

RESEARCH WEEK ABSTRACTS Presented

AUTHOR	Area	Time	Type	Abstract
ADAMSON, P.J, AL KINDI, M.A., WANG, J.J. ET AL	Infectious Diseases	Thurs 7 th 8.45-9.00am	ORAL	<p>Title: Proteomic Analysis of Influenza Haemagglutinin-Specific Antibodies Following Vaccination Reveals Convergent Immunoglobulin Variable Region Signatures</p> <p>Abstract: Introduction: The genomic flexibility of Influenza A viruses and subsequent antigenic drift is the major contributing factor in seasonal epidemics. Occasionally genetic reassortments occur leading to influenza pandemics. The most recent pandemic in 2009 highlighted major limitations in public health responses and vaccine production but also deficiencies in our understanding of specific immune responses to infection. The aim of this study was to compare the serum antibody proteomes of participants of an H1N1pdm09 vaccine trial to determine if they displayed convergent V region signatures.</p> <p>Methods: Anti-H1 immunoglobulins were purified from the serum of 6 participants of a randomized, subject and observer blinded, parallel-group trial of a novel recombinant haemagglutinin (rHA) vaccine using rHA coated ELISA plate affinity purification. Further purification and isolation of H- and L-chains by SDS-PAGE was followed by combined de novo and database-driven mass spectrometric sequencing.</p> <p>Results: Analysis of the serum antibody proteome from vaccinated subjects demonstrated restricted clonotypes specified by IGHV5-51 and IGHV3-7 H-chains and predominantly IGKV3-20 L-chains. Sequences were closely aligned with the matched germline sequence.</p> <p>Conclusion: This study represents one of the first examples of direct characterisation of the secreted antibody repertoire in response to an infectious disease. It demonstrates that despite the potential for extreme diversity the immunoglobulin repertoire can raise convergent responses to specific pathogens. This work provides a framework for the examination of the serum antibody proteome in a diverse range of infectious diseases, in natural infection, determining adequate response to vaccination and may lead to the development of novel therapeutics.</p>

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<p>ALI, S., HUMPHREYS, K., MCKINNON, R., MICHAEL, M.</p>	<p>Cancer</p>		<p>POSTER</p>	<p>Title: MicroRNAs enhance anticancer properties of butyrate in colorectal cancer</p> <p>Abstract: The dysregulation of microRNAs in colorectal cancer contributes to tumour development and progression. Diet may be a contributing factor to colorectal cancer risk, and there is evidence to suggest that the fibre fermentation product, butyrate, has anticancer properties achieved through epigenetic changes in gene expression. Previous studies have demonstrated that butyrate can alter microRNA expression in colorectal cancer; however, the ability of microRNAs to enhance these anticancer properties requires further investigation. This project aimed to determine whether microRNAs can sensitise colorectal cancer cells to butyrate, with this mechanism thereby enhancing the anticancer effect. High throughput functional screens were used to systematically identify miRNAs with the ability to sensitise HCT116 colorectal cancer cells to butyrate by inducing anti-proliferative and pro-apoptotic effects. Validation of this effect was performed using real-time cell analysis systems. miR-125b and miR-1227 showed particularly significant (P value <0.05) exacerbation of the butyrate response. Pathway analysis highlighted potential miRNA target genes involved in cell growth, cell death, and cancer related pathways. Data were integrated with RNA-seq and small RNA-seq results. RT-PCR and western blotting revealed reduction in transcript and protein levels respectively, of cancer-associated predicted target genes involved in key cell growth pathways such as WNT signalling. MicroRNA binding sites in the 3'UTR of the predicted target genes were identified and are being validated using target protectors and luciferase assays. This study is the first unbiased screen to identify microRNAs that enhance the anticancer effects of butyrate in colorectal cancer cells.</p>
