ABSTRACTS

RACP15 – IMJ PUBLICATION

PREVALENCE AND PREDICTORS OF WHOLE BLOOD AND APHERESIS DONOR REACTIONS IN A TERTIARY CARE HOSPITAL

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Background and Aims: Although for most of the blood donors, procedure of blood donation is simple and without complications but sometimes adverse reactions may occur. In India, the increasing demand for blood components constantly challenges blood centres to maintain a safe and adequate blood supply. Donor safety is an essential prerequisite for an adequate and safe voluntary blood supply. Therefore to minimize the reactions, it is important to recognize the early symptoms and propensity of donor to react. Thus this study was conducted to find out the prevalence of adverse donor reactions and injuries during whole blood and apheresis donations & to study various factors affecting donor reactions.

Method: Hundred consecutive reactions were studied in whole blood and apheresis donors (voluntary and replacement), fit to donate, coming to the blood centre from January to April 2009.

Results: 100 adverse reactions were reported in 5109 donations (2%). 86 donors (1.8%) were for whole blood (88% males and 12% females). 14 donors (13%) were for plateletpheresis (86% male and 14% females). Hematoma was the most common adverse effect (20%). Out of 86 whole blood donor reactions, 78% were first time donors and 47% were below the age of 25 years. 6% reactions were grade III VVR in the form of muscle twitching and loss of consciousness, 87% and 7% were grade I and grade II VVR respectively. About 12% of reactions were reported in donors having inadequate sleep. Among plateletpheresis donor reactions, all were first time donors and almost 80%-90% donors felt citrate effects (perioral paraesthesia etc.). 86% of the reactions were grade IVVR, 7% were grade II and 7% grade III.

Conclusions: First time donation, young age and inadequate sleep were more susceptible to adverse reactions. No life threatening adverse reactions were reported.

IS OUR OVERZEALOUS INVESTIGATION OF PE USING CTPA WITHOUT APPLYING PRE-TEST PROBABILITY CAUSING MORE HARM THAN GOOD?

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Background and Aim: There has been increasing availability of CT pulmonary angiography (CTPA) for diagnosis of pulmonary embolism (PE) but this hasn’t been accompanied by a corresponding increase in detection rate of PE, suggesting poor selection of patients. This study investigates if CTPA is being overemployed without appropriately understanding the current concepts in the evaluation of suspected PE.

Methods: Retrospective collection of data on 344 patients with suspected PE who had CTPA performed between October 2013 and April 2014 at tertiary hospital. Data on demographics, clinical presentation, components of various scoring systems for PE along with simultaneous usage of other investigations, including D-dimer and lower extremity ultrasonography (USG), were collected and analyzed by reviewing medical records.

Results: CTPA had a low positive yield of 16.2% in our study. Of the risk assessment scores used in our study, only Modified wells score and Revised Geneva score showed statistical significance (p < 0.01) in differentiating high risk patients from those at low risk for PE while Pulmonary embolism Severity Index, PISA score and Charlotte rule failed to do so. Geneva score had higher positive predictive value but was less sensitive than Wells score. Pulmonary Embolism Rule Out Criteria (PERC), even when combined with Wells score to identify patients with low pre-test probability of PE failed to rule out PE in one thirds of the patients with all negative criteria in our study. Documentation of risk assessment tools in medical records was failed to rule out PE in one thirds of the patients with all negative criteria in our study. Documentation of risk assessment tools in medical records was failed to rule out PE in one thirds of the patients with all negative criteria in our study.

Conclusion: Rational use of risk assessment tools along with commonly agreed upon clinical logarithm can reduce unnecessary CTPA examinations and potential complications associated with radiation and contrast administration.

ACUTE ANTEROSEPTAL MYOCARDIAL INFARCTION AFTER NORMAL EXERCISE STRESS TEST

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Introduction: The exercise stress test is a common non-invasive myocardial test that is relatively safe and cheap. However, this test has been associated with rare but serious complications.

Case Report: A 48-year-old male with history of long-standing mild bronchial asthma was referred for an exercise stress test. His asthma was stable, and his only medications were an inhaled steroid and bronchodilator as required. On examination, he was morbidly obese and normotensive with normal cardiovascular exam. An electrocardiogram (ECG) showed normal sinus rhythm (Figure 1).

Figure 1 Initial ECG

The exercise stress test utilized the Bruce protocol. The patient did a total of 9 minutes of exercise, yielding 10.3 metabolic equivalents (METS). No ST changes were noted during the exercise or recovery periods (Figure 2), and he remained asymptomatic. The exercise stress test was reported as negative for myocardial ischemia. After 15 minutes had elapsed post exercise, the patient experienced typical ischemic chest pain. He presented to the emergency department and ECG showed >2 mm ST elevation in V1-V3, consistent with LAD occlusion.

Figure 2 Summary of ST changes during exercise stress test

Thrombolytic therapy was attempted but failed. The patient was transferred via air ambulance to a coronary care unit in a tertiary hospital for emergency coronary angioplasty. The coronary angiogram (Figure 4) demonstrated proximal LAD thrombotic occlusion and severe middle and distal lesions as well. There were also moderate to severe stenosis (70%) in distal RCA lesions. Patient underwent rescue PCI to the proximal and distal LAD following aspiration and predilation with a DES.
Background and Aims: NSW, Australia the efficacy of VBS for the prevention of PEROS. The budesonide slurry (VBS) may have a role in PEROS prevention due to suppression of the post CER inflammatory process. Our aim was to evaluate the efficacy of VBS for the prevention of PEROS.

Methods: Data were collected of patients referred for CER of neoplastic BO. After January 2012 patients routinely received VBS (four 0.5 mg/2 mL budesonide respules mixed with sucralose) twice daily for 6 weeks following each stage of the CER schedule. All patients received high dose PPI therapy for the duration of CER and the following 3 months. Patients had no other intervention to prevent PEROS. A validated dysphagia score was used (0 = no dysphagia to 4 = aphagia). Endoscopic dilatation was performed for dysphagia. The primary endpoint was need for dilatation.

Results: Between Jan 2008 and Jun 2014, 100 out of 111 eligible patients completed CER. The VBS group (n = 25) and non-VBS group (n = 75) had similar patient, disease and procedural characteristics. Need for dilatation was 16% vs. 38.4% (p = 0.04) and median number of dilatations was 1 vs. 2 (p = 0.08) in the VBS and non-VBS group, respectively. Median dysphagia score during CER was 0 and 1, respectively (p = 0.02). No VBS related adverse events were noted.

Conclusion: VBS appears promising in decreasing incidence of PEROS and need for dilatation after CER for neoplastic BO.

CONFRONTING THE BARRIERS OF MEDICARE: THE PAINFUL DEMISE OF A MICROCEPHALIC FROM TONGA

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Background: Only Australians are entitled to Medicare and desperation of foreign parents can be heart-rending. A 4-month girl with severe microcephaly was brought in hope from Tonga, incurring much stress for carers and a great debt in her demise.

Results: The infant was brought to Campbelltown Hospital (CTN) in May 2011 in respiratory distress needing intubation and transfer to a children’s hospital for intensive care. She was severely microcephalic and seizing, and had aspirated with gastroesophageal reflux. Investigations were listed but curtailed because of foreign nationality. Awkwardness over financial matters was compounded by parental youth and poor English. The infant was discharged, but represented to CTN in August with respiratory failure requiring intubation and referral for intensive care. Gastrostomy, fundoplication and home CPAP or BIPAP were considered but no interventions were undertaken. The debt was mounting. She represented to CTN one month later, for more resuscitation and ambulance transfer for intensive care. The debt exceeded $600,000 and discussions were painful. The legitimate issue of palliative care was complicated by the debt, leaving the parents confused and unhappy. How much did money influence the doctors’ suggestions to limit therapy for their child? They returned home to reappear in CTN 2 months later when respiratory failure could not be reversed.

Conclusion: Understandably, parents seek Australian care when local support is limited but their desperation presents financial and emotional challenges. Limited numbers can be absorbed by financial cunning but the emotional cost can persist. Australian staff are not used to financial considerations regarding children, and apparent restriction can provoke lasting cultural resentment in parents.

SEPTIC ACUTE KIDNEY INJURY

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Background: Acute kidney injury (AKI) is a serious condition that affects many ICU patients. The most common causes of AKI in ICU are severe sepsis and septic shock. The mortality of AKI in septic critically ill patients remains high despite our increasing ability to support vital organs. This is partly due to our poor understanding of the pathogenesis of sepsis-induced renal dysfunction.

Method: Through multiple animal experiments involving invasive renal monitoring and magnetic resonance work in septic animals and humans, we have developed new concepts to explain the pathogenesis of septic AKI, which challenge previously held dogma.

Results: Throughout the past half century, septic AKI has essentially been considered secondary to tubular injury, which, in turn, has been considered
secondary to renal ischemia. However, the hallmark of septic AKI and AKI in general is the loss of glomerular filtration rate (GFR). It would seem logical, therefore, to focus on the glomerulus in trying to understand why such loss of GFR occurs. Our experimental observations suggest that, at least in the initial phases of septic AKI, profound changes occur which involve glomerular haemodynamics and lead to loss of GFR. These observations imply that changes in the vasconstrictor tone of both the afferent and efferent arterioles are an important component of the pathogenesis of septic. They also suggest that intra-renal shunting may be an important mechanism for the loss of GFR. The dissociation seen between blood flow and function in animal experiments was confirmed in human studies.

Conclusions: The ischemia paradigm for septic AKI is not sustained by our experiments over more than a decade. In fact global renal blood is increased in typical septic AKI. Despite such increase GFR decreases. This dissociation between global flow and function suggests specific change in glomerular and peri-glomerular haemodynamics.

'BREAKING BOUNDARIES AND MAKING CONNECTIONS’ – WELCOME TO REFUGEE HEALTH

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The significant and complex health needs of refugee and asylum seeker populations have been well documented; however access to services remains largely problematical to compromised health and wellbeing outcomes.

Monash Health has a long standing commitment to refugee health and the provision of holistic care for some of the communities most vulnerable and disadvantaged. This has culminated in Victoria’s largest and most progressive refugee health service: founded on the premise that health is much more than the absence of disease and committed to its purpose of helping people transition ‘from Surviving to Thriving.’

Monash Refugee Health & Wellbeing (MRH&KW) has evolved through a process of co-design and with an emphasis on sustainability and evaluation. In what was essentially unchartered territory; initiatives have attempted to improve health and wellbeing outcomes by addressing issues of access, equity and service integration. This process has challenged established boundaries and entrenched ways of being; resulting in new and innovative models of care of potential translational significance to universal services.

Embedded within the social model of health and a determinants frame-work, the service has an inclusive understanding of health which acknowledges meaningful connection and purpose are integral to recovery and to the maintenance of health and wellbeing. Significantly, this framework impacts change at both individual and population levels; ultimately supporting the transition of refugees and asylum seekers from survival mode, to becoming capable, contributing members of the community.

ROYAL AUSTRALASIAN COLLEGE OF PHYSICIANS POSITION STATEMENT: REFUGEE AND ASYLUM SEEKER HEALTH

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Background: The Royal Australasian College of Physicians (RACP) is responsible for training, educating and representing over 21,000 physicians, paediatricians and trainees in Australia and New Zealand. The RACP has identified refugee and asylum seeker health as a key policy priority.

Description: Australian and New Zealand populations include many people of refugee-background, with more than 270,000 humanitarian entrants to Australia in the last 20 years and over 40,000 refugees settled in New Zealand since the 1970’s. Currently in Australia there are also nearly 25,000 asylum seekers on bridging visas, and over 9000 people in held and community detention, including people on Manus Island and Nauru.

This policy statement provides a summary of the current demographics and policy environment, and an analysis of the Australian refugee health literature. The statement provides the RACP position on four key areas: health assessments, access to healthcare, supporting long-term health in the community, and asylum seekers in held detention.

Findings: The RACP acknowledges the contribution of refugee-background communities to Australia and New Zealand. The RACP supports equity of access to healthcare for people of refugee-background and asylum seekers, and suggests targeted strategies will be required for this to occur. The RACP does not support held detention for asylum seekers, and considers that held detention carries an unacceptable risk to physical and mental health across the lifespan. The RACP supports independent, transparent oversight of health service provision for asylum seekers, and supports all doctors and health professionals in their duty of care to patients, including the need to maintain professional standards, and to speak out to support best practice and ethical care.

Conclusions: The RACP supports the right to health for all people, including refugees and asylum seekers.

THE EXPANDING ROLE OF PALLIATIVE CARE PRINCIPLES ACROSS MEDICAL DISCIPLINES – RECENT DEVELOPMENTS AND FUTURE TRENDS

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This lecture will examine the expanding role of the principles of Palliative Care across many medical disciplines beyond its historical role with oncol-ogy patients.

The presentation will examine the barriers to this expansion, its challenges, the needs of specific patient groups, the benefits that flow from this involve-ment and the universal role of these principles in symptom management, psychosocial support and care of the dying.

RISK FACTORS FOR URINARY CATHETER ASSOCIATED BLOODSTREAM INFECTION

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Background and Aims: Urinary catheter associated bloodstream infection (UCABSI) causes significant morbidity, mortality and healthcare costs. We aimed to define the risk factors for UCABSI.

Method: A case-control study was conducted at two Australian tertiary hospitals. Patients with urinary source bloodstream infection associated with an indwelling urinary catheter (IDC) were compared to controls with an IDC who did not develop urinary source bloodstream infection.

Results: There were 491 controls and 67 cases included in the analysis. Independent statistically significant risk factors for the development of UCABSI included insertion of the catheter in the operating theatre, chronic kidney disease, age-adjusted Charlson comorbidity index, acute urinary measurements as reason for IDC insertion and dementia. IDCs were inserted for valid reasons in nearly all patients, however an appropriate indication at 48 hrs post-insertion was found in only 44% of patients. Initial empiric antibiotics were deemed inappropriate in 23 patients (34%).

Conclusions: To our knowledge, this is the first study to look specifically at the risk factors for bloodstream infection in urinary catheterised patients. Several risk factors were identified. IDC management and empiric man-agement of UCABSI could be improved and is likely to result in a decreased incidence of infection and its complications.

PATIENT FLOW INTO A REGIONAL MEDICAL UNIT

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Background: Effective management of admissions relies on timely & accu-rate assessment. Efficient use of resources should minimise resource whilst simultaneously facilitating patient flow. Whilst there have been numerous studies of access block from the ED perspective, data from inpatient units are lacking. We present data from an Australian regional hospital. Nine registrars (7 BPT, 2 APT) cover admissions and MET calls.
Abstracts

REMOTE SUPERVISION OF MEDICAL PRACTICE AND TRAINING VIA VIDEOCONFERENCE: PERSPECTIVES OF SUPERVISORS AND TRAINEES

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Background and Aim: Telemedicine has revolutionised the ability to provide care to patients, relieve professional isolation and provide guidance and supervision to junior doctors in rural areas. The prediction of an increased junior workforce in rural locations raises the issue of providing adequate supervision and safe care to patients. Very few studies have explored the perspectives of rural doctors using videoconferencing for supervision, training and educational support. Therefore this study aimed to evaluate the Townsville teleoncology supervision model for the training of junior doctors in rural areas. Specifically, the perspectives of junior and senior doctors were explored to identify recommendations and future implementation for use across various medical streams.

Method: A qualitative approach incorporating observation and semi-structured interviews was used to collect data across five regional and rural centres. Ten junior (Interns, Registrars) and ten senior doctors (Senior Medical Officers, Consultants) who participated in the Townsville teleoncology model of remote supervision via videoconference (TTMRS) were interviewed. Interviews were uploaded into NVivo 10 data management software and template analysis enabled themes to be tested and developed through consensus between researchers. Perspectives on the telemedicine experience, technology, engagement, professional support, costs, satisfaction and limitations were examined.

Results: Four major themes with several sub-themes emerged from the data; learning environment, beginning the learning relationship, stimulus for learning, and practicalities of remote supervision via videoconference. While some themes were consistent with the current literature, new themes such as increased professional edge, recognising non-verbal cues and physiological examination challenges, were identified.

Conclusions: Remote supervision via videoconference provides readily available guidance to trainees supporting their delivery of appropriate care to patients. However, resources required for up-skilling, training in the use of supervision via videoconference, administration issues, and nursing support, as well as physical barriers to examinations, must be addressed to enable more efficient implementation.

