.0039), also reduced total *M. abscessus* growth in THP-1 derived macrophages by 94% (p=0.0062), and finally, reduced interleukin-8 concentration in supernatants from *M. abscessus*-infected THP-1 derived macrophages by 99% (p=0.0412).

Discussion: Data suggest Zafirlukast may reduce growth of



M. abscessus and modify M. abscessus-induced inflammation. Further work is required to assess the potential therapeutic role of Zafirlukast in treating M. abscessus infection.

Developing a Septic Patient In Vitro Model

Dr Patrick Hickland, F2, Foundation Programme

Introduction: Sepsis represents a dysregulated host response to infection. Underlying mechanisms are unclear, but deficits in the function of monocytes, central to the innate immune system, are implicated. A heterogeneous condition, recent transcriptomic work has revealed two distinct sepsis-response signature profiles; immunosuppressed and immunocompetent, which are linked to outcome.

Aims: We propose that these distinct profiles impact differentially on volunteer monocytes, and hypothesize that there will be differences in their phagocytic activity and phenotype when conditioned in plasma from patients in these two groups. We therefore aimed to validate a functional assay for this purpose using lipopolysaccharide (LPS) to represent 'septic' plasma.

Methods: CD14+ monocytes were isolated from healthy volunteers, and incubated overnight in media and human plasma +/- 10ng/ml LPS. Surface phenotype and phagocytosis were assessed by flow cytometry.

Results: LPS exposure decreased monocyte surface CD14, as previously reported, and PD-1, whilst phagocytosis of E.coli particles and expression of CD86, and expression of PDL-1 increased.

Discussion: Our LPS model of 'septic' plasma/monocytes demonstrated the ability to alter monocyte phenotype and function, providing a positive control for subsequent analysis of patient samples.

Reverse Intestinal Malrotation in an Adult Patient

Case Report/Series

N. Allen, M. McKeever, S. O'Brien, B. Clements

Case Study: Small bowel malrotations are a rare congenital abnormality (symptomatic in 1 per 6000 live births 1). The majority of these present as a neonate or in early childhood (adult presentation between 0.0001% and 0.19%2,3). Our case is a patient with a rare form of malrotation, a reverse malrotation, presenting as an adult. An 18-year-old woman presented with 1 week of epigastric pain radiating through to her back. The pain had worsened in the 3 days preceding admission and was associated with vomiting. Bowels had been opened the previous day with no diarrhoea, mucus or blood reported. On examination the patient had a tender epigastrium and RUQ with associated guarding. Biochemical tests were unremarkable; WCC, CRP, LFT and Amylase all grossly normal. CT demonstrated small bowel volvulus and incomplete obstruction with a "whirlpool sign" of the small bowel mesentery. At Laparotomy the transverse colon was found running through the small bowel mesentery, ultimately a Right hemicolectomy with end ileostomy was performed.

Discussion: Cases of malrotation are rare and there is often a delay in diagnosis. We hope the discussion generated by this report will improve the diagnosis of intestinal malrotation and therefore improve outcomes for patients.

Insidious ocular cicatricial pemphigoid masquerading as pseudomembranous conjunctivitis

Mr Mohamad Baba

Case study: Ocular cicatricial pemphigoid (OCP) is an autoimmune disease that affects the conjunctiva. It is a subtype of mucous membrane pemphigoid (MMP), a disease that affects the skin and the mucous membranes. Initial signs and symptoms can overlap with other conditions such as pseudomembranous conjunctivitis. OCP is sight threatening and requires systemic steroids and immunosuppression while pseudomembranous conjunctivitis is self-limiting. We present the case of a 72 year-old gentleman with multiple attendances to eye casualty with red eyes. He was initially diagnosed with pseudomembranous conjunctivitis before developing cicatricial conjunctivitis and mouth ulcers. The conjunctival biopsy confirmed the diagnosis of OCP and the patient was started on oral steroid and immunosuppressive therapy.

Discussion: The diagnosis of OCP was delayed in our case and affected one eye more than the other. Extra-ocular signs and positive direct immunofluorescence can help differentiate OCP from other cause of chronic conjunctivitis. Early diagnosis is important as immunotherapy takes few weeks to achieve maximal effect. A step-wise approach was used in this case, starting with oral Dapsone and escalating to oral Mycophenolate. Close monitoring of the patient will continue under the joint care of the ophthalmology and rheumatology team.

A Good Catch

Dr Lorraine Bouzan

Case Study: A lady who was 7 weeks pregnant presented to the Emergency Department at 4am with her partner. She had been out for dinner with friends at 7pm and developed severe vomiting and diarrhoea from 10pm. Whilst in the waiting room she fainted & was faecally incontinent so was brought into a bed. On examination she was clammy and had generalised abdominal tenderness. Observations were normal except a Heart Rate of 105BPM. Initial haemoglobin on her Venous Blood Gas was 145. The obstetrics registrar was called - he could not see an intrauterine pregnancy. Her VBG was repeated showing a haemoglobin of 85. She was rushed to theatre and had 2 Litres of blood in her abdomen.

Discussion: Ectopic pregnancy should be considered in any female who presents with abdominal pain. All women presenting with abdominal pain should have a pregnancy test performed. Pregnant women should also have an ultrasound scan to confirm intrauterine pregnancy. This is a potentially life threatening condition if not managed promptly. This case highlights how it can present with atypical features which

mimicked gastroenteritis. It also highlights that initial bloods can be normal. This lady survived.

Delayed Hysteroscopic Management of Retained Placental tissue for an anaemic patient who refused blood products

Dr Michael Graham

Case Study: This patient had a normal delivery with a postpartum haemorrhage of 800ml. Her haemoglobin was 94g/L on discharge. She was a Jehovah's Witness and refused transfusion of blood products.

She was readmitted day 8 following delivery with sepsis. Ultrasound showed a 9x4cm area of retained placental tissue. Her haemoglobin on readmission was 82g/L.