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<p>BAKER, R. A., NEWLAND, R.F., BENNETTS, J.S.</p>	<p>Cardiology</p>		<p>Poster</p>	<p>Title: The Association Between Intraoperative Glycaemic Change and Mortality is Modulated by Pre-Existing Hyperglycaemia in Cardiac Surgery: A Cardiac Surgery Registry Analysis</p> <p>Abstract: Targeting tight glucose control in patients adapted to chronic hyperglycaemia may result in derangement of glycaemic homeostasis. We evaluated whether the association between intraoperative glycaemic change and mortality is modulated by pre-existing hyperglycaemia. Data from 3,026 adult patients with HbA1c measurements was collected using the Cardiac Surgery Registry (OFR# 198.16). The glycaemic ratio (GR) for each patient was calculated by dividing the chronic average blood glucose level (AG) by the minimum CPB glucose. To convert HbA1c levels to AG, we used the following equation: $AG (mmol) = (1.59) \times (HbA1c) - (2.59)$. Pre-existing hyperglycaemia was defined as a preoperative HbA1c >7%. Cut off points in the relationship between GR and mortality were assessed with LOWESS plots. The influence of GR above or below cut off points on mortality was determined using multivariate models for patients with or without pre-existing hyperglycaemia. Pre-existing hyperglycaemia was identified in 21% of patients. LOWESS plots identified GR>1 for normoglycaemic patients and GR <0.5 for patients with pre-existing hyperglycaemia as having an increase in the likelihood for mortality. In multivariate analyses, GR >1 was an independent predictor of mortality in normoglycaemic patients (OR, 1.3; 95% CI, 1.05-1.62; $p=0.017$) and GR <0.5 in patients with pre-existing hyperglycaemia (OR, 5.23; 95% CI, 1.54-17.73; $p=0.008$). The association between glycaemic change and mortality for cardiac surgical patients appears to be modulated by pre-existing hyperglycaemia. These preliminary results suggest intraoperative hyperglycaemia should be managed with consideration of the preoperative HbA1c. In patients with pre-existing hyperglycaemia, reducing glucose levels >50% may be detrimental.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>BAKER, R.A. & NEWLAND, R.F.</p>	<p>Cardiology</p>	<p>Tues 5th 11.15-11.30am</p>	<p>ORAL</p>	<p>Title: Influence of oxygen delivery on acute kidney injury: A multicentre propensity matched analysis.</p> <p>Abstract Preoperative risk factors for acute kidney injury (AKI) for patients undergoing cardiac surgery have been reported, however intraoperative risk factors for patients undergoing cardiopulmonary bypass (CPB) are not clearly defined. Minimum oxygen delivery index (DO_{2i}) during CPB below 272ml/min/m² has been associated with AKI in small observation studies. This study aims to determine whether these findings can be reproduced in a larger propensity-matched multicentre patient population.</p> <p>Influence of DO_{2i} was evaluated in 9778 adult patients undergoing isolated on pump coronary artery bypass graft (CABG), valve repair and/or replacement and valve/CABG procedures using multicentre data from the Australian and New Zealand Collaborative Perfusion Registry (OFR# 198.16). Minimum DO_{2i} during CPB was calculated according to the formula; 10 x average cardiac index (l/min/m²) x oxygen content, where oxygen content was calculated as; (minimum haemoglobin (g/dL) x 1.34 x minimum oxygen saturation (%)) + (0.003 x minimum pO₂ (mmHg)). Propensity scores were calculated to determine the predicted probability of having a minimum DO_{2i} <272ml/min/m². The influence of minimum DO_{2i} on AKI was determined using mixed effects logistic regression models..</p> <p>Overall, 11.3% developed AKI. Minimum DO_{2i} (10 ml/min/m² increments) was found to be an independent predictor of AKI for RIFLE class Risk (OR 0.98 CI 0.96-0.99), Injury (OR 0.98 CI 0.96-0.99), and also mortality (OR 0.98 CI 0.96-0.99),</p> <p>These results support the findings that oxygen delivery during CPB is an independent predictor of AKI following cardiac surgery. In this multicentre analysis, oxygen delivery was found to predictive of both AKI and mortality.</p>
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RESEARCH WEEK ABSTRACTS Presented

BARRY, C.	Women's Health	Wed 6 th 11.00-11.15am	ORAL/P OSTER	<p>Title: A New Model to study female pelvic pain disorders</p> <p>Abstract Background and Aims: Vulvodynia is a chronic pelvic pain disorder affecting over a million Australian women and girls. The cause is unknown. Treatments are poorly targeted, often ineffective and costly for patients and the healthcare system [1, 2]. Biopsies indicate increased nerve fibre numbers (hyperinnervation) [3]. The mechanisms leading to hyperinnervation and the types of nerves involved are unknown. Therefore, this study aimed to develop and characterise a model of vulvodynia.