A CURIOUS CASE OF CHYLOUS ASCITES

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Profile: Mr RA 56-year-old male

Presentation: Recurrent admissions for management of chylous ascites of unclear aetiology since May 2014 complicating deteriorating hepatic function

Past Medical History:
1. Alcohol Abuse
   a. Child C Cirrhosis secondary to alcohol
   b. Acute Alcoholic Hepatitis December 2012
2. Complicated by hepatic encephalopathy and spontaneous bacterial peritonitis
3. Abstinence since 2013
4. Gout
5. Depression

Investigations:
- Malignancy screen negative (myeloma screen, cytology and flow cytometry from chylous fluid)
- Imaging: cirrhotic liver, no evidence of malignancy, no pancreatic lesions
- Infective screen: Quantiferon gold indeterminate, fluid acid fast bacilli smear and culture negative
- Hepatitis B, C and HIV serology negative
- Autoimmune and vasculitic screen negative
- No history of trauma or previous surgeries (previous ascitic tap non-chylous)
- Lymphoscintigraphy: no thoracic duct obstruction
- Microalbuminuric renal dysfunction with eGFR ~50
- Normal serum ACE, cortisol
- Liver biopsy consistent with severe fibrosis progressing to cirrhosis of alcoholic aetiology
- Invasive portal pressure measurements: elevated portal vein pressure but no gradient
- Echocardiograms: Elevated right heart pressure with septal bounce to left associated with thickened pericardium and a fixed dilated IVC – suggestive but not diagnostic of constrictive pericarditis
- NT Pro-BNP 900 (<125)
- Pericardectomy histology: fibrosis with haemosiderin deposition but no granuloma formation or other specific features
- Echocardiograms since pericardectomy: ongoing septal shift with persistent constrictive physiology

Management:
- Intolerant of diuretics due to hyponatraemia
- Low fat diet reduced fat content of ascites, but patient non-compliant
- Pericardectomy: uneventful procedure but no improvement in volume of ascites
- Liver transplantation work up
- Requiring fortnightly admissions for large volume paracentesis

Conclusion:
- Management of chylous ascites is largely dependent upon the underlying aetiology, which is unclear in this case
- Despite pericardectomy, symptoms and physiology persist
- Given the lack of portal pressure gradient, it is unclear to what extent cirrhosis is contributing to ascites, therefore liver transplantation may not be curative

APPROACHES TO MANAGEMENT OF REFUGEES FROM EBOLA AFFECTED AREAS

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Background and Aims: In 2014 the ongoing epidemic of Ebola virus disease (EVD) prompted the development of guidelines throughout the world. The Victorian department of health published guidelines for management of EVD which outlined specialist hospital management of
symptomatic arrivals from EVD areas but did not provide any information for migrant care providers or information for newly arrived asymptomatic refugees. Refugee clients often face a number of barriers to accessing appropriate health care including: low English proficiency, a lack of understanding of how to navigate the health care system and low health literacy (1). We aimed to develop a management plan to ensure that newly arrived humanitarian entrants from EVD affected areas were able to access health care appropriately. We also wanted to provide support and resources for care providers including case managers and settlement support workers and refugee health nurses. This was prompted by the new arrival of families from Guinea, Liberia and Sierra Leone.

Methods: A literature review was performed of the current available EVD guidelines worldwide. The refugee health fellow worked with the department of health, the refugee health network and cohealth a community health organisation to develop a modified response plan for management of asymptomatic new arrivals from EVD affected areas. The new plan included introducing thermometers and twice daily temperature recording for asymptomatic refugees; deferring all blood tests and immunisations until after the incubation period; exclusion of children from childcare and schools, and development of plain language and visual resources to assist in communication with patients and families.

Discussion and Conclusions: We discuss the development of this plan and some of the challenges in dissemination and implementation.

REFERENCE

REVISITING THE 2009 AUSTRALASIAN SOCIETY OF INFECTIOUS DISEASES GUIDELINES FOR DIAGNOSIS, MANAGEMENT AND PREVENTION OF INFECTIONS IN NEWLY ARRIVED REFUGEES – NOT ONLY INFECTIONS AND NOT ONLY REFUGEES

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Background and Aims: In 2009 the Australasian Society of Infectious Diseases (ASID) published guidelines for the diagnosis, management and prevention of infection in newly arrived refugees, primarily for people arriving from sub-Saharan Africa (1). Since 2009, most refugees have arrived from the Middle-East and Asia, asylum seeker numbers have increased significantly, and refugee health has evolved as a sub-specialty interest in the disciplines of adult medicine, public health, paediatrics, general practice (GP) and nursing. Therefore, an update of refugee health screening guidelines was needed.

Methods: Members from ASID, the Royal Australian College of GP Refugees’ Health Special Interest Group (RACGP-RHSIG) and the Refugee Health Network of Australia (RHEANA) formed a working group with expertise in infectious diseases, public health, internal medicine, paediatrics, general practice and refugee health nursing and determined priority conditions based on available Australian and international data and published consultations with refugee-background communities. Over twenty conditions based on available Australian and international data and publications consultations with refugee-background communities. Over twenty conditions were considered. Thus, the recommendations are based on expert opinion and published national and international guidelines. Some recommendations include: malaria screening for all refugees arriving from Democratic Republic of Congo (DRC) and Eritrea; tuberculin skin testing for refugees from Central and South America; and, sexually transmitted infections for refugees from Asia. The working group also revised the guidelines in light of updated biological data and expert opinion. The final version of the guidelines was reviewed by a secondary specialist author, and subsequently by the working group, prior to submission for peer-reviewed publication.

Results: The ASID guidelines have been extensively revised and updated. Key updates to discuss are the inclusion of asylum seekers; new recommendations on screening for tuberculosis, malaria, blood-borne viruses, sexually transmitted and cutaneous infections; and, new sections on nutrition, vitamin D, mental health, visiting friends and relatives and chronic diseases.

Conclusions: These guidelines represent a collaboration between ASID, the RACGP-RHSIG and RHEANA. They provide a comprehensive review of the diagnosis and management of infectious and other common conditions in newly arrived refugees and asylum seekers in Australia, relevant for specialists and GPs.

REFERENCE

OVERTURNING ANTIBIOTIC WASTAGE: FROM RESTRICTION TO REVOLUTION

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Background: Resistant bacteria development occurs within weeks in individuals given antibiotics (BMJ 2010;340:c2096). To prevent antimicrobial inefficacy, Royal Darwin Hospital has an antimicrobial restriction policy. Prospective audit of prescription appropriateness reviewed policy effectiveness.

Methods: During June–October 2014, 619 prescriptions (244 on Rapid Assessment Planning Unit (RAPU), 375 on other hospital wards) were audited. All patients on antibiotics on a given ward on audit days were included. ED/ICU patients were excluded. Appropriateness was graded by National Antimicrobial Prescribing Survey criteria: grade 1 (optimal by Territory-specific or national Therapeutic Guidelines), 2 (suboptimal), 3 (overuse/overlapping spectra), 4 (inadequate), 5 (not assessable). Grading done by a registrar external to the prescribing teams was standardised by a reviewing antimicrobial stewardship (AMS) pharmacist and AMS committee. Reasons for suboptimal usage were analysed.

Results: On RAPU, 130/244 (53%) prescriptions were not optimal, compared to 99/375 (26%) on other wards. For restricted antimicrobials, 66% were not optimal, compared to 43% for unrestricted antimicrobials (p < 0.01), most involved overprescription. Of prescriptions supposedly needing ID approval, 71% were given without approval sought/obtained, with 78% of these inappropriate; 45% of approved prescriptions were inappropriate. Overprescription occurred for skin/respiratory/urinary/intra-abdominal infections, and surgical prophylaxis. Staff-expressed reasons for overprescription included prescriber unwillingness to lose face or autonomy by consulting, unwillingness to confront prescribers, peer practice conformity, and fear of undertreatment outweighing fear of resistance from overtreatment. Unapproved prescriptions were not countered by pharmacists or nurses.

Conclusion: Despite the restriction policy, inappropriate prescription occurred more for restricted antimicrobials. Emotive sociopolitical factors were important contributors to entrenching this phenomenon. Once prescribers prescribed, restriction was not enforced, despite potential checkpoints from ID, pharmacists, and nurses. This study spurred a Northern Territory shift in strategy, towards regular feedback for prescribers, not just restriction. To harness emotive sociopolitical factors, public feedback via prescribing competitions between hospital units may be essential.

BEWARE THE POTENTIALLY MISDIAGNOSED REFUGEE: CLINICIAN EXPECTATIONS OF PSYCHOSOCIAL AND TRAVEL-RELATED ILLNESSES, AND LANGUAGE BARRIERS

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Background and Aim: To determine effects of refugee/asylum-seeker status on tertiary hospital physicians’ differential diagnoses, management, and outcomes, examining referrals from the key Australian Northern Territory detention centre.

Method: Prospective observational audit of Royal Darwin Hospital patients admitted between 22/09/2014–20/01/2015, including Wickham Point Detention asylum-seekers.

Results: Notably, few asylum-seekers were admitted (4/325 observed admissions).
Asylum-seeker status was associated with physician suspicion of psychogenic and travel-related illnesses, and additional consultation. Language barriers facilitated assumption about differential diagnoses, and understanding of treatment regimens, with associated recurrent admissions and non-adherence.

**Conclusion:** Refugees/asylum-seekers face risks of diagnostic bias and additional consultation, regarding clinician expectations of psychogenic or travel-related illnesses, and language barriers. Even though previous literature indicated refugees may experience psychological distress (Phillips C. Aus Fam Phys 2014;43:764–767), and actual cases of psychogenic illness amongst refugees can be associated with refugee trauma (Van Ommeren M. Psychiat Med 2001;31:1259–67), this still does not mean that asylum-seeker status specifically predicts psychogenic illness. Clinicians should beware biased expectations of psychogenic illnesses. Checking of accurate comprehension is recommended to avoid miscommunication in history-taking and treatment counseling.  

### A RARE COMPLICATION OF A COMMON DISEASE  
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**Case History:** A 52-year-old man with longstanding inadequately managed type 2 diabetes mellitus presented with a painful left thigh swelling. There was no preceding trauma and no fever. He had associated systemic hypertension, COPD with cor-pulmonale, dyslipidaemia and his diabetes complications included nephropathy, retinopathy, peripheral neuropathy and ischaemic heart disease. Examination revealed a tender mass in the left anterior thigh with left inguinal lymphadenopathy. He had features of decompensated cor pulmonale. Blood tests showed chronic renal impairment, elevated hepatic enzymes, inflammatory markers, and creatinine kinase. Autoimmune screen was negative. Local aspirate did not grow any organisms. Ultrasound excluded deep vein thrombosis or abscess. MRI showed extensive inflammatory myositis involving the anterior and abductor compartments of the thigh. Gadolinium enhanced scan was not done due to co-existing renal failure. The right thigh was affected similarly during admission. Statin induced myositis could not be excluded initially. 

**THE ASSOCIATION BETWEEN SHIFT WORK AND UNHEALTHY WEIGHT IN UNDERGROUND COAL MINERS IN NEW SOUTH WALES: A CROSS-SECTIONAL STUDY**  
**Coelho L**  
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**Background:** Shift work has been linked to obesity. In Australia, the mining industry has the highest proportion of men who usually work shift work. Anecdotally, many miners attribute their unhealthy weight to shift work.  

**Objectives:** Determine the prevalence of unhealthy weight (overweight and obesity) in a cohort of male underground coal miners and examine the association between BMI and shift work in this group.  

**Methodology:** This cross-sectional study evaluated 197 male underground coal miners (102 shift workers and 95 nonshift workers) who underwent an occupational medical assessment in 2011 for one mining company in regional NSW. Measurement outcomes included age, exercise status, shift work and BMI. Data were analysed using SAS version 9.3 software.  

**Results:** The overall prevalence of overweight and obesity was 84.3% (N = 166). The mean BMI amongst shift workers was 28.5 ± 3.95 and amongst non-shift workers was 28.2 ± 3.97. Univariate analyses showed no statistically significant association between BMI and shift work, with BMI as a categorical variable (p = 0.28) and as a continuous variable (p = 0.53). Examining the relationship between shift work and BMI, adjusting for exercise and age, revealed no significant association between BMI and shift work (p = 0.85) or BMI and exercise (p = 0.09) but a significant positive association between age and BMI was demonstrated (p = 0.02).  

**Conclusion:** No association between BMI and shift work was demonstrated in this cohort but the high prevalence of unhealthy weight warrants further study.

**CLINICAL LEADERSHIP – OR HOW TO MAKE A DIFFERENCE IN YOUR WORKPLACE**  
**Dalton S, Phelps G**  

Health care systems in many countries faces major challenges – from spiralling costs to ongoing concerns about safety and quality, and critically, a need for the healthcare system to provide real value to the community, the ultimate owners of the system. These issues, combined with a need for all of us to focus much more on providing care systems which are built around the needs of our patients, presents major challenges to us as individuals and to the organisations and systems that we work in. We are in a time of great
change in our healthcare systems. Change brings enormous challenges but also great opportunities. Implementing and sustaining successful change in healthcare requires clinicians to be armed with leadership skills and to actively engage in system wide reform.

This short workshop will provide and introduction to clinical leadership and will provide those who attend with a better understanding of the role of clinical leaders in both driving and managing change. The workshop will be presented by Sarah Dalton and Grant Phelps. Sarah is a Paediatrician who works part time for the NSW Clinical Excellence Commission (CEC). Sarah is the medical lead for the CEC’s clinical leadership program and has recently returned from a Fulbright scholarship in the US, where she looked at clinical leadership activities and programs. Grant is an adult physician and medical executive who amongst other leadership roles in the College and in the national safety and quality agenda, coordinates a Masters program in Clinical Leadership for Deakin University.

The workshop will also be an opportunity for you to provide your thoughts to the College about how we might better support trainees and fellows who wish to develop their leadership and management skills.

MEDICAL PROFESSIONALISM – WHOSE RESPONSIBILITY?

Dalton S, Phelps G

The community has expectations of us as medical professionals. This is increasingly reflected in the way regulators around the world are thinking about the performance of doctors. We have expectations of ourselves and each other as medical professionals. The College recognises this and it too has expectations of our professional behaviour. We embed this in training standards and in the Supporting Physician’s Performance and Professionalism (SPPP) framework.

Using case studies and an interactive format, attendees will further develop their own views of medical professionalism and be guided by experienced colleagues.

Sarah and Grant are experienced clinicians and healthcare leaders who have with others led the College’s recent work on medical professionalism, leading to the development of the SPPP framework, which can help us understand our professionalism by describing professional and unprofessional behaviours.

Sarah is a Pediatric Emergency Physician and leads the NSW Clinical Excellence Commission’s work on clinical leadership and a number of major safety programs, together with leading the College’s work on Clinical Practice Improvement skills development for trainees. Grant is a lapsed Gastroenterologist who provides leadership to the national healthcare agenda through various roles including with Tasmania’s healthcare system and as Associate Professor of Clinical Leadership with Deakin Uni, where he runs a Masters program in Clinical Leadership. Both Sarah and Grant have major leadership roles within the College.

AN UPDATE ON BLOOD TRANSFUSION

Daly J. 1, 2

1QML Pathology, Brisbane QLD, Australia, 2ANZSBT council

The transfusion of fresh blood components and plasma derived products is an important and often lifesaving aspect of modern healthcare. This session will provide an update on recent activity in the blood sector and potential issues for the near future including

- a review of the current and projected use of blood products in Australia,
- the governance of the blood sector,
- a presentation of some of the known and emerging risks associated with blood products,
- an overview of the ‘patient blood management’ guidelines and efforts to improve appropriate use and minimise wastage of fresh blood components.

ALTERATIONS TO EARLY WARNING SCORES – AN EDUCATIONAL INTERVENTION FOR THE RACP CPI PROGRAM

Davis T. 1, Nogajski B. 2

1Sydney Children’s Hospital, Sydney, NSW, Australia, 2Children’s Hospital Westmead, NSW, Australia

Background and Aims: Early warning scores aim to detect clinical deterioration of patients at an early stage. Between the Flags was introduced in New South Wales Health for this purpose. When patients are transferred from the Emergency Department to the ward, there are times when the calling criteria need to be altered to take into account the clinical context of the illness and physiological observations. It is recognised that amongst junior medical staff, there is some confusion about the process of making alterations to the Between the Flags calling criteria.

Method: As part of the RACP and the CEC’s CPI Program, a quality improvement project was implemented. This project undertook a baseline survey of junior medical staff, provided education and training (to junior medical staff on the existing guidelines for making alteration to the calling criteria), and conducted a post-implementation survey.

Results: A baseline survey demonstrated that 74% of junior medical staff had received no education on making alterations and only 5% knew how long their alterations would last once the patient was transferred to the ward. After implementation of training, we found that 63% of junior medical staff were aware of the guidelines on making alterations and 50% knew how long their alterations would last once the patient was transferred to the ward.

Conclusion: The lack of knowledge shown by junior doctors on how to make alterations to calling criteria has serious potential consequences for safe patient care following transfer. Educating junior medical staff improved short-term knowledge on the guidelines and process of making alterations.

REFERENCES


HOW TO SURVIVE AS A NEW CONSULTANT

Dee S. 1

1Hutt Valley District Health Board, New Zealand

The talk will cover the evidence for the needs of new fellows from the PIPE study (2014) and the RACP/IMSANZ document ‘How to survive as a new consultant’.

The topics covered will include preparing senior registrars for consultant practice and the practical and professional challenges of being a new consultant including:

- Building a team and setting expectations
- Support networks
- Professional issues
- Managing complaints
- How your organisation can help
- Learning to say ‘NO’

Most importantly achieving work-life balance and being successful as a new consultant.