Instead of immediate intervention the patient was reviewed weekly to assess for infection and there was multidisciplinary input including pre-operative counselling, anaesthetic review and completion of an advance directive.

She was admitted 8 weeks postpartum for resection of retained tissue. Her haemoglobin was 135g/L and intravenous tranexamic acid bolus and infusions were given prior to the procedure.

Hysteroscopy showed adherent placental tissue on the right lateral wall and posterior wall of the uterus. As there was moderate bleeding following tissue resection a urinary catheter with 20ml saline was inserted into the uterus.

Discussion: Hysteroscopic resection of retained placental tissue is relatively new however has been supported by the literature and warrants further trials. When compared with uterine curettage it may reduce blood loss and long term complications such as Ashermans syndrome.

Leptomeningeal Metastasis in a case of Triple Negative Breast Cancer

“A case of a triple negative breast cancer patient presenting within weeks of completing neo-adjuvant chemotherapy and surgery with isolated leptomeningeal metastasis.”

Dr Ronan McLaughlin

Case Study: A 35 year old female self-detected a lump in left breast July 2017. Triple assessment confirmed node positive, triple negative, infiltrating ductal carcinoma. No evidence of distant metastases on staging investigations. Completed six cycles of neo-adjuvant chemotherapy 08/01/2018 and left partial mastectomy and ANC 05/02/2018. Presented 5 days post-surgery with headache, photophobia, nausea, vomiting; CT Brain was normal - discharged. Admitted to Oncology 11 days later with ongoing symptoms; Normal examinations; MRI Brain and whole Spine normal; LP – cytology confirmed epithelial cells consistent with metastases from a primary breast carcinoma; Rapid decline with death on 11/05/2018.

Discussion: Early breast cancer carries an excellent prognosis when treated with neo-adjuvant chemotherapy and surgery. Commonest sites for metastases include bone, lung, liver,

brain and leptomeningeal involvement usually occurring months to years post initial diagnosis. Leptomeningeal metastases alone are very rare especially early in the natural history of the disease. Diagnosis requires a high clinical index of suspicion. Gold standard Investigations include T1-W MRI scan of brain and spine with gadolinium enhancement and CSF analysis. Treatment options are limited with continued debate over the effectiveness of systemic chemotherapy, radiotherapy and intra-thecal chemotherapy. Life expectancy following diagnosis of leptomeningeal metastasis is measured in terms of weeks.

Spontaneous Coronary Artery Dissection in a 41 year old Athlete

Dr Emma Wilkinson

Case Study: A 41-year old male athlete presented acutely to the Royal Victoria Hospital emergency department with sustained resting typical angina chest pain 30 minutes following completion of an ultra-triathlon. 12-lead ECG demonstrated hyper acute t waves in precordial leads V3 and V4. Serial high-sensitivity Troponin T assays were elevated at 186 – 330 – 603ng/L respectively.

Invasive coronary angiography demonstrated acute LAD dissection and significant thrombus burden with TIMI 3 flow distally. Optical coherence tomography (OCT) confirmed coronary dissection. A 6.0(width)/18 (length) mm Herculink bare metal stent was deployed following catheter thrombectomy, with a successful angiographic result. Following 3 months of dual antiplatelet therapy he remains on life-long Aspirin. At 1 year he has had no further major adverse cardiovascular events (MACE), angina free (CCS class 0) and exercising regularly.

Discussion: Spontaneous coronary artery dissection (SCAD) is a rare and clinically challenging cause of acute myocardial infarction most commonly affecting younger patients with low risk of atherosclerotic heart disease. The low incidence of SCAD has resulted in a paucity of information on optimal treatment. Our case highlights a challenging case successfully treated with percutaneous coronary intervention including intra-coronary imaging, and antiplatelet therapy.

Clinical Research

Epidemiology of Adolescent Trauma in England: a review of TARN data 2008-2017

Dr Julie-Ann Collins

Introduction: Trauma contributes significantly to adolescent morbidity and mortality. Currently a dearth of literature exists, specific to this field in the UK. This study aims to highlight the epidemiology of UK adolescent trauma.

Methods: TARN (Trauma Audit Research Network) records all trauma cases which meet pre-specified criteria. Adolescents were defined as 10-24 years old as per recent literature. TARN data from English sites over a ten-year period (2008-2017) were included in this analysis.



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Results: TARN recorded 26,330 trauma cases, 5,266 aged between 10-15 years and 21,064 aged between 16-24 years. Median age was 19.4 years (IQR 16.7-21.7 years). There was a 2.2-fold increase in the annual number of cases reported during this period with an increase in the number treated in MTCs (44% 2008 vs 73% 2017).

Trauma was more likely to occur between 08.00 and 00:00 (77.4%), at weekends and between April and October. Mortality rate was 4.4% (4.47% in 16-24 year old group and 3.84% in 10-15 year old group). Road traffic collision (RTC) was the leading cause of adolescent trauma (52%). Intentional injuries accounted for 19.8%; 16.2% alleged assault and 3.6% suspected self-harm.

Conclusions: There has been an increase in reported adolescent trauma. RTC and intentional injuries, including stabbings are leading aetiologies. Health care professionals need to prioritise national preventative public health measures and early interventions to reduce the incidence of trauma in this vulnerable group.

Which factors are important in determining the quality of informed consent?: A meta-synthesis of the qualitative evidence.

Background: Informed consent is an integral component of good medical practice. Many have investigated measures to improve the quality of informed consent, but it is not clear which techniques work best and why. To address this problem, we propose developing a 'core outcome set' to evaluate interventions designed to improve the consent process for surgery. Part of that process involves reviewing outcomes that have been reported in existing research that reportedly capture the quality of a consent process.

Aims: To systematically review all qualitative studies to determine which factors determine the quality of informed consent for surgery as viewed by patients and clinicians.

Methods: This qualitative synthesis comprises four phases: identification of published papers and determining their relevance; appraisal of the quality of the papers; identification and summary of the key findings from each paper while determining the definitiveness of each finding against the primary data; comparison of key themes between papers such that findings are linked across studies. The study protocol has been registered on the International Prospective Register for Systematic Reviews (PROSPERO ID: CRD42017077101).