</p> <p>Methods: Under Flinders University Animal Welfare Committee approval (#906/16), inflammation was induced in 6–8 week old C57/BL6 mice for 7 days (n = 7) or 14 days (n = 6) by intra-vaginal microinjection of complete Freund's adjuvant. Control mice received saline. Inflammation was assessed by tissue morphology (H&E) and macrophage infiltration (CD-68 labelling). Multiple labelling immunohistochemistry identified blood vessels immunoreactive for alpha-smooth muscle actin and nerve fibres immunoreactive for calcitonin gene-related peptide (CGRP), vasoactive intestinal peptide (VIP) and substance P (SP).</p> <p>Results: Inflammation was present at 7 days and increased at 14 days, evidenced by lamina propria thickening, macrophage infiltration and blood vessel proliferation. Vaginal nerve fibres immunoreactive for CGRP, SP and VIP were all more abundant 7 days (p < 0.01), and CGRP-immunoreactive fibres were more abundant at 14 days (p<0.05).</p> <p>Conclusions: Our new model shows mild chronic inflammation induces vaginal hyperinnervation involving involving multiple, neurochemically distinct populations of nerves. Further studies are required to determine the duration of hyperinnervation following a pro-inflammatory stimulus, the mechanisms mediating hyperinnervation and the impact of potential therapies</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>BELL, E.</p>	<p>Clinical</p>	<p>Fri 8th 11.15-11.30am</p>	<p>ORAL</p>	<p>Title: Inter-professional learning in the acute health care setting spontaneity and impression management</p> <p>Abstract: Aim: To explore how different professional groups perceive and enact inter-professional learning (IPL) in the acute health care setting.</p> <p>Methods: Qualitative methodology using symbolic interactionism to guide data collection and Goffman’s Theory of impression management to guide data analysis. Data was collected using 6 cases; a doctor, registered nurse, pharmacist, physiotherapist, social worker and podiatrist. The methods employed for data collection were work shadowing, interviews and participatory network mapping over a six week period located in a medical division of a large metropolitan hospital in South Australia.</p> <p>Results: The ward round was found to be a key factor in current siloed practice observed in the acute health care setting. The ward round signified disjuncture caused by the structure and professional priorities associated with it. Cultural hegemony relating to medicine’s traditional dominance over other professions came through as a very strong theme across the data in this study. Specifically in relation to the perceived power dynamics between physicians and other health professionals by the very nature of exclusivity in conducting the ward rounds. Data analysis is ongoing.</p> <p>Discussion: The ward round is a planned and structured activity, yet, the resultant learning may be spontaneously triggered by relevance and inspired by an inter-professional approach to patient care. IPL is much more than putting different health professionals into the same workspace or classroom. This presentation will focus on how ward rounds could play a crucial role in IPL in the acute health care setting in terms of spontaneous learning.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>BICKFORD, J., COVENEY, J., BAKER, J. ET AL</p>	<p>Mental Health</p>		<p>POSTER</p>	<p>TITLE: Support following laryngectomy: exploring the concept from different perspectives</p> <p>ABSTRACT:</p> <p>Purpose: Psychosocial adjustment after total laryngectomy (TL) is complex, and the resultant support needs are extensive. Current practices have been guided by HR-QOL measures; whilst useful many were developed without considering the perspectives of people who have experienced TL. To improve understanding of the support needs after TL, multiple viewpoints were examined (e.g. individuals with laryngectomy (IWL), significant others (SO) and health professionals).</p> <p>Methodology: A qualitative study explored the perspectives of 28 individuals (IWL - 7 men and 5 women, 9 SO and 7 health professionals). Data were collected through in-depth, semi-structured interviews and analysed using constructivist grounded theory and symbolic interactionism.</p> <p>Results: The data suggest that supporting IWL to develop competence and build resilience is a multidimensional and non-linear construct underpinned by two interactive processes <i>Getting and perceiving competent care</i> and <i>Sharing and balancing the care</i>. Additionally, these processes are dependent on contextual factors including: <i>Social support, Resourcing, Awareness and Timing</i>. These constructs highlight the significant contribution the care triad plays and that a lack of awareness and adequate specialist care provokes anxiety and precipitates compensatory behaviour. This is particularly evident for the SO participants, who voiced concerns about adequate care and issues of safety and dignity.