PHYSICIAN CAREER AND TRANSITIONS: A CONSULTATION WITH FELLOWS AND TRAINEES

Doherty R. 1

1The Royal Australasian College of Physicians, Melbourne, VIC, Australia

Transitions in a professional career are common and inevitable. They are often complex, and involve a series of interactions between professional, personal, family, and social or cultural components of a physician’s life. Transitions can involve loss (such as with retirement from practice) or opportunity (as with appointment to a definitive career role), and on occasions both of these effects may coexist.
The March 2015 Colleges Alliance meeting (RACP, RACS, ANZCA, RANZCP and the Canadian Royal College) included a one day workshop on career transitions, and focussed on three themes relevant to specialist doctors:

- Entering practice: finishing training and becoming a consultant
- Mid-career transitions: changes within practice, including moving in and out of managerial positions, sabbaticals, and moves between employers or locations
- Leaving practice to retirement and the concept of a clinician’s ethical duty to retire

This session will provide a report from the Colleges Alliance workshop and build on the discussions begun there. It is intended to provide an opportunity for this College to learn more from its Fellows about the impact of career transitions and how these can be negotiated successfully. Attendees at this session will have the opportunity to learn more about the outcomes from the March meeting and more importantly, to add to the discussion in an interactive forum.

These discussions will then be incorporated into a discussion paper on the issue to be drafted over coming months.

CORTICOSTEROID INJECTION INTO THE OSTEOARTHRITIC KNEE: DRUG SELECTION, DOSE, AND INJECTION FREQUENCY
Douglas R1
1SportsmedSA, Stepney, Adelaide, SA, Australia

Background and Aims: Although some disagreement exists amongst practitioners as to the efficacy of corticosteroid injection into the osteoarthritic knee, this procedure remains the most common reason to perform knee joint injection. There is disagreement too over the most efficacious corticosteroid for the procedure; the dose required at injection; injection frequency; and total quantity of corticosteroid that can be injected into the knee. This poster examines the controversies surrounding the efficacy of corticosteroid injection into the osteoarthritic knee, and attempts to provide guidance as to appropriate corticosteroid selection, dose, and treatment interval.

Method: Searches were made of electronic databases, and relevant papers were identified and hand-searched.

Results and Conclusion: Although numerous investigations have been conducted in an attempt to identify the optimal corticosteroid agent, and its optimal dosing regimen for the intra-articular treatment of osteoarthritis, a consensus has not been established. The current recommendations for dosing interval appear to have arisen as a consequence of a misinterpretation of previously published works. The Author recommends that practitioners refine and individually tailor their selection of agent and dosing regimen to patient needs and clinical response.

STARTING THE CONVERSATION: SEEKING CONSENT FOR RESEARCH WITH INDIGENOUS POPULATIONS
Fitzpatrick E1,2, Martinuik A1,4, D'Antoine H, Oscar J5, Carter M6, Elliot E1,2
1Discipline of Paediatrics and Child Health, Sydney Medical School, University of Sydney, Sydney, NSW, Australia, 2The Sydney Children’s Hospital Network, Sydney, NSW, Australia, 3Sydney Medical School, University of Sydney, Sydney, NSW, Australia, 4The George Institute for Global Health, Sydney, NSW, Australia, 5Menzies School of Health Research, Darwin, NT, Australia, 6Marninwarntiku Women’s Resource Centre, Fitzroy Crossing, WA, Australia, 7Nindilingarri Cultural Health Services, Fitzroy Crossing, WA, Australia

Introduction: Methods of obtaining consent for research from Indigenous communities are poorly documented. A search in medical literature, Indigenous resources, and ethics guidelines revealed only one study formally evaluating consent for Indigenous research. Other research projects use interpreters, voice recording, videos, flipcharts and ‘plain language’ forms to seek consent but fail to assess participant understanding of the process.

Methods: In response, The Picture Talk Project is conducted in the Fitzroy Valley, WA. Invited by and working in partnership with local Aboriginal leaders and Non-Aboriginal researchers, The Project interviews Aboriginal leaders about community engagement and consent and includes focus groups with Aboriginal community members about the individual consent process. These are analysed using NVivo10 software, and validated by local leaders and interpreters. Themes from these discussions and rich quotes from Aboriginal leaders and Aboriginal community members are explored and discussed.

Results: Interviews (n = 20) conducted with Aboriginal leaders and focus groups (n = 6) where held with consent. The focus group sizes range from three to eleven Aboriginal community members. The interviews and focus groups were conducted in the setting most preferred by participants in the presence of a local Community Navigator, who was well known and respected by the community. Participants involved were from different age groups, both males and females and from the four major local language groups of the Fitzroy Valley Community. Themes such as reciprocity, respect, integrity, responsibility, equality, trust, cultural protocol and language where highlighted in these discussions. Rich quotes from individuals exemplify these themes.

Conclusion: There is much to be learned about how research with remote Aboriginal communities should be conducted in a way that is culturally respectful as well as meaningful to participants. It’s time to consult communities directly about research, how consent should be sought and to evaluate this.

PAEDIATRIC CT BRAIN IN A LARGE TEACHING HOSPITAL – AN ANALYSIS OF PRACTICE
Fleming C1, Too M1, Perchyonok Y1, Fitt GL2, Begbie MD2, Schelleman A3
1Department of Paediatrics, Austin Health, Heidelberg, Victoria, Australia, 2Department of Radiology, Austin Health, Heidelberg, Victoria, Australia, 3University of Melbourne, Melbourne, Victoria, Australia

Background and Aims: The link between childhood exposure to ionising radiation and an increased incidence of cancer has lead to greater scrutiny about the risks and benefits when considering a Computed Tomography (CT) scan for a child. In a Melbourne tertiary hospital predominantly treating adults, we aimed to ensure our paediatric CT brain requests, results and procedures were appropriate.

Method: A retrospective audit was undertaken of consecutive paediatric CT brain examinations between August 2011 and September 2013 in the Emergency Department. Clinical information was assessed for indication for scanning, appropriateness of request, documentation of risk discussion and clinical outcomes. Appropriateness was evaluated retrospectively with the Children’s Head Injury Algorithm for the Prediction of Important Clinical Events (CHALICE) and local Clinical Practice Guidelines. CT results, radiation doses and image quality were recorded.

Results: 116 scans were performed on 113 children aged 3 months to 17 years (median 14 years). The majority were performed for trauma (57%), headache (16%), and seizure (9%). CHALICE criteria were fulfilled for trauma in 79% cases. 24 (20%) of all scans were abnormal and five of these required neurosurgical intervention. The greatest proportion of abnormal scans was related to trauma (46%). Four of these patients had not fulfilled the CHALICE criteria for scanning.

Conclusions: We have demonstrated that a non-tertiary paediatric centre can undertake high quality CT imaging safely. With one fifth of scans abnormal, we felt our clinical decisions around CT imaging were appropriate. Improved outcomes will be delivered by encouraging clinicians to discuss and document risks when ordering CT imaging.
MISSING AMYLOIDOSIS? A MULTIDISCIPLINARY UPDATE ON THE IMPROVED DIAGNOSTICS, TREATMENTS AND SURVIVAL OF AMYLOIDOSIS PATIENTS IN 2015 AND BEYOND

Gibbs S1

1Eastern Health Monash University Clinical School, Melbourne, VIC, Australia

Key Words: Amyloidosis, monoclonal antibodies, cardiomyopathy, proteinuria, neuropathy

Amyloidosis was once thought of as a progressive and incurable disease. However, extraordinary advances in the understanding of this disorder and novel treatments such as monoclonal antibodies against amyloid fibrils, now provide realistic hope of cure.

Early detection is key. Amyloidosis presents with vague signs, such as fluid overload, so diagnosis is easily missed. Amyloidosis should be considered (and biopsies taken) in anyone with ‘NUTS’: peripheral and/or autonomic neuropathy; proteinuria on urine dipstick; raised troponin T or cardiac failure; soft tissue involvement, eg. macroglossia, bruising, carpal tunnel syndrome.

The gold standard for diagnosis remains Congo red staining of biopsies, with apple-green birefringence under polarized light. Suspected or confirmed cases were further analysed to see whether the PE was at proximal level or subsegmental level. The causes, demographic data, clinical presentations and management strategies of SSPE cases were further reviewed.

Results: 13(6.0%) out of 216 cases of PE were classified as SSPE. The average age was 66.8 (± 8.6) years with male to female ratio of 3:1. Shortness of breath was the commonest symptom (96%). Malignancy, immobilization and recent surgery were the common predictors. No patient had deep venous thrombosis of lower limbs on Doppler ultrasound. Only 4 out of 13 cases (30.7%) were treated with anticoagulant treatment for at least 3 months and the remaining received no such treatment. No bleeding complications or death was reported.

Conclusion: Our study shows that patients with SSPE, especially if they have no evidence of proximal DVT in lower limbs, may not need anticoagulant treatment. Withholding treatment in patients with SSPE may be considered a valid strategy with unlikely dire clinical outcomes.

REFERENCES

HEALTH BENEFITS OF WORK – THE FUTURE

Hande P

Tan Tock Seng Hospital, Singapore

Background: Pulmonary embolism (PE) is common and carries high mortality if left untreated. With the widespread use of computed tomographic pulmonary angiography (CTPA), subsegmental pulmonary embolism (SSPE) is being increasingly diagnosed. There is no consensus on its clinical significance and management. We undertook this study to look at its prevalence and clinical implications of treating or not treating it.

Method: All patients admitted to Tan Tock Seng Hospital from 2011 to 2014 with the diagnosis of PE were retrospectively reviewed. The diagnosis was suspected on a clinical scenario and confirmed with CTPA. All confirmed cases were further analysed to see whether the PE was at proximal level or subsegmental level. The causes, demographic data, clinical presentations and management strategies of SSPE cases were further reviewed.

Results: 13(6.0%) out of 216 cases of PE were classified as SSPE. The average age was 66.8 (± 8.6) years with male to female ratio of 3:1. Shortness of breath was the commonest symptom (96%). Malignancy, immobilization and recent surgery were the common predictors. No patient had deep venous thrombosis of lower limbs on Doppler ultrasound. Only 4 out of 13 cases (30.7%) were treated with anticoagulant treatment for at least 3 months and the remaining received no such treatment. No bleeding complications or death was reported.

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REFERENCES
health benefits of good work and the changes required in medical certifi-
cation on recovery from illness or injury, return to work and capacity for
work.

MASSIVE ASCITES SECONDARY TO SCHISTOSOMIASIS IN SUB-SAHARAN AFRICA

Hawson J1, Sreedharan S2, Morton D2

1Alfred Health, Melbourne, VIC, Australia, 2Royal Melbourne Hospital, Melbourne, VIC, Australia, 3Nkhoma Hospital, Malawi

Description of Case: We present a case of massive ascites encountered whilst volunteering at Nkhoma Hospital in Malawi. A 50-year-old female was admitted with a six-month history of gradually worsening abdominal distension. She denied use of traditional medicines, alcohol abuse or intravenous drug use, and was in a monogamous relationship.

On examination she had massive abdominal distension with extensive caput medusae. There was no evidence of jaundice, anaemia or hepatic encephalopathy. Hepatitis B surface antigen was negative. Full blood count, creatinine, liver function test, coagulation studies and hepatitis C serology were unavailable. She was HIV negative. Urine and stool samples were sent for microscopy, which revealed Schistosoma haematobium ova.

Schistosomiasis, or bilharzia, is caused by skin contact with contaminated freshwater. In sub-Saharan Africa, this is by either Schistosoma mansoni or S. haematobium species. A chronic inflammatory response to Schistosoma eggs results in periportal fibrosis and subsequent portal hypertension. Normal hepatocellular function is often preserved.

She was treated with 40 mg/kg of oral praziquantel over two doses. The management of her massive ascites posed a challenge, as albumin was not available in Malawi. We adopted the approach of multiple abdominal paracentesis with frequent blood pressure monitoring. Microscopy of the ascitic fluid showed no leukocytes or acid-fast bacilli. There was mild abdominal distension with shifting dullness following the third paracentesis. However, without ultrasound guidance, we decided that further paracentesis would increase complication risk with minimal added benefit. She was started on frusemide and spironolactone. The patient’s weight on discharge was 38 kg, indicating 36 L of fluid had been drained.

Areas of Interest:
1. Schistosomiasis is a common cause of portal hypertension in sub-Saharan Africa.
2. The massive volume of the ascites accounted for approximately half of our patient’s weight on admission.
3. This case highlighted the challenges of working in a resource poor setting.

A CLINICAL DIAGNOSIS OF SICKLE CELL DISEASE

Hawson J1, Sreedharan S2, Morton D2

1The Alfred Hospital, Melbourne, VIC, Australia, 2The Royal Melbourne Hospital, Melbourne, VIC, Australia, 3Nkhoma Hospital, Nkhoma, Malawi

We present a case that we encountered whilst volunteering at Nkhoma Hospital, Malawi. A 17-year-old female presented with generalised pain and anaemia, on a background of several similar presentations. She described the pains as being in her thighs, elbows and shoulders. Her haemoglobin was 80 g/L. As haemoglobin electrophoresis is unavailable in Malawi, her blood had been examined by microscopy, which showed no evidence of sickle cells. Microscopy was repeated, and was again unremarkable.

She was managed with analgesia and intravenous fluid, and improved over the next two days. On the third day she developed bilateral chest pain and became acutely short of breath. Oxygen saturation fell to 82% on room air. Repeat haemoglobin was 53 g/L, and she was transfused two units. A chest X-ray (CXR) was performed which was unremarkable. No further pulmonary imaging was available. An ECG showed sinus tachycardia. She was managed for suspected pulmonary embolus. We also treated her empirically with ceftriaxone and azithromycin.

After two days her condition remained unchanged. A CXR was repeated which showed wedge-shaped consolidation in the right lower zone. A repeat ECG showed new T-wave inversion in V1-V3, consistent with right ventricular overload. Over the next several days her symptoms improved with supportive therapy.

We believe the most likely diagnosis in this case is sickle cell disease or sickle cell variant. The clinical picture is consistent with sickle cell crisis followed by an acute chest syndrome. Sickle cell disease is a public health priority in Sub-Saharan Africa, with a sickle-cell trait prevalence of up to 40% in some regions. The mortality rate from sickle cell disease in Sub-Saharan Africa is almost fifteen times that seen in developed countries. We present this patient to promote discussion about the case and any other differentials to be considered.

A SEVERE HEADACHE AFTER VISITING THE CHIROPRACTOR

Hawson J1, MacIntyre J1, Taylor B2

1Royal Hobart Hospital, Hobart, TAS, Australia, 2Menzies Research Institute, Hobart, TAS, Australia

A 36-year-old female with a background of scoliosis presented to the Royal Hobart Hospital (RHH) with a severe headache after visiting her chiropractor.

The day prior she had awaken with pain in her neck and back that was associated with paraesthesias in both hands. She had suffered similar complaints before, and saw her regular chiropractor for manipulation. The following morning she woke with a severe diffuse headache. The headache was intense when sitting or standing but completely resolved when lying flat. It was associated with pulsatile tinnitus, nausea and vomiting. There was no relief from simple analgesics. A CT-angiogram of the head and neck was performed, which showed no evidence of vertebral artery dissection or cervical fracture.

The history was typical of a low CSF pressure headache secondary to a CSF leak. An MRI of the brain and spinal cord was performed to investigate for evidence of CSF leakage or changes consistent with low CSF pressure. This showed no evidence of subdural fluid, engorgement of the venous sinuses or sagging of the brain. The MRI of the spine showed no apparent CSF leak. Our patient was initially treated conservatively with no improvement in symptoms. After five days an epidural blood patch was performed for presumed MRI-negative spontaneous intracranial hypotension. Her symptoms resolved almost instantaneously after the procedure, and she was discharged home the same day.

Spontaneous intracranial hypotension is often precipitated by incidental or ‘trivial’ trauma, such as neck manipulation. The headache is profoundly postural and usually associated with nausea, vomiting and vertigo. The MRI is normal in 20% of cases, so clinical recognition is important. We hope to raise awareness of spontaneous intracranial hypotension and the dangers of chiropractic manipulation.

DRESSED TO KILL: AN UNUSUAL CAUSE OF COLLAPSE

Hawson J1, MacIntyre J1, Girao G1

1Royal Hobart Hospital, Hobart, TAS, Australia

A 53-year-old gentleman presented to the Royal Hobart Hospital (RHH) following an unwatched collapse. That morning he had woken feeling well, before developing a sudden onset of vertigo and falling whilst gardening. He had associated nausea, vomiting, right hand paraesthesia and diaphoresis. At scene his vital signs were within normal limits. On arrival he developed abdominal pain, diarrhoea, increasing confusion and bradycardia. CT brain, chest X-ray and lumbar puncture were unremarkable. A CT abdomen showed thickening of the bowel wall at the terminal ileum and cecum. He received empiric therapy for suspected meningococcal sepsis and was monitored in the intensive care unit. He improved considerably over the next 48 hours and was eventually discharged home with the diagnosis unclear.