Results: Searches of the databases returned 11,073 titles. Of these, 16 studies met the inclusion criteria. Studies were published between 1996 and 2014 and included a total of 367 patients and 74 health care providers. Thirteen studies collected data using in-depth interviews and constant comparison was the most common means of qualitative analysis. A total of 94 findings were extracted from the primary papers. These findings were divided into 12 categories and ultimately 6 synthesised findings. These synthesised findings were; trust, knowledge, patient characteristics, situational factors, choice and the model patient.

Discussion: This qualitative meta-aggregation is the first to examine the issue of informed consent. The review has revealed several outcomes deemed important to capture by patients and clinicians when evaluating the quality of a consent process. Some of these outcomes have not been previously been examined in informed consent research. This review forms the basis for the development of a core outcome set to evaluate interventions designed to improve the consent process for surgery.

Online information about vertigo: How reliable and easy to read are the websites?

Dr Sevasti Konstantinidou

Introduction: Nowadays most people use the Internet to access health-related information.

Aim: To objectively analyse online information regarding vertigo, in terms of quality, readability and reliability.

Methods: The term vertigo was searched using the most popular search engines. The top 30 websites were analysed. The readability was assessed using Flesch-Kincaid Reading Ease score (FRES) and Simple Measure of Gobbledygook score (SMOG). The quality and reliability were analysed using DISCERN instrument, JAMA criteria and presence of Health on the Net (HON) Foundation seal.

Results: The websites Nhs.uk, Patient.info and Nidirect.gov.uk had the highest readability scores. The average FRES score was 48 which correlates to the reading ability of a college student. Thirteen websites had the HON seal and most websites met 2 out of 4 JAMA criteria. The websites Cks.nice.org, Nhsinform.scot and Menieres.org.uk had the highest DISCERN scores and average DISCERN score was 41.

Discussion: On average, information online about vertigo is difficult to read and is of fair quality. The highest ranked websites on search engines are not always the most reliable. Clinicians should be aware of available health information online and advise patients accordingly.

Do Margins Matter?

Dr Cathy Malone

Introduction: Studies have shown that disease recurrence after LLETZ is higher in patients with positive resection margins; however rates vary possibly due to technique and extent of margin cautery. We analysed patient records to determine if margin status affected test of cure (TOC) rates.

Methods: 100 margin positive LLETZ specimens and 103 margin negative specimens were identified in the WHSCT for high grade CIN (CIN 2/3) from January 2016- June 2017. Case records were examined to determine TOC post excisional therapy.

Results: Of 203 patients who had LLETZ for high grade CIN 5% of patients were immunocompromised (n=10). 6 cases had co-existing CGIN (4 in margin positive group). 63% of the margin positive group and 68% of the margin negative group

had negative TOC ($p=0.22$). 7% of the margin positive group and 3% of the margin negative group required repeat excision ($p=0.09$). DNA rates for TOC were 10% and 5% in the margin positive and negative groups, respectively.

Discussion: Our results show that after TOC smears post LLETZ for high grade CIN margin status of the LLETZ specimen made no significant difference to the outcome. This is perhaps due in part to the treatment technique involving cauterization of the residual margins.

A study of the relationship between resilience, burnout and coping mechanisms in doctors.

Ms Nicola McKinley

Introduction: Burnout in doctors has been widely reported on. However, there is limited information in the literature on resilience in doctors. Despite this, workshops and seminars are offered by organisations for clinicians to attend to improve their personal resilience. These may not benefit doctors if they are already highly resilient individuals.

Aims: To measure resilience, professional quality of life and coping mechanisms in doctors.

Methods: During a 4-week period all medical staff within a single NHS trust in Northern Ireland were invited to complete an online survey that was made up of three validated psychological tests.

Results: 283 doctors across a wide range of specialties and grades responded.

Mean resilience was 68.9, higher than population norms. 100 (37%) doctors had high burnout scores. Burnout was positively associated with low resilience, low compassion satisfaction, high secondary traumatic stress and more frequent use of maladaptive coping mechanisms, including self-blame and substance use. Non-clinical issues in the workplace were the main factor perceived to cause low resilience in doctors.

Discussion: Despite high levels of resilience, doctors had high levels of burnout and secondary traumatic stress. As doctors already have high resilience, improving personal resilience further may not offer much benefit to professional quality of life.

Coned Hemipelvic 'Ice Cream Cone' Prosthesis And Total Hip Replacement In Acute Complex Acetabular Fractures Of The Elderly

Mr Sam McMahon

Introduction: Osteoporotic acetabular fractures in the frail elderly patient are associated with high levels of morbidity and mortality.

Aims: We describe the results of a coned hemipelvic acetabular reconstruction and total hip replacement as the treatment of these fractures.

Methods: We have prospectively monitored a series of fifteen patients (16 cases) with a mean follow-up of 22 (12-42) months.

Results: The mean age was 79 (67-87), and mean ASA score 3.3 (3-5). Thirteen had low-energy injuries, two had high-energy injuries.

Mean operative time was 94 minutes. There were seven minor post-operative complications. Fourteen of 15 patients were full weight bearing day one post-operatively. Mean length of hospital stay was 13 (5-27) days. Preoperative mobility status was maintained in 8 patients. At one year mean Harris hip score was 73.13, Merle d'Aubigné score 12.7 and mean EQ-5D score 0.59 (data from 10 patients).

Mortality at 30 days was 0%, and 7% at 1 year. There have been no thromboembolic events, dislocations or deep infections.

Discussion: The coned acetabular prosthesis minimises operative time and bypasses the fracture, creating an immediately stable construct that allows immediate weight bearing.

Early results show an acceptable complication rate, satisfactory patient reported outcomes and excellent survivorship.

Prognosis of Computed Tomography Derived Fractional Flow Reserve (FFRCT) in the Prediction of Clinical Outcomes

Dr Charis McNabney

Introduction: FFR_{CT} can determine the functional significance of stenosis and guide safe deferral of invasive angiography, however intermediate prognostic implications have not been assessed.