</p> <p>Conclusion: The findings emphasize the critical roles of SO and health professionals in providing education, competent care and physical, psychosocial and functional support. Furthermore, person-centred care is optimized when all actors are competent with the care. In turn, reduced competence increases the support burden for one or all in the care triad.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>BIRCH, F. & HILL, J.</p>	<p>Mental Health</p>	<p>Thurs 7th 10.35-10.45am</p>	<p>ORAL</p>	<p>Title: Taking up the Challenge: Improving the management of challenging behaviours in patients with a Traumatic Brain Injury in the acute setting</p> <p>Abstract:</p> <p>Background: A review of best practice guidelines in the management of patients suffering traumatic brain injury (TBI) in FMC neurosurgical unit identified significant issues in managing patients with challenging behaviours. Many displayed complex and challenging behaviours resulting in “code blacks” and/or inappropriate restraint.</p> <p>Methods: Using an audit tool, Neurosurgical team conducted a casenote audit of 38 TBI patients. Of these, 21 required behavioural restraint: 17- chemical, 15-physical and 11-combined physical and chemical. There was variance in the type or dose of medication provided and consent from NOK for application of physical restraints was very poorly documented. A multi-disciplinary working group reviewed current practice and developed a management protocol. The team examined current guidelines, conducted a literature review, compared with other neurosurgical units, and sought expert opinion.</p> <p>Results: A protocol and TBI behavioural scale were developed which outlined the non-pharmacological and pharmacological management of challenging behaviours for TBI patients. The protocol and behavioural scale aimed to provide a consistent way to measure and manage behaviours. This has reduced “code blacks” and subsequent use of contra-indicated restraints, improving the speed of recovery in the acute phases of TBI, thus allowing for the potential for improved long term outcomes.</p> <p>Discussion: Implementation has included a staff education campaign on de-escalation of challenging behaviours and use of the protocol and TBI behaviour scale. As the protocol is currently being implemented it is intended that further results regarding “code black” incidents, required restraints and effectiveness of the TBI behavioural scale will be available to report on by the forum.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>BROWNE-YUNG, K., FREEMAN, T., BAUM, F., MCEVOY, D, BATTERSBY, M.</p>	<p>Public Health</p>	<p>Wed 6th 9.15-9.30am</p>	<p>ORAL</p>	<p>Title: Connecting public health and health care through a short social health screening tool that conveys awareness of individual social determinants of health in health care settings.</p> <p>Abstract: Within public health, the importance of social determinants in health recovery is well recognised. Evidence suggests that taking into consideration patient’s social circumstances such as access to transportation, housing and economic situation may significantly influence the effectiveness of health care. However, currently there are no concise social health screening (SHS) tools that convey this knowledge to clinicians in health care settings. In this proof of concept study we obtained the views of health consumer advocates, patients and clinicians on social determinants of health (SDH) and SHS tools and developed and pre-piloted a brief SHS tool to inform clinicians about the social determinants affecting their patients.</p> <p>This two-staged qualitative study comprised focus groups with health consumer advocates and interviews with clinicians. A second stage involved SHS tool refinement and piloting with fifty new patients; 25 each from two SALHN referral clinics locate at Flinders and the Repatriation hospitals; and evaluation of the tool by patients and clinicians. The data were analysed through framework analysis.</p> <p>All interviewees were positive about the benefits of addressing SDH in clinical practice to help reduce health inequities. A self-complete SHS tool was developed. The response to introducing a SHS tool in clinical settings was positive. Further piloting across diverse clinical settings is required to determine efficacy. This tool has the potential to promote equitable health outcomes through enabling improved clinician understanding of individual social circumstances and could also provide useful epidemiological data on SDH if routinely collected.