One month later he collapsed in the garden again. He developed diaphoresis, blurred vision, abdominal pain and confusion. His GP performed a home visit and noted miosis, muscle fasciculations and bradycardia. He recognised this presentation as the cholinergic toxidrome. He administered atropine with immediate relief of symptoms. On arrival to hospital the patient became asystolic, requiring CPR. Atropine was administered with return of spontaneous circulation. Given the history and presentation, pralidoxime was given for suspected organophosphate poisoning. Toxicology revealed a serum cholinesterase level of 0.1 kU/L (4.3–10.6) and a red cell cholinesterase level of 3 U/g (38–66). On questioning the patient did not have any apparent organophosphate exposure, but noted he had been wearing the same jacket during both events. He had worn this jacket whilst spraying pesticides in the past.
Background and Aims: More patients start haemodialysis (HD) in Central Australia (CA) with a late referral to nephrology service (LR status) than other Australians (McDonald et al, ANZDATA Report 2012). It is unknown in CA if LR status is associated with more rapid chronic kidney disease (CKD) trajectory in the five years prior to starting HD.

Aim: to describe baseline characteristics, test frequency and results over five years prior to HD start (audit period); and explore relationships between LR status and other variables.

Method: Participants and audit period: adults who started HD in CA, with audit of test frequency and results for serum creatinine, albuminuria and glycaated Hb (sCR, ACR, HbA1c) over 5 years prior. eGFR was calculated using CKD-EPI equation. Statistical analysis was performed using STATA v13.0.

Results: The cohort comprised 49 incident HD clients. Characteristics at HD start as follows: 96% Indigenous, 65% female; median age 45 years; 82% residence remote from Alice Springs; 76% diabetes as primary kidney disease; 65% were never smokers; 63% defined LR-status. LR status only denoted younger age at HD start (median): 45 v 49 years (p = 0.04).

Audit entry: albuminuria was the most frequent finding (macro v micro v norm: 86, 7, 2%), corresponding to early KDIGO CKD staging (Stages 1, 2, 3a, 3b, 4, 5: 17%, 26%, 15%, 20%, 7% and 7%). Frequency (median) of pathology ordering per client over audit period was: sCR, ACR, HbA1c: 22, 5, 8 respectively. Test frequency did not vary by LR-status (p > 0.05).

Conclusion: In 2012, 65% Central Australian clients started HD as late-referred to nephrology service. In 5 years previous, a similar frequency of albuminuria was observed regardless of LR status, including low frequency of ACR monitoring, despite albuminuria with preserved eGFR being the predominant CKD manifestation at audit entry. LR status did not inform CKD trajectory or major clinical differences, except younger age at HD start.

BEST PRACTICE OF REPORT WRITING

Home A1

1Independent Medical Services

There is very little or no instruction about report writing in the medical undergraduate program. There are also few resources for those who manage to progress to specialist practice.

This paper presents the requirements of the independent medical report and practical advice about reporting as an expert witness, including the use of best evidence-base, answering enquiries, reporting on surveillance and the use of terminology.

It will also address ethical issues arising from medical reporting.

CASE REPORT: HEMOPHAGOCYTIC LYMPHOHISTIOCYTOSIS DRIVEN BY EPSTEIN BARR VIRUS

Hong LE1, Nagiah S1, Lee HP2, Kuss B3

1Department of General Medicine, Flinders Medical Centre, SA, Australia, 2Department of Haematology, Flinders Medical Centre, SA, Australia

Objective: This case report aims to outline the clinical presentation of Hemophagocytic Lymphohistiocytosis (HLH) and to emphasise importance of early diagnosis and prompt initiation of treatment.

Background: Hemophagocytic Lymphohistiocytosis (HLH) is an aggressive and rare syndrome caused by pathologic immune activation. It is classified into primary HLH which is familial and secondary HLH which is acquired, in association with malignancy, infection and rheumatologic disorders.

Case Description: 21 year old female Caucasian presented with 3 weeks history of fever, chills, dyspnoea, generalised malaise and myalgia. Physical examination was unremarkable. Significant laboratory findings were pancytopenia, liver function test derangement, hyperferritinemia, and positive Epstein Barr Nucleic Acid Test (22,100,000 copies/mL). Bone marrow biopsy showed presence of EBV positive T cells and increased activated macrophages with hemophagocytosis without infiltrative cause. She was diagnosed with HLH, driven by EBV infection, and commenced on high dose steroid therapy. She developed hypertriglyceridemia later in the course of her illness. Subsequently, she was commenced on Etodiposide, Dexamethasone, Cyclosporine and weekly Rituximab as per the HLH-2004 protocol with no achievement of therapeutic response. Treatment with Alemtuzumab was attempted with no evidence of disease control. Patient succumbed to the illness 1 month post diagnosis and commencement of therapy.

Early diagnosis of HLH is challenging as it often presents as febrile illness with multisystem involvement. The diagnosis of HLH is established if a molecular diagnosis consistent with HLH is identified or if five out of eight clinical or laboratory criteria is met.

Conclusion: Hemophagocytic Lymphohistiocytosis has high mortality. Early recognition of this disease is challenging. Prompt initiation of treatment is crucial to achieve a favourable outcome.

REFERENCE


THE EFFECT OF A THREE YEAR EXERCISE INTERVENTION ON GLYCAEMIC CONTROL IN PATIENTS WITH TYPE 2 DIABETES

Hordern MJ1, Prins J2, Marwick T3, Coombes J4

1Western Health, Melbourne VIC, Australia, 2School of Human Movement Studies, The University of Queensland, Brisbane, QLD, Australia, 3School of Medicine, The University of Queensland, Brisbane, QLD, Australia, 4The Menzies Institute, Hobart, TAS, Australia

Background and Aims: Exercise is effective in the management of Type 2 Diabetes (T2DM). Unfortunately, its long-term utilisation is resource intensive and the benefits unclear. The aim of this study was to determine the effects of a three-year, home-based exercise intervention on glycaemic control in patients with T2DM.

Methods: 223 patients with T2DM were randomised to usual care (n = 112) or exercise intervention (n = 111) for three years. The intervention included one month of gym-based training followed by three years of home-based training. Glycaemic control (HbAIc), cardiovascular risk factors (cholesterol, blood pressure, BMI), exercise capacity (VO2max) and physical activity (MET-mins) were assessed annually. Data were analysed with general linear models for group by time effects and are expressed in absolute change from baseline for intervention vs. control groups ± standard deviation.

Results: There were significant group by time effects for HbAIc, over the 1st (-0.1 ± 0.9 vs. 0.3 ± 1.1% p = 0.02) and 2nd years (0.1 ± 1.1 vs. 0.4 ± 1.3%, p = 0.03) of the study, but not over the 3rd (0.1 ± 1.3 vs. 0.4 ± 1.3% p = 0.31). Similarly, no significant effect was seen for cholesterol (-0.4 ± 0.9 vs. -0.2 ± 0.9 mmol/L, p = 0.08) and VO2max (3.6 ± 6.4 vs. 2.6 ± 6.1 ml.kg.⁻¹.min⁻¹, p = 0.31) over 3 yrs. However, there were for systolic BP (-5.7 ± 15.3 mmHg vs. -0.1 ± 15.4 mmHg, p = 0.04) and BMI (0.0 ± 2.2 vs. 0.4 ± 2.1 kg.m⁻², p = 0.01). Significant group by time effects for VO2max were seen at 2 yrs (3.2 ± 5.5 vs. 1.1 ± 5.8 ml.kg.⁻¹.min⁻¹), the intervention group significantly maintained increases in physical activity levels (398.2 ± 1890.3, 292.5 ± 2051.5, 392.6 ± 2131.9MET.min⁻¹, for 1st, 2nd and 3rd years respectfully, p < 0.05).

Conclusion: The third year of the intervention was not effective in maintaining improvements in glycaemic control and cardiorespiratory fitness compared to the first two years, despite maintaining physical activity levels.
over the intervention period. However, the intervention was effective in improving some of the cardiovascular risk factors. This intervention model could be used to improve the health of patients with T2DM.

A COMPARISON OF WORKPLACE INJURIES REPORTED BY OCCUPATIONAL PHYSICIANS (OPs) AND GENERAL PRACTITIONERS (GPs) IN THE UNITED KINGDOM (UK)

Jabbour R1, Turner S1, Hussey L1, Page F1, Agius R1

1Centre for Occupational and Environmental Health (COEH), The University of Manchester, Manchester, England

Background: Reliable workplace injury data is important in the development of targeted prevention strategies. In the UK, the Health and Occupation Research (THOR) network collects data reported by medical practitioners.

Objectives: A comparison of workplace injury data collected from OPs and GPs reporting to THOR.

Methodology: THOR network collects medically certified workplace injury and ill-health data from a number of different medical professions. Data on workplace injuries, (demography, industry, nature of injury, kind of accident and site of injury) reported by OPs and GPs (2006–12) were analysed.

Results: OPs’ cases were reported as injuries less frequently (1037/8693 (12%)) than GPs’ (950/5945 (17%)). The mean age of injury was significantly older in cases reported by OPs than GPs (44 vs 41 years). Sprains and strains were the commonest injury reported to both schemes, (OPs 47%, GPs 59%). Upper limbs were the commonest site of injury (OPs 24%, GPs 29%). There was a notable difference in the frequency of OPs’ and GPs’ reporting of psychological injury cases (PTSD); these cases made up 21% of all OP cases, and just 3% of GP cases. Out of all cases reported, OPs’ reported cases most frequently as injuries in the public administration and defence industry (23%), while GPs in the mining and quarrying industry (26%).

Conclusion: Comparison of workplace injury data, reported by OPs and GPs, highlights differences between practitioners’ coverage. This provides a useful platform on which to assess potential unmet needs in occupational health service provision in the UK.

VERIFIED PATIENT DIAGNOSIS FOLLOWING TRANSIENT POTENTIAL ISCHAEMIC NEUROLOGICAL SYMPTOM (PINS) PRESENTATION THROUGH A REGIONAL EMERGENCY DEPARTMENT (ED) – PILOT OBSERVATIONS

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Background: Transient PINS need detailed assessment.1, Assessment may be compromised by lack of history, examination and use of imaging technologies.1,2

Aims: To define the scope, effectiveness and accuracy of such cases discharged from ED. Findings are expected to guide us to improve the quality of stroke service.

Methods: Discharges were audited retrospectively over a three months interval extracting demographics, risk factors and addressing documented assessments.

Results: 12982 attended BHS ED during Jan–March 2014. 310 (2.4%) classified as PINS. 19 (61.3%) discharged in total. 12 (5 (42%) C; Age: 38–96 yrs) discharged without neurology review. 9 (75%) referred for outpatient follow up. Three had no hospital follow up arranged. 8 (89%) given triage of 1–2 weeks on basis of ED assessment. 1 (11%) was lost to follow up. All Patients were seen in outpatients in 1–6 weeks (1/12.5%) within the triaged time. All patients had a Computed tomography scan of brain. Outpatient investigations organized by ED were; carotid ultrasound scan 4 (33%) and Echocardiogram 3 (25%). The prevalence of any abnormality in these investigations was zero. No patient had a holter study, Ambulatory blood pressure measurement or Magnetic resonance imaging scan. After review an alternative diagnosis was made in 5 (62.5%) (Migraine 3; Transient global amnesia 1; Demyelination 1). Diagnosis of Transient ischaemic attack was confirmed in 3 (37.5%).

Conclusion: In an open retrospective sample we found a high rate of referral/investigational burden for PINS. Review for all was urgent yet the diagnosis incorrect in the majority. Delays were inevitable but had little impact.

REFERENCES

PULKURLKPA – THE WESTERN DESERT KIDNEY HEALTH PROJECT STRATEGIES TO BUILD RESILIENCE AND COMBAT KIDNEY DISEASE AND TYPE 2 DIABETES

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Background: The Western Desert Kidney Health Project (WDKHP) is an action research project conducted in remote Western Australia. Early onset of diseases such as type 2 diabetes and kidney disease is common in Aboriginal communities across Australia. Diet during childhood, childhood exposure to stress and lack of resilience are important contributing factors. Community consultations in this project identified high levels of stress, resulting in poor motivation and lack of resilience in the lives of many Aboriginal people and communities. This was thought to be partly due to a lack of ‘Pulkurlkpa’ – a soul felt happiness or deep joy. Community arts can be a joyful, exciting and engaging method for health promotion, community development and the development of resilience.

Aims: The WDKHP aimed to develop and evaluate community education and community development strategies to reduce the prevalence of the risk factors for type 2 diabetes and kidney disease that would be engaging, enjoyable and empowering for the participants.

Methods: The project team presented health promotion strategies to the communities using a Community Arts for community development model. Phase one concentrated on teaching about the risk factors for kidney disease and diabetes, combining the ancient technique of Milbindi (sand drawing) with stop motion animation. Phase 2 developed problem solving skills through sculpture, music and dance and phase 3 used singing to give community members the skills and confidence to speak out and advocate for their communities.

Outcomes: More than 2500 people (58% of the population) were involved in the arts residencies as participants or audience. Overall 32% of the population had health assessments including 78% of the Aboriginal population.

The project was successful in engaging the communities, communicating the key health messages, supporting structural change, developing skills in arts, promoting resilience and as a source of enjoyment and pride for the participants.

www.westerndesertkidney.org.au

A SYSTEMATIC REVIEW TO ANALYSE THE OUTCOMES OF ACTIVE MEDICAL THERAPIES DELIVERED WITH TELEMEDICINE SUPPORT TO RURAL AND REMOTE POPULATIONS

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Background/Introduction: Stroke, cancer and kidney disease are areas where telemedicine has been used to supervise active treatment via videoconferencing in order to improve access and thus health outcomes. We reviewed studies involving telemedicine supervision to deliver active treatments such as thrombolysis, chemotherapy and renal dialysis to rural populations.

Methods: A systematic search was performed using the PRISMA guidelines (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) on the MEDLINE, CINAHL and INFORMIT databases.

Results/Discussion: A total of 521 articles were found, and an additional 42 articles were identified by searching the reference lists. A total of 14
The lifetime prevalence of lower back pain is estimated to be between 13-14%. Observational studies in telestroke showed favourable outcomes when comparing face-to-face and videoconferencing-assisted thrombolysis, with no significant differences between survival and intracerebral bleeds. Although tele-oncology has been routine for more than 20 years, there have been few formal studies. Home dialysis supervised through videoconferencing had similar patient outcomes compared to hospital dialysis.

Conclusion: Telemedicine supervision of active treatment for rural patients appears promising with all three fields reporting health outcomes similar to conventional practice when comparing to telemedicine models, but more rigorous studies of effectiveness, feasibility and safety are required.

HEALTH BENEFITS OF WORK – THE INDUSTRY PERSPECTIVE
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For some time, evidence has established the relationship between employment and positive health outcomes. We know that long term work absence, work disability and unemployment negatively impacts health yet we also know the evidence is not actively embraced across society. Recovering from illness or injury at work as a positive health option is not universally applied in employment practice or healthcare clinical decision making and is yet to materially influence the social agenda.

While there are few who disagree that work can provide significant health benefits, inimical financial and social conditions continue to delay or prevent universal participation and application in positive recovery at work practices. Investing the necessary thought, energy and innovation that might nurture catalysts for change across the world of work, is too often stifled by an environment that does not routinely look to the research to guide its employment and workplace participation practices.

The Australasian Faculty of Occupational and Environmental Medicine (AFOEM) of the Royal Australasian College of Physicians (RACP) has made its mission to positively influence public policy around work and health and to promote the message of the Health Benefits of Work (HBOW). In late 2014, the Australasian Health Benefits of Work Signatory Steering Group (SSG) was established across stakeholder groups to progress integration of the HBOW policy agenda as set out in the AFOEM RACP Consensus Statement. It is comprised 15 organisations from across health care, peak industry associations, unions, insurers, national employers and statutory authorities. The SSG is currently working on several initiatives aimed at advocating for continuous improvement in public policy around work and health and championing the integration of the HBOW policy agenda in the industry sector.

This presentation will provide some detail on initiatives underway which will enable the group to deliver on its agenda.

AN OBSERVATIONAL STUDY INVOLVING WORK-RELATED LOWER BACK INJURIES IN NEW SOUTH WALES
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Introduction: Lower back pain is a common condition in the community. The lifetime prevalence of lower back pain is estimated to be between 70–80%.

Objectives: This study aimed to do the following:

a) Develop a better understanding of the demographic and vocational profile of work related lower back injuries in New South Wales
b) Identify the industrial sectors with the highest proportion of work-related lower back injuries

Methods: Data provided by WorkCover NSW were the basis of an observational study on work-related lower back injuries that occurred between the 1st of January 2008 and 31st of December 2008. The data were used to establish prevalence rates. These were compared to classifications and definitions as specified by WorkCover NSW guidelines, the Type of Occurrence Classification System manual and the Australian and New Zealand Standard Industrial Classification manual. Workers younger than age 18 were excluded from the study.

Results: Males represented the majority of the 14,178 work-related lower back injury cases. The majority of injured claimants were employed in one of the following sectors: manufacturing, health and community services, property and business services, retail trade, transport and storage, and wholesale trade.

Conclusions: Work related lower back injuries are associated with a significant cost to society. This study suggests that similar industries, irrespective of employer size, had the higher proportion of work related lower back injuries. Ergonomic factors may be associated with work related lower back pain. Improving ergonomics in the workplace may be an approach to managing this issue.

KNOWLEDGE OF WARNING SIGNS AND LONG-TERM EFFECTS OF STROKE AMONG UNIVERSITY STUDENTS IN UNITED ARAB EMIRATES
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Aim: Incidence of stroke has increased due to high prevalence of risk factors in the population of United Arab Emirates (UAE). We aimed to assess the level of knowledge regarding the warning signs and long term effects of stroke among young adults of UAE.