Aims: The study aim was to examine the prognosis of fractional flow reserve derived from coronary computed tomography (FFR_{CT}) in routine clinical practice.

Methods: Patients referred for FFR_{CT} analysis with stable chest pain at a single centre between October 2015 and June 2017 were retrospectively included and followed up for rates of vessel related late (>90days) unplanned revascularization, MI, and cardiac mortality.

Results: 200 (mean age 62.4 ± 10.0 years) patients were sent for FFR_{CT} analysis. A Cox Regression model was used to determine hazard ratios from FFR_{CT} status. $FFR_{CT} < 0.8$ patients were significantly more likely to undergo invasive angiography ($p < 0.001$) and subsequent revascularization ($p < 0.001$). All MI's occurred in FFR_{CT} positive group ($n=4$), none in FFR_{CT} negative group ($p=0.009$).

Discussion: A positive FFR_{CT} was prognostic for significantly increased risk of unplanned revascularization and MI. FFR_{CT} negativity provided strong clinical warranty, with no deaths or MI's at one year. Invasive Catheter Angiography can be safely deferred in the presence of a negative FFR_{CT} result.

Skin cancer incidence is rising in Northern Ireland

Dr Bryan Murphy

Introduction: Skin cancer incidence is rising in Northern Ireland (NI)¹. The Department of Health, Social Services



and Public Safety's (DHSSPSNI) 'Skin Cancer Prevention Strategy and Action Plan (2011-2021)'², aims to reduce skin cancers by raising awareness of the dangers of ultraviolet radiation. Target groups include children and outdoor sports participants.

Aim: We surveyed NI sports clubs to gauge whether such messages are reaching members.

Methods: Links to sun-safety material accompanied surveys emailed to 562 clubs (158 complete; 75 partially complete).

Results: Amongst 158 complete responders, highest responding clubs included Gaelic football (54%), running/athletics (10%) and golf (9.5%). 67% were unaware of the DHSSPSNI strategy ;< 6% recall receiving promotional material. The majority of clubs provide no sunscreen; 5% supply free sunscreen and 2.5% offer it for special events. Considering future sun-safety promotion, 129/158 clubs would use the material accompanying the survey.

Discussion: Evidence shows that safe-sun and skin cancer education does not always lead to behavioural change^{3,4}. Club-level health policies result in healthier behaviours⁵, with those connected to regional bodies being more inclined to partake. NI clubs are willing to promote sun-safety. They propose better use of social media to target members, with the literature suggesting improved member websites⁶. Future campaigns could target governing bodies to encourage member-clubs to promote sun-safe behavior.

Patient reported outcomes after laparoscopic versus open inguinal hernia repair: A systematic review and meta-analysis of 17,148 patients.

Dr Timothy Patterson

Introduction: Traditional outcome measures (e.g. mortality, length of hospital stay) may not provide a full depiction of patients' post-operative state, especially for low-risk interventions such as inguinal hernia repair. Patient reported outcomes (PRO) are becoming increasingly common as primary outcomes in clinical trials.

Aims: The aim of this study is to report and summarise the PROs in randomised controlled trials (RCT) comparing laparoscopic versus open inguinal hernia repair techniques.

Methods: A systematic review and meta-analysis was carried out in accordance with PRISMA guidelines. PubMed, Embase, SCOPUS, Cochrane Library and four clinical trials registries were searched. Identified publications were independently reviewed by two authors.

Results: 7,129 records were identified, resulting in 53 RCTs being selected. In total 17,148 patients were identified and 18,004 hernias were repaired. After meta-analysis the laparoscopic group was associated with significantly less post-operative pain, except that reported within 2 weeks post-operatively. Numbness and patient reported satisfaction was also significantly better in the laparoscopic group.

Discussion: This study reflects the most up-to-date evidence

available for the surgeon to counsel their patient. It was constrained by the heterogeneity of outcome reporting.

Medical Education

Audit Of Stress Cardiac Magnetic Resonance Referrals In Northern Ireland

Dr Efstathios Bonanos

Introduction: The recently updated NICE guidelines regarding investigation and treatment of stable ischaemic heart disease advise CTCA for investigation of chest pain and reserve non-invasive ischaemia tests for patients with known coronary artery disease. In practice, choice of investigation often depends on local availability and expertise and options for non-invasive ischaemia testing include DSE, MPI and CMR. This audit aimed to assess safety outcomes and sensitivity/specificity of stress CMR in Northern Ireland.

Methodology: A retrospective audit of patients undergoing CMR from 1st Jan 2016 - 1st January 2017 was undertaken. For patients with a positive CMR, findings at angiography were assessed. For patients with a negative study, the electronic care record was reviewed to assess incidence of adverse outcomes including acute coronary syndrome and mortality.

Results: In total, 74 patients were included in the audit. Follow-up was undertaken from 14-26 months. Twenty nine (39.2%) had a positive CMR. Of the 45 stress CMR negative patients, no patient had myocardial infarction or mortality during follow-up. Of the 29 CMR positive patients, 20 (68.9%) had invasive angiography, of which 19 (95.0%) had PCI and 1 (5.0%) had bypass surgery. The remaining 9 patients were felt inappropriate for angiography due to comorbidities. Sensitivity was 0.96 for coronary artery disease according to post CMR angiogram.

Discussion: Stress CMR correctly identified patients with obstructive coronary disease which required further therapy with a high degree of sensitivity. Patients with negative studies appear to have a low risk of cardiac events in the short to medium term.

Emergency Medicine Registrar Ready Course

Dr Lorraine Bouzan

Introduction: A survey of Emergency Medicine Trainees indicated that the progression from lower into higher specialty training (HST) is a stressful transition.

Aims: Our aim was to develop a course which met the needs of our trainees based on the feedback obtained from our survey.