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>CAVALLARO, E.C., LAWRENCE, M.D., FORSYTH, K.D. ET AL</p>	<p>Resp Sleep</p>		<p>POSTER</p>	<p>Title: An Analysis of the Temporal Neutrophil Response in the Airways of Infants with Bronchiolitis</p> <p>Abstract: Rationale: The continued absence of an affordable and effective treatment for bronchiolitis ensures it exists as a leading cause of infant hospitalisation. Pulmonary neutrophilia is observed in these patients. The neutrophilic response, which lacks target specificity, is implicated in potentiating acute and chronic consequences on developing lungs. Despite this, limited investigation of airway neutrophil activity longitudinally across disease progression has been undertaken.</p> <p>Methods: Daily consecutive nasopharyngeal aspirate (NPA) samples were collected from hospitalised bronchiolitic infants (≤ 12 months of age) presenting to Flinders Medical Centre, between May and September 2015-2016 (142.14). Neutrophil infiltration and activation was assessed via differential leukocyte counts and quantification of interleukin (IL)-8, a potent neutrophil chemoattractant, and myeloperoxidase (MPO), a marker of neutrophil degranulation, by ELISA. Augmented clinical severity was attributed to interventional therapy requirement (supplemental oxygen and/or continuous nasogastric feeds) for ≥ 24 hours.</p> <p>Results: NPA IL-8 was elevated at admission in infants subsequently requiring interventional therapy. MPO, total leukocyte and neutrophil concentrations did not differ. IL-8 concentration at admission did not correlate with either neutrophil concentration at admission or discharge. Nil parameters assessed differed significantly between admission and discharge, irrespective of interventional therapy requirement.</p> <p>Conclusion: Bronchiolitic infants requiring interventional therapy had elevated markers of airway neutrophil chemotaxis at admission. This was not associated with increased neutrophil prevalence or activation. Therefore, at admission, IL-8 was a poor predictor of airway neutrophil infiltration. Despite alleviation in clinical symptoms, the airway neutrophilic response does not appear to resolve by discharge. Investigation into phenotypic polarisation of neutrophils is proposed.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>CHEONG, A.</p>	<p>Infectious Diseases</p>		<p>POSTER</p>	<p>Title: ‘Dengue virus (DENV) diagnostic methods for use in South Australia: Assessment of a one-step pan-DENV real-time RT-PCR.’</p> <p>Abstract: The diagnosis of dengue virus (DENV) in South Australia is currently based on NS1 antigen and anti-DENV IgM or IgG detection in patient blood. In this study we evaluated the use of a one-step pan-DENV real-time RT-PCR (rRT-PCR) for detecting DENV in a cohort of return travellers to South Australia who had previously undergone dengue testing at SA Pathology. We hypothesised that a pan-DENV rRT-PCR could be developed to assist with dengue diagnosis in South Australia. An ethics application was submitted to and approved by the Southern Adelaide Clinical Human Research Ethics Committee in accordance with their guidelines for low risk research (HREC/SAC [134.15]). The pan-DENV rRT-PCR was validated and performed on 41 SA Pathology samples then compared with their retrospective dengue diagnoses. High specificity (89%) and low sensitivity (44%) of DENV detection was demonstrated. The stage of disease progression was shown to strongly influence results with NS1 antigen present in 14 of the 15 rRT-PCR positive samples indicating an earlier stage of infection. An inconsistency with early fluorescent profiles generated by negative samples was observed and results were therefore followed up by gel visualisation for confirmation. Our study concluded that the one-step pan-DENV rRT-PCR is not effective as a routine diagnostic method in South Australia. For future applications, we recommend the use of this test in conjunction with other dengue diagnostic methods to confirm or exclude dengue when clinically or diagnostically appropriate.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>CLARNETTE, J., CAIN, M., DOORNBERG, J., MACLEAN, S., RING, D., BAIN, G.</p>	<p>Orthopaedic</p>	<p>Wed 6th 2.00-2.15pm</p>	<p>ORAL</p>	<p>Title: Coronal Shear Fractures and Lateral Condyle Fractures of the Distal Humerus: Mapping of Fracture Patters using 3D CT scans</p> <p>Abstract Introduction & aims Capitellum and trochlear fractures are uncommon fractures involving distal humerus. Current classification systems are reflections of the subjective interpretation of fracture patterns. This study aims to enhance our understanding of complex coronal shear fractures using 3D fracture mapping.