Method: A cross-sectional questionnaire based survey (with closed ended statements) was conducted on 342 University students in UAE. Healthcare related students were excluded. Data was analyzed using SPSS version 21.

Results: Mean age of the participants was 20 ± 1.92 years with 58% females. Many students knew the definition of stroke (58.5%). Knowledge about Transient Ischemic Attack (TIA) and that ‘people who had TIA have a high risk of stroke’ was less (16.6%). Students identified sudden appearance of any of the following as a warning sign of stroke: ‘Dizziness or loss of balance’ (65.5%); ‘Numbness of one side of the face, arms, or legs’ (60.7%); ‘Trouble in speaking’ (51.1%); ‘Trouble walking’ (53%); ‘Severe headache with no known cause’ (57.7%); ‘Trouble seeing in one or both eyes’ (43.6%). Only 31.3% knew that clot dissolving medicines given within 3–4 hours can significantly reduce the effects of stroke and permanent disability.

Conclusion: Lack of knowledge about TIA may reduce the recognition of this strong predictor of stroke. Increasing awareness regarding warning signs and importance of seeking immediate medical help for stroke/TIA patients is warranted.

AN UNUSUAL CASE OF ACUTE DIARRHOEA: GASTRO-INTESTINAL AMYLOIDOSIS
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Case Description: Amyloidosis refers to the deposition of misfolded fibrillar protein in extra-cellular tissue. Common types include AA and AL amyloid. Gastro-intestinal (GI) involvement can occur, but is an unusual cause of acute diarrhoea.

A 41 year-old diabetic Aboriginal male, with end stage kidney disease, presented to his GP suffering an acute diarrhoea illness. A specialist opinion indicated he was complicated by 3 line related infections in 4 months.

He was empirically treated with intravenous (IV) antibiotics and the tunneled catheter was re-sited. Four days later, he developed intractable watery diarrhoea and diffuse abdominal pain associated with hypotension. Investigations showed rising inflammatory markers and down trending albumin. Several stool cultures were negative for C.difficile, ova, cysts, parasites or viruses. Blood cultures and strongylid serology were negative. CT abdomen showed diffuse mucosal enhancement of the small bowel.

He developed severe anaemia and 8 kg weight loss within a week.

Given recurrent ileal infections, he was screened for immunosuppressive disorders. Cytomegalovirus viral load was marginally elevated. There was no
Abstracts

improvement with a trial of IV ganciclovir. Gastroscopy showed severe duodenitis with gross edema and nodularity. Colonoscopy showed mild transverse colitis with mucosal nodularity. Biopsy specimens demonstrated extensive deposition of amyloid, staining positive with Congo red. CMV was not identified. Bone marrow biopsy was negative for AL amyloid. Patient was managed on a palliative basis.

Comments:
1) Did our patient actually have renal amyloid?
2) GI amyloidosis has a wide spectrum of presentations (diarrhoea, malabsorption) and maybe fatal
3) AA amyloid has no cure, AL amyloid may respond to chemotherapy

REFERENCES

INTERMITTENT AORTIC REGURGITATION POST VALVE REPLACEMENT SURGERY
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Case Description: A 48-year-old Aboriginal woman, with a history of rheumatic heart disease, for which she received mechanical Medtronic Hall aortic valve replacement (AVR), mitral valve replacement and tricuspid annuloplasty in 2012, presented with chest pain. Examination of her cardiovascular system initially revealed mechanical heart sounds followed by a loud diastolic murmur. Subsequent examination by a colleague revealed an ejection systolic murmur. She was poorly compliant with warfarin and her INR on presentation was 1.0 (target 2.5–3.5).

Echocardiogram showed intermittent severe aortic regurgitation with severely elevated gradients and velocities consistent with aortic stenosis (mean gradient 38 mmHg). Left ventricular function was moderately impaired. Mitral valve showed satisfactory function. Pulmonary artery systolic pressure (PASP) was elevated at 80 mmHg. Fluoroscopy of the valves confirmed intermittent aortic regurgitation (abnormal motion of prosthetic disc). This was most likely from thrombus formation around the valve given poor compliance with warfarin.

The patient was thrombolysed and her subsequent echocardiogram showed significant improvement in aortic regurgitation as well as stenosis (mean gradient 20 mmHg) with somewhat worse ventricular function but improved PASP at 47 mmHg. She made an uncomplicated recovery and was discharged on warfarin.

Intermittent prosthetic aortic valve regurgitation is unusual. It can present as non-specific symptoms or can be severe enough to cause ischemic chest pain from load perfusion mismatch or hemodynamic compromise and death from heart failure. It occurs secondary to either thrombus or pannus formation. While thrombus formation develops from inadequate anti-coagulation, pannus can form years after valve implantation. Thrombus tends to be less video dense, more mobile and larger in size. Treatment includes thrombolysis or alternately, re-do surgery for pannus formation.

REFERENCES

COMPARISON OF OUTCOMES OF WORKPLACE INJURIES IN DIFFERENT AGE GROUPS
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Background: People are living longer and more older workers are choosing to retire later. A perception exists that physical decline in older workers means they are more likely to sustain workplace injuries.

Aim: To examine if there is a relationship between age and work injury outcomes. The hypothesis is that older workers have worse outcomes.

Method: Workers’ compensation data was obtained from a health provider in Perth. All injuries occurred in WA. Data was collected over a six month period to make data analysis manageable. A sample size of 1219 patients was used to examine injuries among four age groups; 25–34 years, 35–44 years, 45–54 years and above 55 years.

Results: Younger workers had a higher frequency of injury claims (37.1% in the age group 25–34 years, 27.6% in 35–44 years, 22.8% in 35–44 years and 12.5% in workers above 55). A higher proportion of workers above 45 years required surgery for hand, shoulder or knee injuries. On average, although there were significant difference in the mean duration of claims between the age groups (p = 0.0263), these were only in workers 45–54 years (mean 91.4, standard deviation 100.6) compared to workers 25–34 years (mean 71.9, standard deviation 79.5) for some injuries.

Conclusion: Younger workers have a higher frequency of injury claims but older workers sustain more severe injuries. These differences were not only due to age but not all compensated musculoskeletal injury duration between older workers and younger workers in this population. However, outcomes data were subject to bias and must be interpreted cautiously.

A COMPARISON STUDY ON THE CONCEPTIONS OF PERSONHOOD IN AN ASIAN SETTING: THE GERIATRIC POPULATION VERSUS THE REST
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Background and Aims: Understanding personhood is key to the preservation of patient dignity at the end of life (Chochinov HM, 2002, Jama, 287, 2253–60). In Singapore’s public policy, the elderly (>65 years old) and the young (<65 years old) are considered distinct age groups. Within the cultural context they are often treated differently, in the belief that the elderly hold different views on personhood compared to the young. This study aims to compare the differences in conceptions of personhood between the young and the elderly.

Method: At a tertiary specialist cancer centre in Singapore, between 2013–14, 182 English-speaking patients with cancer were recruited by convenience sampling. Participants were aged between 17 to 90 years old (mean 57), with 124 young participants and 58 elderly. Male to female ratio of 59:65 and 1:1 among the young and the elderly respectively. Demographic information was collected, followed by participants’ responses to a two-part validated questionnaire adapted from Sarah Bishop Merrill’s list of key elements to define personhood, and an interview based on vignette questions.

Results: Results found differences between the young and the elderly group in their conceptions of personhood. The top 10 elements of personhood were the same across the two age groups, but in differing order: consciousness (no.1, elderly), being alive (no.1, young), relationships with family, self-determination, ability to think, ability to communicate, familial duties, ability to function, physical mobility (no.10, young), and independence in making decisions (no.10, elderly).

Conclusions: There were differences between the conception of personhood between the elderly and the young in an Asian setting. These findings imply that the current local culture of managing palliative care patients from different age groups in dissimilar ways may be the better way, to ensure the preservation of patients’ dignity, and that goals of care are congruent with the patients’ beliefs and values (Schwartz KD et al, 2012, Palliat Support Care, 10, 27–36).

A PAIN IN THE NECK: A CASE OF CERVICAL MYELOPATHY DUE TO CPPD DEPOSITION DISEASE IN THE AXIAL SPINE
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Background: Calcium pyrophosphate dihydrate (CPPD) deposition disease is a heterogeneous group of conditions unified by the presence of CPPD crystals within and surrounding joints. Clinical presentations range from asymptomatic disease to acute pseudogout or chronic pyrophosphate arthropathy. While the most commonly affected joint is the knee, the axial
spine can be involved infrequently. Axial CPPD deposition usually manifests as the Crowned Dens Syndrome, with periodontoid calcifications presenting as neck pain or stiffness. Rarely, axial CPPD can form a pseudotumour with resultant myelopathy. Both of these presentations can mimic atlanto-axial rheumatoid arthritis, and represent an important differential to this.

Aim: We report the case of a patient with progressive cervical myelopathy due to axial CPPD deposition disease, requiring surgical management.

Case Report: A 90-year-old female patient presented to the Emergency Department after a mechanical fall. Examination revealed an asymmetrical weakness of both upper and lower limbs. On further questioning she described a 3-year history of neck pain, with bilateral upper and lower limb weakness developing over the preceding 7 months. An MRI of her spine revealed severe spinal canal stenosis at the cervicomedullary junction due to a large partially calcified mass arising posteriorly from the atlantoaxial joint. Rheumatoid arthritis serology returned negative. She underwent a trans-nasal decompression of the lesion, with an uncomplicated post-operative course. Histopathology of the resected lesion confirmed weakly positively birefringent crystals, consistent with CPPD. She completed 6 weeks of rehabilitation with minimal neurological recovery, but of significance, no further deterioration of her symptoms. Colchicine was prescribed to prevent progression of her CPPD deposition disease.

Conclusion: CPPD deposition disease should be considered as a rare differential diagnosis for a pseudotumour causing myelopathy. Treatment involves surgical decompression, which may result in incomplete recovery of neurological symptoms if not undertaken early in the course of the disease.

AUSTRALIAN AND NEW ZEALAND CONTRIBUTIONS TO MEDICAL ADVANCES IN WW1

Likeman R1

1RANZCOG

It is generally recognized that the urgency of wartime has stimulated advances in military medicine and surgery, and that these have overflowed into civilian practice and enhanced the care of the sick and injured.

The contribution of doctors serving in the armed forces of Australia and New Zealand during WW1 to the enlargement of medical knowledge was far from insignificant, and is acknowledged in this presentation.

During the Dardanelles Campaign, which is commemorated this year, pathological research at the Third Australian General Hospital on the island of Lemnos identified the profile of gastroenterological diseases on the Gallipoli Peninsula, and led to the introduction of the TAB inoculation.

Public health measures were also paramount during the Palestine Campaign, and mobile laboratory facilities were established in the field for the early diagnosis of malaria. Furthermore in the unaccustomed environment of the desert new surgical techniques were developed in support of the highly mobile Desert Column.

On the Western Front resuscitation and blood transfusion in the forward areas improved the survival rate of casualties, while in England plastic and reconstructive surgery was pioneered by New Zealand and Australian surgeons.

The application of x-rays to the management of the casualties of war owes much to the initiative of an Australian radiologist who later became Premier of the State of Victoria.

Above all, the concept of rehabilitation after injury was introduced during WW1, and became the genesis of Australia’s unparalleled on-going care for its veterans, which continues to this day.

HIGHER T CELL NUMBERS IS A FAVOURABLE PROGNOSTIC FACTOR IN ACUTE MYELOID LEUKAEMIA WITH NORMAL CYTOGENETICS

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Background and Aim: Cyogenetically normal acute myeloid leukaemia (CN-AML) is heterogeneous and requires improved prognostication. Immune response against various malignancies correlates with survival. We aimed to determine whether higher T lymphocyte infiltration portends improved survival in CN-AML.

Methods: Patients diagnosed with CN-AML between 2006 and 2013 at our institution, treated with intensive chemotherapy and had suitable stored bone marrow trephines were included. Diagnostic trephines were immunohistochemically stained for pan-T cell marker, CD3 and cytotoxic T cell markers, CD8 and Granzyme B (GB). Positive cells were enumerated using Fiji© image analysis software from photomicrographs taken at 200x magnification and averaged over three representative areas. Primary outcome was overall survival (OS). Cox regression was used for univariate and multivariate analyses. Kaplan-Meier survival analyses were performed with patient categories compared using the log-rank test.

Results: 53 patients (median age 51 years) were analysed (median follow-up 25.9 months). Overall, 47 patients (89%) achieved remission (29 of whom subsequently relapsed), 21 (40%) were allografted and 20 (38%) had died. In multivariate analyses with clinically relevant factors, higher CD3 and CD8, but not GB predicted improved OS (CD3: HR 0.929 for death, 95% CI 0.870–0.992, p = 0.029; CD8: HR 0.920, 95% CI 0.869–0.973, p = 0.004). In survival analyses, patients with highest CD3% had better OS (Quartile 4 (>12.39%) vs Quartiles 1–3) (Figure 1), with no significant differences for CD8% or GB%. In molecular subgroups, there were no differences in OS for all markers in the poor prognostic FLT3-ITDpos (n = 18) and good prognostic NPM1mutated/FLT3-ITDneg (n = 9) subgroups. However, in the indeterminate-risk NPM1wild-type(wt)/FLT3-ITDneg subgroup (n = 17), CD3% > median (16.0%) and CD8% > median (13.8%) were associated with superior OS (Figure 2A-B), although GB% > median was not.

Conclusion: The study supports baseline immune response as a novel prognostic marker in CN-AML, with greatest potential use in further risk-stratifying the NPM1wt/FLT3-ITDneg subgroup.

WILL A CHANGE FROM 12- TO 8-HOUR SHIFTS REDUCE THE RATE OF INJURY IN PACKAGING OPERATORS AT A MANUFACTURING PLANT?

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Background: A pharmaceutical manufacturing Company changed from a two 12-hour shift regime to a three 8-hour shift regime in one packaging department.

Aim: This study aimed to examine changes to the incidence of injury, given the change to shift regime. It was hypothesised that changing work shifts from 12 hours to 8 hours would reduce the rate of injury in the observed packaging department. The findings have informed decision making regarding whether to implement 8-hour shifts for another packaging department in the Company.

Method: Injury records of full-time packaging operators were analysed five months before and after changes made to the shift regime (from 12- to 8-hours). The primary measures of interest were incidence of injury cases (operators who sustained at least one injury), sex, age, length of employment, injury type and time of injury. A cohort of full-time packaging operators who remained on 12-hour shifts in another packaging department served as a comparison group.
Results: The data revealed a statistically significant increase in the proportion of injury cases following the change from 12- to 8-hour shifts, 20.4% and 50%, respectively, χ² (1, n = 30) = 16.187, p < 0.001.

Conclusion: The finding in the current study showed that changing the shift regime from 12-hours to 8-hours increased the incidence of injury cases. This has important implications for packaging operators in another packaging department of the Company, because the study finding suggests that reducing shift duration to 8-hour shifts may have health and safety implications for operators by increasing the risk of workplace injury.

LIFE SHORTENING EFFECT OF OPIOIDS: TIME TO LAY THE MYTH TO REST
MacKintosh D1

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A.B. was dying. Unconscious and unresponsive her family administered seven doses of morphine overnight believing it would shorten her life. She died two days later. C.D., had an ovarian carcinoma. Admitted with abdominal pain she asked her treating team to give her a lethal injection; they refused. On day 7, her opioid dose was increased eightfold. By day 17 her oral morphine equivalent dose was nearly 12 times the dose on admission and 70 times the minimum dose on day 2. She requested a dose reduction on day 17 because she was too drowsy. On day 18 she was discharged to a private hospital where she died two weeks later. Both patients died from their disease.

Despite a lack of supportive evidence and in the face of considerable evidence to the contrary, the myth that opioids have a life shortening effect is widely held within medicine, bioethics, and the law as well as the community at large. The myth is frequently stated as established fact and has had wide ranging influence outside the field of pain management including end of life decision making, advance care planning, judicial decision making, and bioethical problem solving where it is frequently cited as an example of the principle of double effect. It is used in argument by promoters of euthanasia and assisted suicide and has influenced considerations by legislators of relevant legislation including the House of Lords in the UK.

Arguments about possible life shortening effects of opioids other than through acute toxicity date, at least, to the middle of the 19th century. That the myth persists into the age of evidence based medicine and continues to exert such influence is remarkable but concerning. This paper argues that it is time for physicians to acknowledge the evidence and lay the myth to rest.

SMALL INTESTINAL GLUCOSE EXPOSURE DETERMINES THE MAGNITUDE OF THE INCRETIN EFFECT IN HEALTH AND TYPE 2 DIABETES
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Background and Aim: The potential influence of gastric emptying on the ‘incretin effect’, mediated by glucose-dependent insulinotropic polypeptide (GIP) and glucagon-like peptide-1 (GLP-1), is unknown. The objectives of this study were to determine the effects of intraduodenal glucose infusions at 2 (ID2) and 4 (ID4) kcal/min (equating to two rates of gastric emptying within the physiological range) on the size of the incretin effect, gastrointestinal glucose disposal and plasma GIP, GLP-1 and glucagon, in health and type 2 diabetes.