Methods: We developed a one day course which simulated a busy night shift. The candidate was required to manage simulated patients and the rest of the department represented on a "board". It tested their ability to prioritise, delegate, lead and managing other staff, deal with difficult situations and maintain situational awareness.

Results: Feedback showed improved confidence in managing staff, giving advice, delegating appropriately, making decisions and dealing with difficult situations. All trainees felt the course would improve patient safety and would recommend the course to other trainees.

Discussion: The transition into HST is stressful. Our survey identified that the reasons underpinning this are in relation to leadership & management skills and non-technical skills. We showed how a simulated teaching session could help provide a “safe” environment to learn these skills and provide strategies for overcoming common problems. Overall this improved leadership skills, confidence and patient safety.

A root cause analysis of dental negligence claims

Ms Christine Causey

Introduction: In recent years, clinical negligence claims are a growing reality for dental professionals. Defence organisations report both increasing claim numbers and higher levels of compensation being awarded.

Aim: We aim to undertake root cause analysis of negligence claims reported on by a single consultant oral to improve understanding of the root causes and to direct quality improvement activities.

Method: Claims were identified between 1993 and 2015 through consultant records and a systematic approach taken to review each case to determine both active and latent factors contributing to the claim.

Results: 30 negligence cases were identified with 53% of claimants being male and the most common age group 31-40 (33%). Extractions were the most frequent cause of claims. Other reasons included misdiagnosis, patient injury and complications of treatment. Several latent and active contributing factors were identified for each including organisational (30%), task (97%) and communication (57%) factors amongst others.

Discussion This study highlights that the cause for dental negligence claims is often multifactorial. It reinforces an often significant variation in recollection and perception of events by both complainant and dentist. Communication frequently features as a factor although other organisational and task factors also play a significant role. Many root causes identified are preventable or modifiable and therefore measures can be put in place to reduce the impact of these and ultimately risk of negligence and negligence claims.

The Long Case as a Formative Assessment Tool – Views of Medical Students

Dr Claire Mashih

Introduction: Previous literature identifies authenticity and the holistic nature of the long case as advantages; however its unreliability makes it unsuitable for summative assessment. The views of students are not well represented in existing research.

Aims: To ascertain the views of medical students on the value of the long case.

Methods: A questionnaire and focus groups were used to discover students’ views on a rheumatology long case. Eighty-six percent of 106 students returned questionnaires and 19% attended focus groups. Qualitative thematic analysis was undertaken. SPSS® was used for statistics.

Results: There was overwhelming support for the long case (92% in favour). Students reported it provided them with a ‘real’ encounter and ‘integrated’ their learning. There were mixed opinions on the educational value of the long case. Opinions that it was ‘unfair’ were prominent in focus groups. There was frequent mention of practical difficulties completing the case. Views on the importance of feedback were expressed.

Discussion: Students used the terms ‘real’, ‘integrated’ and ‘fair/unfair’ when describing the long case which correspond to the academic terms ‘authentic’ ‘holistic’ and ‘reliable’. We may improve students’ experience by minimising practical obstacles and maximising the quality of feedback.

Quality Improvement

PICC Positive in Surgery

Dr Lucy Arrowsmith

Aim: A General Surgery firm of a District General Hospital noted an opportunity to improve knowledge and skills for Foundation Year Doctors caring for surgical patients with Peripherally Inserted Central Catheter lines. Shift pattern demands prevented trainees from attending a single education session. Our aim was to improve confidence and knowledge through education with Trust Specialist Nurses.

Methods: An initial questionnaire was circulated amongst Foundation Doctors working in Surgery to determine baseline familiarity and confidence with PICC lines. Following education, the questionnaire was recirculated.

Results: Pre-education - 14 responses received. 100% encountered a patient with a PICC. 57% had taken blood from a PICC without formal training. 64% encountered difficulty drawing a blood sample from a PICC. The average level of confidence was 6/10.

100% felt they would benefit from formal training on PICC lines.

Following formal education: Average level of confidence was 7/10 – demonstrating a 10% increase. Average rating for quality of teaching was 9/10.

Conclusion: This unique, combined medical education and patient safety QI project confirmed issues in Junior Doctor training. Results demonstrated simple education can increase confidence in PICC management. As a result, Doctors can deliver safer care for this group of patients.

Readability of patient correspondence.

Dr Megan Blakely

Introduction: Many surgeons write directly to patients with



updates on their care. The readability of this correspondence was not subject to the same standards expected from other patient literature. New guidance on patient correspondence has further highlighted this issue.

Aim: To show results from a study we undertook regarding readability in January 2018 and to highlight some of this new guidance.

Methods: One hundred consecutive letters written directly to patients from the General Surgery Department, Ulster Hospital in December 2017 were analysed. The Simplified Measure of Gobbledygook (SMOG) was calculated for each letter.

Results: The mean SMOG was 11.23. 82% of letters were classified as difficult to read.

Discussion: Only 3% of letters included in our initial study were considered 'easy to read'. Although new guidance does not specify a target age for readability, it does give some advice; this includes words to avoid, sentence length, and avoidance of medical jargon. As part of an ongoing quality improvement project we hope to demonstrate improvement in the readability of patient correspondence.

Management of Anaemia in Pregnancy

Dr Gillian Blayney

Introduction: Anaemia is a key contributor to poor obstetric outcome including increased mortality from obstetric haemorrhage. It is associated with fetal death and premature delivery and UK antenatal prevalence is 24.4%.

Aims: To review the diagnosis, treatment and follow up of antenatal anaemia and determine the incidence of avoidable anaemia and transfusion at delivery.

Methods: A proforma based upon national guidelines was completed following a chart review of mothers with antenatal anaemia who delivered in the Ulster hospital over a one-month period.

Results: Of the 22 patients haemoglobin was checked at 28 weeks in 86%. Oral iron was prescribed when indicated in 50% of patients, with 1/3 experiencing a significant delay. 13% received dietary counselling and of those applicable only 7% were referred to secondary care. 31% were appropriately followed up with a 45% adequate response to treatment. There was a 4.5% incidence of avoidable red cell transfusion and 41% avoidable anaemia at delivery.