Method: We studied 10 healthy men and 11 men with type 2 diabetes (diet-controlled or on metformin) on 4 separate study days. A nasoduodenal catheter was introduced to deliver intraduodenal glucose at 2 and 4 kcal/min for 120 min and these were matched with corresponding intravenous isoglycemic infusions.

Result: In both groups, GIP, GLP-1 and the magnitude of incretin effect were greater with ID4 than ID2, as was gastrointestinal glucose disposal. In both groups, plasma glucagon was suppressed by ID2, but not ID4. (See table 1 for detailed results).

Conclusion: Based on these data, we conclude that the rate of small intestinal glucose exposure (i.e. glucose load) is a major determinant of the comparative secretion of GIP and GLP-1, as well as the magnitude of both the incretin effect and gastrointestinal glucose disposal in health and type 2 diabetes.

INFECTION DISEASE (Q FEVER) OUTBREAK IN A WORKPLACE – ENVIRONMENTAL, OCCUPATIONAL AND PUBLIC HEALTH MEDICINE
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Q fever is a zoonosis caused by Coxiella burnetii, a unique bacterium that is widespread but infrequently associated with human illness or outbreaks. In Australia, the disease is particularly likely to affect meat workers, veterinarians, those working on farms, and those in contact with native animals such as kangaroos.

Since the implementation of the National Q Fever Management Program, Q fever notifications and compensation claims have reduced substantially.

We report on an outbreak of Q fever among office-based construction workers on a Central Queensland mine site.

This created interesting challenges at the interface of occupational, environmental and public health medicine.

BETTER SYSTEMS, BUT CLINICAL INERTIA STILL HAMPERS DIABETES CARE IN NORTH QUEENSLAND GIVING GREAT OPPORTUNITIES FOR CLINICAL LEADERSHIP
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Indigenous Australians have extremely high rates of diabetes and related complications. Many of these, especially CVD and renal disease, can be prevented with appropriate primary care level management. More than a decade ago we demonstrated that simple registers and recall systems, managed in the community, could reduce avoidable hospitalisations by 40%, and that this improved trajectory could be sustained over 4 years. Since then in the absence of effective obesity prevention in the community, weight gain, most marked in younger women, has seen type 2 diabetes incidence rates of 3% (more than 6 times that of the general population).

Unchecked, this adds around 250 new cases of diabetes every year to the small populations of Cape York and the Torres Strait. The good news is that the opportunities for prevention (of new cases, and also progression of disease in established diabetes) are plentiful. I will summarise some of this past and continuing work which shows that simple changes can give big returns, both in improved clinical profiles and keeping people out of hospital. In particular this population has a risk profile which requires attention to glycemia, extremely adverse lipid profiles and early onset of albuminuria. All of these are amenable to clinical management, however inertia by some clinicians remains a barrier.

THE YEAR IN THYROID TREATMENTS
McLeod D1

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This presentation will review the past year’s treatment advances and insights for thyroid diseases, concentrating on thyroid cancer, thyroid nodules, hypothyroidism, and Graves’ disease. Major clinical trials, studies of importance to a generalist audience, and updates to clinical practice guidelines will be discussed.

INCLUSION BODY MYOSITIS PRESENTING AS SEVERE DYSPHAGIA
Menon K1, Rotstein L1

1 Alfred Health, Melbourne, VIC, Australia

A 78-year-old man was admitted for evaluation and management of severe dysphagia (over 2 years) and aspiration pneumonia. He had regurgitation of both solids and liquids. There was no relevant family history of significance.

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An initial series of bloods revealed a normocytic anaemia with an elevated ESR. Other abnormal markers included a low iron level, transferrin and transferrin saturation with a normal ferritin, positive anti nuclear antibody (ANA) and extractable nuclear antigen (ENA) and a mildly elevated CA-19-9.

Chest X ray demonstrated changes consistent with aspiration pneumonia. CT neck, chest, abdomen and pelvis revealed calcific granulomas in the neck, chest and spleen and a diverticulum in the oesophagus.

A gastroscopy performed was normal. There was no evidence of dysplasia or malignancy on biopsy. Video fluoroscopy showed poor pharyngeal swallow and pooling in the airway at the cricopharynx. It was felt there was a bulbar dysfunction component to the dysphagia.

He was reviewed by the neurology team. The examination findings were indicative of an underlying myopathy – inclusion body myositis (IBM). Biopsy of the right quadriceps confirmed the diagnosis of IBM.

Treatment with intravenous immunoglobulin (IVIG) was initiated over 5 days. There was no improvement in his swallow function. He was discharged home following a percutaneous endoscopic gastrostomy (PEG) tube insertion.

Discussion: IBM is the most common inflammatory myopathy in patients over the age of 50. The clinical presentation of IBM can vary. Dysphagia is a frequent symptom occurring in 60–80% of patients. Muscle biopsy helps confirm the diagnosis. IBM is refractory to treatment and a better understanding of the underlying pathogenesis is needed to target treatment options available to IBM.

REFERENCE

SLEEP HEALTH AND SCIENCE
Naughton MT

1 Alfred Hospital and Monash University, Melbourne, Australia

Introduction: The science of sleep and breathing has taken leaps and bounds into new fields of medicine. This presentation will mainly cover the importance of sleep, novel management strategies for sleep apnoea and its impact upon cardiovascular sequelae.

Aims: To review recent publications in the sleep field as relevant to a general physician population.

Methods: Review of quality sleep, respiratory and general medicine scientific journals.

Results: 6 publications were identified which highlight
1. the role sleep has in switching on ‘glymphatics’ to clear CNS toxins generated during wakefulness
2. explain techniques to assist CPAP adherence
3. explain the effect of CPAP upon systemic blood pressure in patients with OSA and resistant hypertension
4. explain the effect of laparoscopic adjustable gastric banding induced weight loss on sleep apnoea severity and CPAP adherence: an Australian randomised controlled trial
5. describe common obstructive sleep apnoea phenotypes which may assist in deciding responsiveness to novel therapies
6. discuss the potential for hypoglycaemic nervous stimulation to treat obstructive sleep apnoea

Conclusions: Sleep and apnoea are important factors to consider for healthy cardiovascular function, cognition and quality of life. Options other than CPAP are emerging.

SCREENING FOR OBSTRUCTIVE SLEEP APNOEA IN SEAFAVERS PERFORMING SAFETY CRITICAL WORK
Oey V

1 Medibank Health Solutions, Sydney, NSW, Australia

Background: Obstructive sleep apnoea (OSA) is defined as repetitive upper airway closure, resulting in episodes of blood oxygen desaturation and sleep fragmentation. The main risk factor for its development is obesity. Little is known about seafarers’ health, particularly with regards to OSA prevalence and its impact on accident risk. While OSA is noted in medical standards internationally, it is not mentioned in the Australian standard. As there is the potential for negative outcomes for those onboard a vessel following an accident, it would be beneficial to determine the proportion of those at risk of having OSA. In this study, it is proposed that objective criteria be used to determine whether an individual should be further assessed for OSA.

Method: Seafarers who were assessed during a 12-month period and undertake deck watchkeeping duties were eligible for inclusion in the study. Of the 8619 seafarer medical booked by the Organisation, 3704 pertained to seafarers who undertook watchkeeping duties; of these, 3674 medicals were included in the study. Unavailable files and those with incomplete information were excluded from this study. All data was analysed using Microsoft Excel and relevant information extracted.

Results: In this study, 2.2% of the study population met the criteria for OSA screening and 0.2% declared a known history of OSA. This is much lower than prevalence estimates from the Wisconsin study where 24% of men had OSA and 4% had OSAS.

Conclusion: The number of people who met OSA screening criteria is below that expected when compared to previous population studies. The main proposed reason is non-disclosure by the examinee given the perceived impact on an individual’s fitness and employability. The value of lowering the threshold for screening and the implication of implementing OSA screening warrants further investigation.

ELEVEN YEARS OF SILICA HEALTH SURVEILLANCE ON CLAY BRICK MANUFACTURING WORKERS
Ozanne N

1 OccuMED, Perth, WA, Australia

Background: Silicosis is a chronic, untreatable occupational respiratory disease. It is preventable by avoiding exposure. International, Australian and WA opinions on the benefits of silica health surveillance are diverse.

Aim: To determine the medical benefits to workers, of a clay brick manufacturing company continuing 5-yearly silica health surveillance.

Method: De-identified work history, lung function and smoking data for workers who had undergone silica health surveillance in 2001 or 2006, and 2012, were analysed according to their work area / exposure to respirable silica.

Results: There were no confirmed cases of silica-related respiratory disease. Exposed workers had no statistically significant change in FEV1 or FVC, and controls had statistically significant decreases in FEV1 and FVC. Compared with normal age-related decrease in FEV1, controls had a similar rate of decrease in FEV1, and exposed workers had a lower average rate of decrease in FEV1. During the 2006–2012 period, 25% of smokers quit smoking; however in 2012, 29% of workers were currently smoking, which is higher than the national average of 20%.

Conclusion: The medical benefit to all workers of the clay brick manufacturing company continuing 5-yearly silica health surveillance, would appear to be small unless it is combined with continued quit smoking advice and campaigns. This is important because the clay brick manufacturing company’s workers are currently smoking at higher than the average male Australian rate. This highlights the importance and benefit of combining targeted health promotion as an integral part of health surveillance.

ANTIBIOTIC PRESCRIBING PRACTICES AND GUIDELINE COMPLIANCE IN THE MANAGEMENT OF COMMUNITY ACQUIRED PNEUMONIA
Paranavithana C,2, Crough T,2, Dulhunty J2, Yelland C1,2

1 Redcliffe Hospital, Metro North Hospital and Health Service, Brisbane, QLD, Australia, 2 School of Medicine, The University of Queensland, Brisbane, QLD, Australia

Background: Community acquired pneumonia (CAP) is a common and potentially serious condition, the outcome of which depends on early appropriate antibiotic treatment. There are several guidelines for antibiotic prescribing; the commonly used Therapeutic Guidelines (cTG) are accessible online to all clinicians in Queensland.
Aims: To determine compliance with eTG in antibiotic prescribing for patients admitted to hospital with CAP against baseline severity of pneumonia, the organism identified and allergies documented.

Methods: This was a cross sectional, retrospective, observational study from July 2012 to June 2013 involving 150 sequential adult patients admitted to the Medical Admissions Unit (MAU) of Redcliffe Hospital, via Emergency Department (ED), with a diagnosis of CAP.

Results: 48.7% of cohort were females. The median age was 72 years [IQR: 56–83; range 18–96]; 60.7% were aged over 65 years. The median length of hospital stay was 3 days [IQR: 1–4; range 1–59]. In-patient mortality rate was1.3%. Severity markers were documented in only 4.0% cases. The median time from arrival to first antibiotic dose was 2.3 hours [IQR: 1.4–4.0]; 75.9% were treated within 4 hours. The median time to switch from intravenous to oral antibiotics was 3 days [IQR: 1.3–4.0]. Compliance with eTG with regards to the choice of antibiotics was 23.5% for the ED and 45.4% for the MAU doctors. Compliance with dosage and duration were high with the correct choice of antibiotics.

Conclusion: Compliance with eTG and documentation of severity markers were low in both the ED and MAU, but early initiation of treatment and a short length of stay were achieved. This study identifies a gap in prescribing practices against national guidelines; education and encouragement of compliance with the eTG are recommended.

REFERENCE

A GUIDE TO SETTING UP A PRIVATE PRACTICE
Phelps G, Phelps L
This interactive session will give you a quick overview of the sort of issues you need to consider in starting a private practice. Grant and Lisa established a private practice which has undergone a number of transitions. Lisa now leads a consulting business to support doctors in practice and has established and supported many specialist practices (www.mysn.net.au). The information provided will be general in nature but will hopefully prompt you to consider what really matters in thinking about establishing a private practice.

COMPARISON OF HAND IMPAIRMENT ASSESSMENTS USING COMCARE AND AMA5
Provan J1
1Curtin University, Perth, WA, Australia

Background and Aim: Assessment of the degree of permanent impairment is a necessary precursor to determining the amount of lump-sum compensation payable in many Australian jurisdictions. Whereas most State and Territory-based schemes rate impairment using the American Medical Association Guides to the Evaluation of Permanent Impairment, the Comcare scheme for Commonwealth employees used a simplified approach. The aim of this study was to determine whether permanent impairment assessment using the Comcare system provided a net benefit or disadvantage to claimants with a hand injury when compared with the fifth edition of the American Medical Association Guides to the Evaluation of Permanent Impairment (AMA5).

Method: The study sample consisted of all hand impairment assessments undertaken by a single occupational physician over the course of 2013. For each of the 217 cases, the measurements recorded in the case notes were used by a single, non-blinded rater to derive impairment assessments under both systems.

Results: On average, impairment assessments obtained using the Comcare system were slightly higher than those obtained using AMA5 (mean difference 1.1%; 95% CI 0.8% – 1.3%). The magnitude of the difference seen was moderately correlated to the number of impairments evaluated (r = 0.569, p = 0.000), suggesting that the difference was at least partially due to the compounding of rounding effects.

Conclusion: Attempts to simplify something as complex as hand impairment assessment inevitably introduces compromises. Since any cost saving realised as a result of simplification will benefit the compensation system itself, a small increase in potential benefit to the claimant may be considered acceptable.

WHAT’S NEW IN DERMATOLOGY 2015
Rademaker M.
1Dermatology Department, Waikato Hospital, Hamilton and Waikato Clinical Campus, Auckland Medical School, New Zealand

Cutaneous Drug Reactions: We have expanded our models for drug reactions to include hapten/prohapten, reactive metabolite, danger signal, p-i concept, and innate immune models. The management of severe cutaneous adverse reactions (SCAR) is becoming clearer, with roles for systemic steroids, IVIG and ciclosporin. Causality remains difficult, but Naranjo scale and Information Component are helpful

Atopic Dermatitis: Recent insights into atopic dermatitis reveal abnormalities in terminal differentiation of the epidermis leading to a defective stratum corneum (fagagrum and ceramides), which allows enhanced allergen penetration and systemic IgE sensitization. Atopy is due to colonization/infection by pathogenic microbes (reduced innate immune response), e.g. Staphylococcus aureus and herpes simplex virus. Causes of this abnormal skin barrier are complex and driven by a combination of genetic, environmental, and immunologic factors. Recent studies suggest prevention of atopic dermatitis can be achieved through early interventions to protect the skin barrier.

Basal Cell Carcinoma: Aberrant hedgehog signalling pathway is involved in the pathogenesis and chemotherapy resistance of basal cell carcinoma. This has allowed the development of new, targeted therapies such as Vismodegib.

Melanoma: The identification of several key molecular pathways implicated in the pathogenesis of melanoma has led to the development of novel therapies. Both the Ras/Raf/MEK/ERK (MAPK) and the PI3K/AKT (AKT) signalling pathways are constitutively activated through multiple mechanisms.

Skin Biome: A vast diversity of microorganisms, including bacteria, fungi, viruses, and arthropods, colonize the human skin. A number of cutaneous diseases, including acne, atopic dermatitis, rosacea, and psoriasis, are associated with changes in the biome which may lead to new diagnostic, prognostic, and/or therapeutic tools.

Autoinflammatory Diseases: These are a relatively new category of disorders that are different from autoimmune diseases. They are defined as conditions caused by an exaggerated innate immune system response resulting in episodes of spontaneous inflammation affecting multiple organs.

MANAGING END OF LIFE SUPPORT
Roycroft T1
1Medicinal Cannabis Resource Centre, Vancouver, Canada

Terry Roycroft will be a part of the panel discussion on end of life care. Mr. Roycroft founded the Medicinal Cannabis Resource Centre (MCRCI) in 2010, which has seen over 3000 patients, many of which have been in the final stages of cancer and AIDS. MCRCI’s physicians offer consultations to qualified patients for guidance on medicinal cannabis and sign in support for their federal exemption. Mr. Roycroft has worked with physicians, researchers, and pharmacies on putting together a customized medicinal cannabis health care program customized towards individual patient needs. These plans have offered a better quality of life by offering temporary relief for the physical and psychological symptoms that patients may be experiencing throughout palliative care. A member of MCRCI’s advisory board, Dr. Donna Dryer has also been instrumental for end of life care in regards to grief counselling and has assisted MCRCI in its health care program for end of life support.

MEDICINAL CANNABIS: Q&A
Roycroft T1
1Medicinal Cannabis Resource Centre, Vancouver, Canada

Terry Roycroft will be answering questions on medicinal cannabis law and advocacy. Mr. Roycroft is an expert on medicinal cannabis law in Canada and founded the Medicinal Cannabis Resource Centre (MCRCI) in 2010. Mr. Roycroft has been a part of the medicinal cannabis industry since 2000, when Mr. Roycroft’s partner John Conroy won a Supreme Court ruling. This ruling resulted in Health Canada creating the Medicinal Cannabis
Access Regulations (MMAR), which offered federal exemption for medical marijuana for patients with the support of a licensed Medical Doctor. MCRCI has physicians on staff that offer support towards legal access and education on medicinal cannabis. Mr. Roycroft has worked with the top medicinal cannabis, lawyers, physicians and researchers in Canada and has offered industry consultations for businesses, producers, and patients.

AUDIOMETRIC TESTING OF COALMINERS IN NEW SOUTH WALES
Sabetghadam R
1Coal Services Health, Lithgow, NSW, Australia

Background: Compulsory audiometric testing has been introduced as a standard part of the hearing conservation programme for coal mine employees in NSW. The aim of the current study was to assess the effectiveness of this programme in order to reduce the prevalence of hearing loss is required.

Objectives: To identify the binaural hearing loss and NIHL percentage in the four levels of mild, moderate, severe and profound. To determine if the level of hearing loss is influenced by age, gender and the nature of the mine. To determine if the length of stay at the mine influences hearing loss.

Methods: A sample of one thousand coal miners tested in 2004 and one thousand coal miners tested in 2014 were randomly drawn from test results of 19, 240 people. The two groups were compared on binaural hearing loss and NIHL. The samples were stratified according to age, gender and mine type for further comparison. Three sample of 300 mine workers with two audiometric tests, three audiometric tests and four audiometric tests were drawn from the 2014 sample in order to determine if the length of employment in the mining industry is a factor.

Results: There were no discernible differences between the prevalence of hearing loss of the 2004 and the 2014 sample. Based on a t-test of the samples, the null hypothesis that there was no difference between the hearing loss of the two samples was accepted. Hearing loss was found to be influenced by age but not gender and the type of mine. Individuals with three tests tended to evidence a higher level of hearing loss than those with two or four tests.

Conclusion: The results call into question the effectiveness of the hearing conservation programme in reducing hearing loss in the coal mining sector since 2004. However it is too early to draw any definitive conclusion. Long term research is needed to determine the impact of the conservation programme.

NEW MODELS OF CARE TO MEET THE HEALTHCARE CHALLENGES OF REFUGEES
Schulz TR1,2, Chaves NC1,2, Gardiner J1,2, Biggs, BA1,2,3
1Royal Melbourne Hospital, Melbourne, Vic, Australia, 2Peter Doherty Institute, Melbourne, Vic, Australia, 3Department of Medicine, University of Melbourne, Vic, Australia

Background and Aim: Some 13700 refugees are resettled in Australia annually of which 80 are settled in Victoria. These refugees need health screening and half will require specialist referral. In response, the Victorian Health Department has funded a new Refugee Health Fellow programme. This year five fellows (two paediatric, an ID Physician, and two GP’s) have been appointed in order to provide care for this diverse group.

Methods: We describe an innovative model of care being implemented from the Royal Melbourne Hospital, one of the three tertiary hospitals delivering the fellow program, and profile key components of success, and the challenges faced.

Results: This program has commenced in 2009 and now four outreach clinics, a GP assessment clinic and a weekly telehealth clinic supplement the original tertiary hospital clinic. Clinical software has been developed and implemented at four hospitals to enhance clinical care and enable the collection of research data from multiple sites and at Royal Melbourne alone this has been used for over 2000 consultations. The tertiary hospital is now also linked to the community by software that allows GPs and Specialists to view a shared medical record. In 2014, 48 educational presentations were delivered to over 1000 participants and two papers were published in the peer reviewed literature.

Conclusion: Through collaboration across multiple sectors and with strong government funding support it has been possible to develop a comprehensive programme to support refugees after arrival in Victoria. A model of clinical care that is supported by clinical staff education and backed by a strong research portfolio illustrates how world class health care can be delivered to the most vulnerable in our community.

ADVANCE CARE PLANNING AND END OF LIFE CARE
Scott IA1, Rajakaruna N2, Miller L1,2, Raymond E1, Daly P3
1Princess Alexandra Hospital, Brisbane, QLD, Australia

Aims: To describe and assess early effects of a program commencing July 2014 aimed at systematising advance care plans (ACP’s) and end of life (EoL) care for patients admitted to a tertiary hospital general medicine service over 8 months with life expectancy less than 12 months.

Methods: A dedicated ACP facilitator was deployed to all participating consultant units. The Supportive and Palliative Care Indicator Tool (SPICT) and a ‘surprise’ question was used to screen for eligible patients. Following introductory interviews, willing participants underwent detailed ACP discussions. Pre-post audits of ACP discussions and completed ACPs were performed.

Results: More than 150 patients underwent ACP discussions and more than 75% completed an advance care plan prior to discharge. Several key themes emerged in engaging staff and patients in ACP discussions: 1) explaining rationale for, and processes of, ACP; 2) facilitating identification and engagement of eligible patients; 3) training of staff in ACP processes; 4) audit and feedback of ACP initiation and completion rates; 5) documenting ACPs and rendering them accessible by all clinicians caring for individual patients. The SPICT tool, while helpful, may not be superior to the ‘surprise’ question in identifying eligible patients. The ACP processes and associated documents have been modified and are now being implemented throughout all hospitals in Metro South HHS in combination with a public awareness campaign targeting general practice and residential aged care facilities.

Conclusions: Ensuring appropriate, patient-centred EoL care requires anticipatory ACPs that explicitly state patient care goals and preferences. Initial experience from a pilot program reveals important pre-requisites for successful facilitation of ACP.

EFFECTIVENESS OF SAFETY ENGINEERED MEDICAL DEVICES IN REDUCING SHARPS INJURIES IN SIR CHARLES GAIRDNER HOSPITAL, WESTERN AUSTRALIA
Shahzad F3, Lee E1, Martin R1, Mukhtar A2
1Occupational Safety & Health Department, Sir Charles Gairdner Hospital, Perth, WA, Australia, 2Centre for Population Health, Curtin University, Perth, WA, Australia

Background: Percutaneous injuries among healthcare workers (HCW) place them at risk of blood borne pathogen infection. The effect on the rate of percutaneous injuries from the introduction of safety engineered medical devices (SEMD) was assessed over a 5-year period. SEMD’s were introduced as part of a preventative program which included educational activities and procedural directives.

Objectives: To analyse the impact of SEMD on reducing the risk of sharps injuries in HCW.

Methodology: Sharps injury data were collected over a 5-year period (2008-2012) in a 607 bed tertiary care hospital. Percutaneous injuries reported were categorised into Hollow bore needles (HB); Medical sharps (MS) and Spit, splash and scratches (SSS). This study focuses on HB and MS injuries only. SEMD devices were fully introduced by the end of 2009 following a successful 12 month pilot study. Data on all sharps injuries reported by HCW were analysed and rates of blood & body substance exposure (BBSE) were compared pre and post intervention.

Results: There was an overall decrease in the needlestick-related injuries over the 5-year period. The rate of HB and MS injuries decreased by 40% from 16.7 incidents/100,000 patient bed days in 2007/08 to 9.9 in 2011/12 (p = 0.009, RR = 0.595, p < 0.001).

Discussion: The study had some limitations. These included bias on reporting by clinical staff, under reporting and the small sample size of HCW. Although post intervention reduction displays an appreciable
outcome, other hospital staff (except HCW) and SSS injuries were not compared. This study demonstrated that the implementation of SEMD was associated with a statistically significant decrease in the rate of BBSE injuries. However, they constitute only part of a strategy that includes education, training and reinforcement activities.

**RISING INCIDENCE OF HEPATITIS C RELATED HEPATOCELLULAR CARCINOMA AND IMPACT OF SURVEILLANCE**

Shaik R1, Gane E1

1NZ Liver Transplant Unit, Auckland City Hospital, New Zealand

**Background and Aims:** To determine rates of hepatocellular carcinoma (HCC) in patients with chronic hepatitis C (HCV) and impact of regular surveillance on treatment outcomes and overall survival.

**Methods:** A retrospective analysis of all HCC patients referred to NZLTU from January 1999 to June 2014.

**Results:** 1300 new HCCs were diagnosed, of whom 288 were HCV-related. Number of HCV-HCCs increased from 1/27 (3.7%) in 1999 to 54/173 (31.2%) in 2013. 128 (44.4%) HCV-related HCCs were detected by surveillance whilst remaining 160 (55.6%) were diagnosed incidentally or following onset of symptoms. Of 160 symptomatic or incidentally picked up cases, 51 were not known to have prior diagnosis of HCV, 76 were diagnosed with HCV and known to have cirrhosis but thought to be non-cirrhotic. Of the 53 non-cirrhotic patients, 35 never underwent staging with either biopsy or a fibroscan. At most recent staging of remaining patients 6/18 had severe fibrosis (F3 or LSM > 9.5 kPa), 8/18 had moderate fibrosis (F2 or LSM > 7.1 kPa) and 4/18 had mild fibrosis (F0/F1 or LSM < 7.1 kPa).

At time of detection, 103/126 (80.5%) screen-detected HCCs were suitable for curative interventions compared to 63/160 (39.3%) not detected through screening.

**Conclusions:** HCV has become the leading cause of HCC in New Zealand. Unfortunately, more than half HCCs are only diagnosed following onset of symptoms or incidentally, when advanced stage precludes curative intervention and reduces survival. More frequent staging with a liver biopsy or fibroscan is needed with regular surveillance in all HCV cirrhotic patients.

**INFECTIOUS DISEASES DURING THE FIRST WORLD WAR**

Shanks GD1,2

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The First World War was a key transition point towards scientific medicine, medical officers having incorporated the Pasteur paradigm shift of understanding micro-organisms as the cause of infectious diseases and therefore susceptible to rational control and treatment measures even in the pre-antibiotic era. Typhoid vaccination was successful in avoiding the disastrous epidemics of previous wars. Tetanus was probably decreased by giving millions of doses of horse anti-toxin to wounded soldiers. Quinine treated but could not control malaria; its use required mass compulsion. Tuberculosis was not a great military problem during the war although civilian populations experienced huge mortality increases. Sexually transmitted diseases remained a matter of aversive conditioning with invasive antisepsis in the absence of antibiotics. Pandemic influenza in 1918–19 killed more than the entire war, graphically demonstrating how much remained beyond the capability of our scientific great-grandfathers who fought infectious diseases during the Great War. The modern evolution of multi-drug resistant micro-organisms raises the possibility that our medical progress against infectious diseases may not continue in an uninterrupted trajectory.

**TB, MDRTB, XDRTB, TDRTB – HOW DO WE GET INTO THIS MESS AND WHAT CAN WE DO ABOUT IT?**

Simpson G1

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Tuberculosis has killed more human beings than any other disease. The search for effective treatment was one of the highest priorities of medical research for almost a century once the cause was discovered. By the 1980s we had treatment which would cure almost all cases within 6 months. Elimination of the disease was a realistic possibility. Instead we now have a situation where drug resistant TB is becoming ever more widespread, and there are forms of the disease which are essentially untreatable.

How did this happen and what are we doing about it?

**THE BURDEN OF DIABETES ON HOSPITAL SERVICES: IMPACT ON GENERAL INTERNAL MEDICAL INPATIENTS AT WESTERN HEALTH**

Somarajah G1, Karunajeewa H1,2, Hamblin PS1,2,3, Karahalios E1,2,3

1General Internal Medicine Unit, Western Health, Melbourne, VIC, Australia, 2Endocrinology and Diabetes Unit, Western Health, Melbourne, VIC, Australia, 3Department of Medicine, Western Academic Centre, University of Melbourne, Melbourne, VIC, Australia, 4The Walter and Eliza Hall Institute of Medical Research, Parkville, VIC, Australia, 5Centre for Epidemiology and Biostatistics, Melbourne School of Population and Global Health, University of Melbourne, Melbourne, VIC, Australia

**Background:** Western Health (Sunshine and Footscray campuses) had the highest inpatient prevalence of diabetes mellitus (DM) in a recent point prevalence study across 11 Melbourne metropolitan hospitals.1

**Objective:** To determine the impact of DM, its complications and co-morbidities on length of stay (LOS), readmission rate and cost in patients admitted to the General Internal Medicine (GIM) units at Western Health.

**Methodology:** We performed a retrospective case-control study by extracting data on all GIM admissions over 12-months (Jan 1 2013 to Dec 31 2013) from Western Health’s administrative database. Data included demographic, social factors and ICD-10 codes mapped to major co-morbidities constituting the Charlson Co-morbidity Index (CCI). We compared patients with presumed DM, based on ICD-10 co-morbidity codes, with non-diabetics (no DM-related ICD-10 codes) with respect to key outcomes of LOS, readmission and clinical costing, using univariable (paired t test and Mann-Whitney U test) and multivariable (ordinal regression model) analysis.

**Results:** Of 6036 GIM admissions during the study period, 2040 (33%) had DM based on ICD-10 coding. Mean LOS for patients with DM was 5.7 days compared with 5.2 days for patients without DM (p < 0.01) after adjusting for confounders, the odds of patients with DM, staying 27 days was 1.17 times greater (odds ratio1.17; 95% confidence interval 1.07–1.29; p = 0.01) than for those without DM. Unadjusted mean clinical costing in patients with DM was significantly greater than those without (5757 vs 6454: p < 0.001). Six-month readmission rates were also higher in DM patients (48.1% vs 40.2%; p < 0.001).

**Conclusion:** The high prevalence of DM and the higher LOS, readmission rates and clinical costing in GIM patients with DM suggest a very high economic cost to health services like ours. Interventions to improve efficiency and effectiveness of ward-based management of DM patients should be prioritized.

**REFERENCE**

1. Bach et al., 2014, MJA, 201, 334–338
Background: An attempt to resuscitate after cardiac/respiratory arrest is mandatory in Australian hospitals, unless there is documentation in the medical history of a decision to not attempt cardiopulmonary resuscitation (CPR). The outcome of CPR in the elderly, chronically ill has been well documented to be very poor. As part of evidence based patient-centred care CPR should only be offered to those for whom it is beneficial.

Aim: This study aims to examine doctors’ general attitudes towards the discussion and writing of NFR orders and identifying the potential barriers to the completion of NFR orders for hospital inpatients.

Methods: All doctors accredited at Cabrini Health, Melbourne, Australia were asked to participate in an anonymous online questionnaire. The questionnaire employed likert scales and open-ended questions to gauge physician responses to the legal, ethical, family, personal and cultural/religious issues surrounding the discussion and writing of NFR orders.

Results: 107 doctors participated in the study. Doctors are comfortable in writing NFR orders and believe that NFR orders do not result in suboptimal care. In practice, doctors thought the presence of an NFR altered the care delivered by nursing staff including differences in delivery of pain relief, nursing observations and MET calls, and the likelihood of the patient having a procedure or operation.

Conclusion: NFR orders result in changes to treatment goals of care, suggesting a confounding of NFR orders with the delivery of palliative care. There are complex barriers to the writing and implementation of NFR orders, complicated by doctors’ views on the relationship with goals of care.

THE YEAR IN DIABETES TREATMENT
Stranks S1
1Southern Adelaide Local Health Network (Flinders Medical Centre), Adelaide, SA, Australia

The past year has seen advances in therapy of both Type 1 and 2 diabetes. In particular, this talk will outline improvements in CSII (insulin pump) and sensor technology and progress towards development of clinically usable closed loop technology. Newer oral therapies, particularly SGLT2 inhibitors, designed for Type 2 diabetes may eventually also have a role in Type 1 diabetes therapy. New long acting insulins, with some potential advantages over existing therapies, are emerging. The risk/benefit profile of existing therapies such as DPP4 inhibitors are being better defined. AHS has published an updated treatment algorithm for glucose management of Type 2 diabetes which will be discussed. Finally, updated lipid management guidelines will be outlined.

EVALUATING STROKE ETIOLOGIES AND TERRITORIES BASED UPON ITS RISK FACTORS
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Background and Aims: Although the risk factors of ischemic strokes are well defined, there is slight information about their relations with the etiologies of ischemic strokes. This study investigates the distribution of ischemic stroke risk factors and their connections to diverse etiologies of cerebrovascular attack (CVA) and specific ischemic regions of brain.

Method: In this cross-sectional study, we analyzed the data of patients with definite diagnosis of CVA, excluding hemorrhagic strokes, registered in Imam Hossein Medical Center in Tehran, Iran. The data were collected from entire archived medical records from March 2010 till September 2012, retrospectively.

Results: Out of 1696 cases a total of 1011 subjects, 487 (48.2%) males and 524 (31.8%) females with mean age of 68.91 ± 13.54, were included in the study. Patients suffering from atrial fibrillation (AF), valvular heart disease (VHD), and dilated cardiomyopathy were more prone to develop cardioembolic stroke (OR [95%CI]: 19.33[11.98–31.17], 31.91[21.69–41.96], 22.73[6.73–76.75] respectively). Those with diabetes mellitus (DM), carotid artery stenosis and dyslipidemia (DLP) had a higher prevalence of macroangiopathic stroke (ORs [95%CIs]: 1.83[1.37–2.43], 5.75[3.89–8.48], 1.35 [1.02–1.79] respectively). Ischemic heart disease (IHD), AF, and VHD were associated with stroke in the brain territory supplied by middle cerebral artery (MCA) (ORs [95%CIs]: 1.39[1.08–1.79], 1.96[1.33–2.89], 1.38[1.03–1.85] respectively) while DM and carotid artery stenosis were correspondent with posterior cerebral artery (PCA) stroke (ORs [95%CIs]: 1.46[1.06–2.01], 1.47[1.04–2.08] respectively). Peripheral artery disease (PAD) and smoking were related with watershed stroke (ORs [95%CIs]: 13.27[1.30–134.61], 4.13[4.5–11.73] respectively).