Discussion: To summarise, 31% of patients with confirmed anaemia received oral iron at the correct dose resulting in avoidable anaemia and transfusion at delivery. This review represents substandard practice and creates baseline data for a quality improvement project which is ongoing.

Audit of Oral Epithelial Dysplasia management in Oral Surgery and Oral Medicine Clinics in BHSCT.

Ms Christine Causey

Aims: To determine the presentation, management, waiting times and conversion to SCC of Oral Epithelial Dysplasia

(OED) at the School of Dentistry (SOD).

Methods: A retrospective review of cases of OED referred to the SOD between March 2011 and July 2017. Hard copy and electronic patient records were used.

Results: Overall 45 patient records were reviewed over the time (24 male and 21 female).

Over 84% of patients were aged over 50 on referral. Most lesions were located on the tongue or floor of mouth (82%) with almost half appearing as homogenous white patch lesions (69% asymptomatic). Just under one third were referred on the red flag pathway.

Management of lesions varied between monitoring (60%), surgical removal, referral or laser excision. Overall 9 of the 51 lesions were re-biopsied and a diagnosis of OSCC made. No link was made between degree of dysplasia and likelihood of conversion.

Discussion: OED occurred most frequently in patients over 50 and appears strongly linked to factors such as excessive alcohol intake and smoking. Characteristics of the presenting lesion vary and as such so does triage grade on referral. Management of lesions varied depending on histopathology, clinical findings and risk factors. 20% of lesions later converted to OSCC. Using these findings we aim to formulate a management protocol for these patients in conjunction with histopathology and our head and neck surgery colleagues which will be applicable to both the oral surgery and oral medicine department in the school of dentistry.

The development of a Video Capillaroscopy Service within the Belfast Trust

Dr Ashley Elliott

As a rheumatology trainee I was aware that for those patients with raynauds syndrome, who were being assessed for an underlying connective tissue disease, there was no facility to perform capillaroscopy. Capillaroscopy is a non-invasive method of examining the nail bed capillaries of patients to assess for any abnormalities. This allows for earlier diagnosis and treatment for those with scleroderma and it also can facilitate discharge of those patients with primary raynauds with normal capillaroscopy findings.

My aim was to create a nurse led capillaroscopy clinic for the Belfast Trust by August 2018. I was able to secure funding in order to learn how to perform capillaroscopy in May 2017 and successfully completed a capital funding bid to secure a video capillaroscope for the Belfast Trust. After developing my skills in the procedure I was able to encourage one of our specialist nurses, Donna Torrens, to learn the skill herself.

We have now completed 6 capillaroscopy clinics at RVH, reviewing 20 patients (16 Female: 4 Male) who were referred via our online form. For those seen 4 patients were given a connective tissue disease diagnosis, 2 patients had their disease staged, 7 patients were able to be discharged from rheumatology services and the remaining 7 patients require ongoing review due to either abnormal capillaroscopy

findings or concerning history. The service shall now continue as a nurse led service.

Improving National Vascular Registry Data Capture for Carotid Endarterectomy Patients

Dr Julie-Anne Empey

Introduction: The UK National Vascular Registry (NVR) records and publishes outcomes for procedures performed by vascular consultants. It aims to audit and improve vascular patient care. Difficulty in extracting data from patient notes have led to incomplete entries and underreporting of results.

Aims: To improve the accuracy of data entry into the NVR for all patients undergoing carotid endarterectomies (CEAs) at a Regional Vascular Centre.

Methods: A total of 5 PDSA cycles were completed. Data was collected over four months from consecutive CEA patients. Deficiencies in data entries were analysed. At month two, a new proforma was introduced highlighting the key data components required for the NVR database along with further sections for MDT input and inpatient note keeping. Staff were unaware that notes were being audited. Data completion rates were then compared.

Results: There was a significant improvement in completion of NVR entries after pro forma introduction; admission details improved from 48% to 98% completion and demographics from 68% to 99%.

Discussion: The proforma has resulted in an improvement in the accuracy and completion of NVR data entries for CEA patients permitting outcome data to be audited to ensure high standards of patient care.

What is the perfect pathway to enhance patient care in the management of osteoporotic thoracolumbar fractures?

Dr Pedro Ferreira

Introduction: The current pathway is that these patients are referred to a spinal specialist. This generally requires an ambulance trip, often long since the N. Irish population is covered by a single spinal centre.

Aim: We propose treatment can be done locally on selected patients.

Methods: Retrospective study of new referrals seen in the spinal clinics at the Royal Victoria hospital between October 2017 and March 2018 - 395 patients. The segmental kyphotic angle was compared between imaging at diagnosis and in clinic.

We've excluded patients: younger than 65yo; with neoplastic/metastatic fractures; with associated myopathy/neuropathy; clinic letter not typed (n=2). N = 109 patients

Results: 20% discharged at 1st encounter. Spinal bracing fitted on 45% but no patients offered surgical intervention. Mean segmental kyphotic angle increased 5.25°.

Discussion: There was a minimally significant increase in the mean segmental kyphotic angle.

Surgical intervention was not necessary for any of the patients, being analgesia and physiotherapy the treatment modalities chosen. We believe this patient group can be managed locally and only referred to a specialist if meeting defined criteria. This should be less cumbersome for all.

Red Flag Dictations, Quality Improvement OMFS; 2018

Mr Mark Kennedy

Introduction: Head and neck patients are subject to national requirements to establish a diagnosis by 31 days. Timely communication is key to assisting this. Red flag signposting of letters in medspeech is key step in process. Prior to this project the majority of letters for red flag patients were being dictated as routine and so typing of the dictations could vary between 1 - 4 weeks depending on the secretarial support. One of the issues we faced was clinicians can remove patients from the red flag process and thus think red flag dictation was unnecessary.