Conclusion: The diagnosis of the weight of each risk factor of ischemic strokes on different etiologies and territories of ischemia can assist care providers for a more efficient prevention of strokes. The results of this study can also be a basis for further investigations to corroborate the pathophysiology of such relations.

EVALUATION OF QUALITY OF LIFE AFTER CARDIAC SURGERY IN HIGH-RISK PATIENTS
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Background and Aims: Conventionally, there is controversy over subjecting high-risk patients to cardiac operations, due to major postoperative complications. Higher survival rates and less morbidity as well as better quality of life can be good predictors of the outcome of surgery. This study evaluates the quality of life before and 12 months after cardiac operations on high-risk patients.

Method: In this study, the European System for Cardiac Operative Risk Evaluation (EuroSCORE II) was used to separate high-risk patients from others. The quality of life was assessed using the Medical Outcomes Study 36-item Short Form Health Survey (SF-36) before surgery and one year afterward. Based on SF-36, the score for each of the eight different dimensions of the quality of life was quantified; and, their differences between pre-surgery and post-follow up period were analyzed.

Results: 126 high-risk patients were included in this study. The mean age of the patients was 64.29 ± 12.35 years. The median of EuroSCORE II score in these cases was 6.83 (6.04–25.98). The results reveal that the majority of the quality of life dimensions, except mental health, improved significantly after the follow-up period.

Conclusion: Cardiac surgery on high-risk patients can noticeably promote the different aspects of their quality of life; although, such improvements should be considered against surgical complications.
CARDIAC EFFECTS GLUCAGON-LIKE PEPTIDE 1 WITH CHITOSAN-BASED SCAFFOLD AFTER INDUCING MYOCARDIAL INFARCTION IN CANINES

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Background and Aims: Glucagon-like peptide 1 (GLP-1) is one of the new choices in the management of diabetes mellitus because of its glucoregulatory effects. GLP-1 receptors are expressed not only in insulin cells, kidney, lung, brain, and gastrointestinal tract, but also in the heart. The cardiac effects of GLP-1 play a major role in the choice to use this treatment, considering the expression of GLP-1 receptors in heart. Degradation by dipeptidyl peptidase-IV (DPPIV) makes GLP-1’s half-life very short. In this study, the cardiac effects of GLP-1 with chitosan-based scaffold as well as the tissue changes after induction of myocardial infarction in canines were evaluated.

Methods: Twelve canines (11 males and one female) of a similar breed and weight were included in this study. They were categorized into three groups: a case group treated with GLP-1 based on a chitosan scaffold, a control group given chitosan with normal saline, and a control group given normal saline alone. Every four weeks after induction of infarction, the troponin-I serum level, regional wall motion abnormality (RWMA), angiogenesis, and microscopic and macroscopic tissue changes were analyzed.

Results: Angiogenesis and infarcted area thickness (which is inversely related to the subsequent risk of pseudoaneurysm development) were significantly higher in the case group compared with the other two groups (p value < 0.05). Our case group recorded lower scores of RWMA compared with other canines (p value = 0.02).

Conclusion: This investigation revealed that the new compound (GLP-1 + chitosan) not only lengthens the releasing duration of GLP-1 but also has cardioprotective effects after myocardial infarction.

THE ‘STEP-UP COURSE.’ A NOVEL COURSE TO PREPARE RESIDENT MEDICAL OFFICERS TRANSITION TO BE EFFECTIVE REGISTRARS

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Background: The ‘Step-up Course’ was designed to improve the transition from Resident Medical Officer (RMOs) to Registrar roles at Princess Margaret Hospital. A two day course was designed, delivered and evaluated in January 2014 and 2015 to cover wider skills essential to the registrar position.

Methods: The ‘Step-up Course’ was designed to address issues identified by junior medical staff. Funding was secured by a Postgraduate Medical Council of Western Australia (PMCWA) grant. Prior to the course each participant completed an Occupational Personality Questionnaire (OPQ), and the results explained during a 30 minute debrief with a psychologist. The course consisted of large and small group facilitated learning sets and simulation training. Areas of focus included communication, negotiation, conflict resolution, leadership and management of the seriously unwell or injured child through targeted simulations.

Results: 31 resident staff participated over 2014 and 2015, with evaluation both immediately and three months afterwards. All participants would recommend the course to a colleague, stating the benefits for future roles. The majority (89%) found the OPQ and debrief helpful. Simulation scenarios were well evaluated with 96% responding that it was the most useful aspect of the course. Half of the 2014 cohort (47%) evaluated the course at 3 months; most (85%) had used the skills gained in their new roles. Direct improvement in communication and supervision skills was reported in 71% and 57% identified improved leadership skills. Follow-up data from 2015 cohort will be also presented.

Conclusion: The ‘Step-up Course’ was a valuable adjunct for junior staff transitioning to more senior roles. It addressed key training gaps for paediatric trainees not available in traditional models. Further long-term follow-up evaluations will enable tailoring to strengthen future courses and build on the current skill-base within PMH. Potential for translation to other paediatric training centres and interdisciplinary settings is possible.

THE RELATIONSHIP BETWEEN CUMULATIVE LIFETIME SUN EXPOSURE AND FRACTURES IN OLDER ADULTS

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Background: While low 25-hydroxyvitamin D concentrations are associated with increased fracture risk, data linking cumulative, lifetime vitamin D status with skeletal outcomes are lacking. The Beagle-Gibson (BG) method utilises microtopographical skin changes to quantify cumulative, lifetime sun exposure. However, the validity of BG grade in older adults is ill-defined. The aims of this cross-sectional study were to (1) describe predictors of BG grade and (2) utilise BG grade to define associations between lifetime sun exposure and fractures in older adults.

Methods: 835 community-dwelling adults aged 53–83 years had silicon casts taken from the dorsum of both hands and graded by the BG method. Sun exposure, skin phenotype, smoking and symptomatic fractures were quantified using questionnaire, 25-hydroxyvitamin D by radioimmunoassay, melanin density by spectrophotometry and BMI and vertebral deformities by DXA. Predictors of BG grade were defined using ordered logistic regression to compute a single odds ratio (OR) with BG grade the dependent variable. BG grade was the independent variable in analyses with fractures outcomes.

Results: Independent predictors of BG grade were age (OR = 1.14, p < 0.001), occupational (OR = 1.67, p < 0.001) and leisure time (OR = 1.24, p = 0.001) sun exposure, ability to tan (OR = 1.40, p < 0.001), melanin density (OR = 1.79, p < 0.001) and DXA sunburn (OR = 1.22, p = 0.002), current smoking (OR = 1.70, p = 0.016) and waist- hip ratio (OR = 1.09, p = 0.034). The relationship between BG grade, vertebral fracture and spine BMI differed depending upon sex (p = 0.012 and p = 0.035, for interactions). In females, BG grade was associated with lower vertebral fracture prevalence (OR = 0.45-grade, p = 0.013) and fewer fractures (OR = 0.81-grade, p = 0.049). In males, BG grade was associated with more DXA-detected vertebral deformities (RR = 1.22-grade, p = 0.004), but not symptomatic fractures. These relationships were independent of BMI, falls risk, smoking and 25-hydroxyvitamin D concentration.

Conclusions: Our results support the utility of BG grade as a measure of lifetime sun exposure in older adults. BG grade demonstrated beneficial associations with multiple fracture outcomes in females independent of 25-hydroxyvitamin D concentration, supporting the concept that cumulative lifetime sun exposure is an important contributor to skeletal health.

RECURRENT ACID DISCHARGE AND AMIODARONE INDUCED THYROTOXICOSIS

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This is a case presentation of an unusual clinical scenario. We could not follow the given abstract template for this case presentation.

Description of Case: 44-year-old male presented with 2 episodes of implantable cardioverter and defibrillator (AICD) firing in July 2014 to the Gold coast university hospital.
He was diagnosed with idiopathic dilated cardiomyopathy in year 2005. He had intermittent episodes of palpitations in 2009. His echocardiogram revealed ejection fraction (EF) of 40% with intermittent complete heart block and non-sustained ventricular tachycardia. Hence, a biventricular ICD was inserted.

In 2011, he presented with recurrent episodes of ventricular tachycardia (VT) triggering AICD discharge. Hence, amiodarone was commenced. His regular medications included metoprolol XL 190 mg, perindopril 10 mg and aspirin 100 mg daily.

His ventricular arrhythmias subsided till July 2014 when he had 2 episodes of AICD firing. A formal AICD interrogation confirmed these were appropriate shocks delivered for VT. He underwent investigations to look for alternate causes of recurrent VT.

His thyroid function tests (TFT) done in April 2014 were normal and in July 2014 revealed overt hyperthyroidism (TSH <0.05 FT4 61).

A provisional diagnosis of amiodarone induced thyrotoxicosis was made. He had 99 m Tc Technetium thyroid uptake scan revealing 0% thyroid uptake consistent with type 2 amiodarone thyroiditis.

He was commenced on oral corticosteroid and carbimazole with minimal improvement in his episodes of VT over the next 2 weeks. He developed weight loss and myopathy due to his thyrotoxicosis. Hence, he was commenced on lithium in addition to carbimazole and steroids. His amiodarone was ceased and sotalol was commenced.

His clinical condition deteriorated further which was reflected by decline in his EF and minimal improvement in TFTs. He underwent total thyroidectomy in September 2014 and histopathology was consistent with type 2 amiodarone thyroiditis.

His post-operative recovery was unremarkable and he has not had any further episodes of ventricular tachycardia and AICD firing.

Issues of Interest in the Case:
1. Unusual presentation of amiodarone induced thyrotoxicosis
2. The significance of pro-arrhythmic properties of amiodarone in a patient with known structural heart disease
3. First case in Gold Coast University hospital of intractable amiodarone induced thyrotoxicosis requiring thyroidectomy to prevent ongoing ventricular tachycardia and AICD firing
4. Only 2 case reports of AICD discharge secondary to amiodarone induced thyrotoxicosis

REFERENCE

CANCER-SPECIFIC AND ALL-CAUSE MORTALITY IN KIDNEY TRANSPLANT RECIPIENTS WITH AND WITHOUT PRIOR CANCER
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Background: A period of surveillance is generally recommended for dialysis patients with a cancer history prior to acceptance for transplantation. However, the outcomes of patients with cancer recurrence and/or a second primary cancer after transplantation are unknown.

Aim: To determine the prognosis of kidney transplant recipients who developed cancer after transplantation and whether this varied with cancer types (first cancer, recurrence, second primary cancer).

Methods: Using data from the Australian and New Zealand Dialysis and Transplant Registry, we compared the cancer-specific and all-cause mortality among recipients with different cancer types using adjusted Cox proportional hazard models.

Results: Of the 21,415 recipients transplanted between 1965 and 2012, 3% (651 of 21,415) had a prior cancer history. A total of 2,840 (13%) recipients developed cancer after the first transplant. Of whom, 2,760 (97.2%) developed primary de novo cancers, 23 (0.8%) experienced cancer recurrences and 57 (2%) developed second primary cancers. Compared to recipients who developed their first cancer posttransplant, there were no significant differences in the risks of cancer-specific and all-cause mortality among those with cancer recurrence (adjusted hazard ratios [aHRs]: 0.79 [95% confidence interval [CI]: 0.38 – 1.67, p = 0.54] and 0.86 [95%CI: 0.45 – 1.66, p = 0.66], respectively) and recipients who developed a second primary cancer after transplantation (aHR=1.01 [95%CI: 0.63 – 1.62, p = 0.95] and 1.16 [95%CI: 0.79 – 1.69, p = 0.45]), respectively.

Conclusion: Among patients with a prior history of malignancy, recurrence and second primary cancer are infrequent after renal transplantation. A history of previous malignancy does not have an additive effect on the cancer-specific and overall survival of kidney transplant recipients who develop cancer.

A FORGOTTEN EPIDEMIC: SEXUALLY TRANSMISSIBLE INFECTIONS AND BLOOD BORNE VIRUSES AMONG THE FIRST PEOPLES OF AUSTRALIA
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Aboriginal and Torres Strait Islander people are the First Peoples of Australia, together these groups represent 3% of the total Australian population. These groups are known to have the world’s oldest known living continuous culture, and it’s recognised that peoples’ deep connections to land and country are beneficial to health outcomes. Our collective wisdom, cultural practices and teachings that intersect with contemporary socio-political life bring us hope for change in our communities.

An area of Aboriginal and Torres Strait Islander Health that has largely been neglected is the health and wellbeing of adolescents and young adults. Intersecting issues of sexually transmissible infections (STIs), blood borne viruses, alcohol and other drugs and mental health impact on these population groups significantly. Rates of STIs are among the highest of any identifiable population group in the world. Viral hepatitis; both hepatitis B and C disproportionately affect First Peoples of Australia and HIV has up until now has been a relatively good news story, but cracks are appearing that seriously jeopardise this story. These issues have not changed significantly over the last two decades, despite significant improvements in technology to detect and treat these infections.

Addressing these issues requires a multi-pronged approach including; creating a dialogue of solutions among leadership within communities nationally; addressing health service system gaps; improving prevention efforts, and delivering separate and targeted approaches that are evidence based but also encompass Indigenous world views.

All of us should be asking the questions on why the gap that exists in the areas of STIs and BBVs between the First Peoples of Australia and non-Indigenous people can continue to be maintained and in some cases widen? . . and. Why we are not moving toward elimination of these infections among the most marginalised population groups within First Peoples communities here in Australia?

We have never done it alone, we need your help and as the great Martin Luther King once said ‘Life’s most persistent and urgent question is- what are you doing for others?’

THE YEAR IN GERIATRICS
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This paper will review new developments in evidence and practice in Geriatric Medicine in 2014. Advances in the understanding of dementia,
and the limited changes in treatment, particularly in the management of
behavioural and psychiatric symptoms will be discussed. More controver-
sies in the benefits and harms of Vitamin D and calcium will be covered.
Some clarification on the role of the new oral anticoagulants, and targets for
management of hypertension and diabetes in older people will be reviewed.
Latest evidence in management of fractures in older people will be men-
tioned. Changes in the costs of long term residential care in Australia, and
the impact on hospitals will be outlined.

THE AGEING PHYSICIAN AND COMPETENCE
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We are encourage to continue working longer than we may have planned
when we embarked on our careers as doctors. We live longer and now expect
to be able to work past the previous retiring age of 65, and ease out of work
in our own way.

However, cognitive decline and physical impairments increase with age, and
without an objective measure of the competency of the doctor, risks to the
community may increase. Assessment of ability to practise medicine is
fraught with difficulty, as the debates about revalidation and recertification
show. What is known about the ageing doctor will be presented, assessment
will be discussed and transitions to reduced working hours and retirement
for the older doctor will be reviewed.

SYSTOLIC BLOOD PRESSURE AMONGST ELECTRICITY
DISTRIBUTION WORKERS UNDERTAKING ASBESTOS-RISK WORK,
PARTICIPATING IN THE LUNG BUS PROGRAMME SINCE 2011
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Introduction: Cardiovascular disease is a common issue in the working
population, both outside the workplace as well as at work. Some existing
literature suggests a possible relationship between cardiovascular disease
and occupational dust exposure. The Lung Bus programme of the Dust Diseases Board (DDB) of NSW has developed a focus on medical
consultation regarding blood pressure as part of the health surveillance
package marketed to employers across NSW.

Objectives: This study describes the data from the Lung Bus, focussing on the
relationship between systolic blood pressure (SBP) and several factors
of workers at a selected electricity distribution company (SEDC). Data is
described particularly from 2011 and 2014. Being a descriptive study
without formal hypotheses, this study seeks to identify possible areas for
research using the Lung Bus database.

Methods: Data were collected, collated and de-identified by the DDB prior
to dissemination to the investigator. Data from workers at the SEDC were
subjected to criteria testing, to exclude those with a body-mass index (BMI)
of at least 30 kg/m2, any history of smoking and age outside of 22 to 34
years. Pearson coefficients of correlation ρ were then calculated, for SBP
compared to factors including duration of employment at the SEDC
(DESSEDIC), BMI and age.

Results: SBP was correlated weakly with body-mass index (ρ = 0.25,
95%CI 0.06 to 0.42) but not with age (ρ = 0.018, 95%CI −0.17 to 0.21) or
DESSEDIC (ρ = 0.024, 95%CI −0.017 to 0.21).

Conclusions: This study’s findings do not support significant correlation
between SBP and DESSEDIC at the SEDC.

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Aim: To interest trainees in the field of refugee and asylum seeker health

Methods: Refugee populations in Australia and their origins will be
described, as well as the needs of refugee child populations and their key
challenges in accessing appropriate health care. Systems of care and general
principles that can improve access will be detailed, such as collaborative
primary care-hospital approaches and school based programs. Specific
current issues pertaining to asylum seekers such as health care costs, tem-
porary protection visas and immigration detention will be clarified. The
importance of research evidence application and the research gaps will be
discussed. Finally physician advocacy and the RACP Position Statement
will be presented as a discussion point to address refugee health needs and
improve health outcomes in this resilient group.

Conclusion: Trainees will be encouraged to explore their interest in refugee
and asylum seeker health and ways in which they may be able to contribute.