Aims: To ensure that by start of July 2018, 75% of Red Flag patient Letters are graded correctly in dictation with 100% graded correctly by end of September 2018

Resulting dictations will thus be typed within 24hrs of seeing the patient

This complies with the trust's standard operating procedure, and ensures efficiency within our systems

Methods: Baseline data collection to confirm that improvement was required. PDSA 1 Email to OMFS team. PDSA 2 Audit Reminder. PDSA 3 2nd Email to OMFS team. PDSA 4 Notice on Computers.

Results: Aim: 75% compliance. Overall steady rise in compliance after every PDSA cycle. Median Prior to first intervention 33% (Week 1-15)

Median after PDSA cycle 1= 50%

Median after PDSA cycle 2= 49%

Median after PDSA cycle 3= 58%

Median after PDSA cycle 4= 66%

Discussion: Unfortunately we didn't reach our aim compliance. I feel that we made a substantial improvement in the practises of the staff and that over time we will be able to reach our aim of 75% compliance for red flag dictations.

Summary of Northern Ireland's First BSGE Endocentre and Patient Experience

Dr Cathy Malone

Introduction NI has one BSGE Endocentre established in 2014 with a team of gynaecologists, colorectal and urology surgeons and one nurse.

Aims To determine symptoms and QOL outcomes for women with severe endometriosis since Endocentre was established and patient feedback on current services.

Methods BSGE endometriosis database was analysed



(previous surgery or hormonal therapy, symptoms and pre- and post-surgery quality of life (QOL) measures). Telephone questionnaires about endometriosis services were undertaken.

Results 60 patients on database had QOL score (EQUVAS numeric 0-100 score) recorded. 37% used hormonal therapy pre-surgery, 62% had previous surgery for endometriosis. Most common hormonal therapy was COCP (15%) Most prevalent symptom was menstrual pain (81%). Average pre-surgery QOL score was 57, with average scores at 6 months, 12 months and 24 months post-operatively 67, 71 and 57.

Telephone questionnaire (17 patients), 88% attended gynaecology before the endometriosis clinic, 35% noticed improvement since then. Feedback was positive (88%). All felt a patient support group would be beneficial.

Discussion On average patients had improved QOL scores at 6 months and 12 months post-operatively. Based on patient feedback, the first endometriosis support group in the Northwest is being established, run by charity and the Patient Client Council.

The Failure to Check Natriuretic Peptides in Suspected Heart Failure

Dr Lisa McClenaghan

Introduction Heart failure symptoms are non-specific therefore diagnosis can be challenging. If suspected, the European Society of Cardiology recommends that natriuretic peptide (NP) levels are measured prior to requesting an echocardiogram, as patients with normal NP levels are unlikely to have heart failure and do not require echocardiography.

Aims: To ascertain how often an NT-ProBNP is checked prior to requesting an echocardiogram for left ventricular (LV) function assessment.

Methods: We reviewed 44 echocardiogram requests submitted between May-October 2017. We used ECR to see if an NT-Pro BNP had been requested beforehand, and how these results correlated.

Results: Of 25 inpatient requests, 23 had an NT-ProBNP checked beforehand, compared with 8 out of 19 outpatients. When analysed by grade, the majority of requests came from general practitioners. No patients with normal NT-ProBNP values were shown to have LV dysfunction.

Discussion: In the majority of patients in whom LV dysfunction was suspected, echocardiographic assessment was normal. Therefore, a test which can reliably exclude LV dysfunction has significant potential to reduce unnecessary referrals, which would in turn reduce waiting list pressures, patient anxiety and hospital spending. Recommendations for improvements are discussed.

Pancreatitis Audit Abstract

Dr Leanna McGuigan

Aim: Evaluating time from admission acute gallstone pancreatitis to cholecystectomy.

Method: UK working party guidelines for management of acute pancreatitis. "All patients should undergo definitive management during same admission or within 2 week period."

All coded diagnosis of gallstone pancreatitis Ulster hospital Dundonald admissions 2016. Dataset: Discharge date, ERCP/Surgery, repeat admissions prior to surgery, mode of procedure and 30 day readmission/morbidity/mortality.

Results: 51 patients

47 deemed surgically fit. 14.9% had same admission cholecystectomy; 43.5% performed within guideline 2 week period.

96.1% diagnosed MRCP, 2% CT, 2% USS only. 33.3% positive MRCP findings all underwent ERCP

Cause of delay: 15% failed or delayed ERCP, 5% required repeat imaging, 14% no noted medical/surgical cause 21% Repeat pancreatitis admissions: 27% before ERCP, 36% After ERCP and 36% no evidence of choledocholithiasis. 88% performed Laparoscopically, 9.5% lap conversion to open 11% 30 day readmission rate following surgery, 7% with post operative pancreatitis

Conclusions : 43.5% had surgery performed within guidelines period. Delays majorly observed due to ERCP availability; however 14% had no medical/surgical reason. Therefore waiting list factors may have had some effect. Delay to surgery is thought to have directly affected rate of readmission with pancreatitis.

Immediate Discharge Document: Improving Discharge Accuracy in the Mater Hospital 2016-2018

Dr Abigail Nelson

Introduction: Within the Mater Hospital admission packs there is a 1 page discharge summary sheet for consultants to fill in when patients are fit for discharge. This ensures vital information eg final diagnosis and review information is communicated. This document was however rarely used.

Aims: Increase use of IDD by medical consultants to 90%

Methods: -Information session for all medical staff about changes and to gather feedback

-All medical consultants emailed to ask for support

- Layout of page streamlined

-Document changed to yellow paper and moved to front of admission pack

-GPs surveyed on what is important in a discharge letter

Results: 4 PDSA cycles carried out. Before changes implemented (first audit) 8% were filled out from a random sample of 5 per ward. Improved to 36% on first re-audit, 44% second and 52% on the third. A further re-audit 2 years later (March 2018) showed implementation was at 37%.

Discussion: Change can be slow! Project overall a success and improving discharge accuracy has obvious benefits for patient care in community as well as making discharge letters a more accurate document for ECR reference.

Timeliness of Psychiatric discharge letters within T&F Hospital

Dr John Christopher Sharkey

Introduction: Nice Guideline 53 recommends standards for the transition of care between inpatient mental health facilities and community follow-up. GP's should receive discharge summaries within 7 days. At baseline 0% of letters were completed within this timeframe within the T&F.

Aim: Discharge summary should to be completed within 7 days for at least 60% of patients in the T&F hospital, and to achieve this within 12 months.

Method: The baseline data for all patients admitted and discharged in the 8 months prior were also gathered prior to any intervention. 5 PDSA Cycles were used to introduce a new discharge trolley to each inpatient ward, a new discharge checklist introduced. The letter itself was restructured in a way that made it easier to read and easier to complete.

Results: Changes implemented correlated with an improvement from 0% of letters complete within 7 days to over 80% completed. The mean time taken for community teams receiving letters improved from 51 days to 4 days.

Discussion: This project attained sustained improvement. Microsystems meetings at a local level also allowed a time allocated to focus on this project within a QI minded approach.

QI Project: To Improve Adherence To DVLA Guidance On Driving And ADHD

Dr Vivian Sing

Aim: To reach 90% adherence to DVANI ADHD guidance in East Belfast OPC

Background: According DVLA's guidance, patients with ADHD must notify DVLA/DVANI of their condition. According to DVLA and GMC, it is medical professionals' responsibility to advise patient to do so.

Measures

Process: Staff and patient education, use of checklist, information leaflet. Outcome: % of patients per month informed by medical team to notify DVANI of their diagnosis of ADHD

Results: Cycle 1 (baseline): 33.3% of patients were advised by medical staff to notify DVANI

Cycle 2 (staff educated): 56% of patients were advised

Cycle 3 (Update existing ADHD checklist to include driving): 75% of patients were advised

Cycle 4 (Educate admin staff and update existing checklist): 100% of patients were advised

Cycle 5 Questionnaire given to patients and aim to co-produce driving advice leaflet following focus group

Conclusion: It is the legal duty of ADHD patients to notify DVANI of diagnosis however it is the responsibility of

medical professionals to advise patients to do so. 100% of patients were informed by medical staff to notify DVANI by education and updating the physical health ADHD checklist.

Angiosarcoma of the Breast and Chest Wall - A 15 Year Regional Review of Survival Outcomes

Dr Yi Hang Tan

Introduction: Angiosarcoma of the breast and anterior chest wall are extremely rare malignant endothelial cell neoplasms that develop either spontaneously or secondary to radiotherapy treatments. To date lack of published data is limiting best practice guidelines.

Aims: To describe incidence, management and outcome of breast angiosarcomas within Northern Ireland as part of the national Breast Angiosarcoma Surveillance Study (BRASS).

Methods: An electronic chart review of Northern Ireland patients with histologically confirmed breast angiosarcomas between 01/01/2000 and 31/12/2015.

Results: Nine cases (all female) were identified with mean age of 57 at diagnosis. Primary angiosarcomas occurred only with younger patients. 77.8% were secondary angiosarcomas (mean time ~ six years from receiving radiotherapy to diagnosis). None was discussed by the sarcoma multidisciplinary team (MDT). Seven of the nine patients received surgery (five with curative intent). Chemotherapy was offered to those with non-resectable disease and adjuvant radiotherapy followed inadequate margin of resection. Local recurrence was high with poor survival (shortest three months). Patients with > five year survival had no local recurrence.

Discussion: Owing to small sample size, a collaborative approach is required to produce valuable data that shapes future studies and practice guidelines. These cases should all be discussed at sarcoma MDT meeting.

Improving empirical antibiotic prescription in a low resource setting.

Dr Matthew Todd

Introduction: As volunteer doctors in Kiwoko Hospital Uganda we demonstrated a lack of uniformity in antibiotic prescription amongst healthcare professionals for the same diagnoses through clinical audit. The WHO is very clear regarding prudent antibiotic prescription by healthcare professionals and its role in reducing the problem of antimicrobial resistance.

Aims: Improving patient safety by ensuring the most appropriate antibiotic is chosen for a given illness.

Methods: Based on Uganda Clinical Guidelines 2016 and medications available locally, an accessible antibiotic protocol was devised, printed and placed on four of the wards with education for medical staff.

The same exclusion criteria were used as the initial audit and same parameters were measured following introduction of the protocol. In total 228 cases were used.



Results and Discussion: An improvement was demonstrated in uniformity of antibiotic prescription with the 'correct' choice rising from 17% to 41% following introduction of protocol. The hospital management has introduced the protocol to a number of different clinical areas as a result of the QIP. Anti-microbial resistance is everyone's responsibility and this intervention resulted in improvement in suitable empirical choice of antibiotic in a low resource setting.

PIpA (Purposeful Inpatient Admission)

Dr Keira Walsh

Introduction: Challenge: Mental Health Bed Crisis, Bed Occupancy >110%, Reliance on out of Trust beds
Safety issues, Difficulties engaging carers, Cost

Aims: Decrease bed occupancy to 85%
Decrease length of stay by 30%
Increase service user/staff satisfaction

Methods: Solution: Purposeful Inpatient Admission (PIpA)
Based on the Toyota Production System Model
Used in healthcare in the Virginia Mason Medical Centre

Key features: Patient's experience central
Replaces batched decision making with continuous flow
Standardised processes for each step
Continuous monitoring of changes/outcomes
Formulation and purposeful treatment plan within 72 hours of admission
Patient's journey mapped out on a Visual Control Board
Daily report out instead of weekly ward round
Daily tasks board
Delays immediately identified and escalated

Results: 'Green' bed status (>5 available beds) for 24 consecutive days
85% Bed occupancy (Royal College of Psychiatrists' recommendation)
>30% reduction in length of stay
Reduction in violent incidents
No complaints during pilot
Increased staff satisfaction

Discussion: Conclusion/Next steps
Aims met (bed occupancy/length of stay/satisfaction)
Sustain improvements in bed occupancy and length of stay
Implementation to remaining general adult acute wards.