</p> <p>Method A consecutive series of CT elbow scans was analysed to identify coronal shear fractures according to the Dubberley (1) and Ring (2) classifications. Fracture lines from each case were then mapped and superimposed onto 3-dimensional images of the distal humerus. We used the images to help further characterise patterns in coronal shear fractures of the distal humerus.</p> <p>Results We present the first 11 coronal shear fractures. Fracture lines have been superimposed onto multiple views of the distal humerus to demonstrate frequent locations of fracture lines and areas of comminution. 27% were Dubberley type 1 fractures, 27% type 2 and 45% type 3. 18% were Ring type 2 fractures,9% type 3, 45% type 4 and 27% type 5. Posterior comminution was seen in 36%.64% were seen to have fracture lines exiting medially. 36% had fracture lines exit through the lateral epicondyle. 45% had an intra-articular split through the trochlear and 82% involved a fracture of another bone, most commonly the radial head.</p> <p>Conclusions Based on preliminary fracture mapping, it seems current classification systems may be oversimplified representations of complex fracture patterns. Further imaging analysis by 3Dfracture mapping will</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>COCK, C., BURGSTAD, C., THOMPSON, A. ET AL</p>	<p>Gastroenterology</p>	<p>Thurs 7th 10.30-10.45am</p>	<p>ORAL OR POSTER</p>	<p>Title: Clinical Utility of Upright Viscous and Solid Bolus Swallows During High-Resolution Impedance Manometry</p> <p>Abstract: Introduction: The addition of increased consistency boluses during oesophageal manometry represents a more accurate characterisation of physiological eating behaviour. Solid bolus swallows may correlate better with patient symptoms, and increase diagnostic yield of clinically relevant motility disorders.</p> <p>Method: In addition to the standard ten x 5ml liquid boluses in RL posture, patients were administered five x 5ml viscous and saline soaked bread (2x2cm) boluses in the upright posture. Recordings were acquired using MMS Solar GI system solid state catheter (36 pressure / 16 impedance segments), inserted through an anaesthetised nostril.</p> <p>Results: Data from 120 patients (age 57±14 yrs; 46M) in four groups based on primary indication for study (atypical symptoms n=31; reflux n=29; dysphagia n=32 and chest pain n=28) were included. Viscous or solid boluses did not significantly increase the overall proportion of abnormal studies in any of the symptom groups. However, when considering studies classed as “spastic” oesophageal motility disorders (“above the line”) by the Chicago classification criteria, the proportion increased with solid boluses in the groups with atypical symptoms from 0% to 19% (P=0.01), dysphagia from 18% to 46% (P=0.03) and chest pain from 26% to 63% (P=0.01; figure).</p> <p>Conclusion: The most prevalent abnormalities were absent contractility for those with atypical symptoms, spastic motility disorders for those with dysphagia, and oesophagogastric junction (OGJ) obstruction in those with chest pain. The addition of solid boluses has greatest clinical utility in individuals referred for dysphagia and chest pain in unmasking spastic oesophageal motility and OGJ-obstruction.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>CRITCHLEY, O., MACLEAN, S., HASAN, A., WOODMAN, R., BAIN, G.</p>	<p>Orthopaedic</p>	<p>Wed 6th 2.15-2.30pm</p>	<p>ORAL</p>	<p>Title: Predictors of Articular Surface Involvement in Complex Proximal Humeral Fractures</p> <p>Abstract: Introduction & aims The involvement of the articular surface in complex proximal humerus fractures plays a key role in the management decisions and functional outcome of patients. The aims of this study were to identify the incidence and extent of involvement of the articular surface in complex proximal humerus fractures across various subgroups.</p> <p>Method A series of 100 3D CT scans of proximal humerus fractures were retrospectively identified and the fracture lines accurately transcribed onto an Adobe Illustrator model. The articular surface fractures were assessed with a superior view of the humerus. Concentric circles were drawn from the articular margin to assess the articular surface involvement. A subgroup analysis was performed.</p> <p>Results The articular surface was involved in 58% of fractures. There were significantly more articular surface fractures in the high-energy group (79%) compared to the low-energy group (53%). In women and patients >65 years old, the fractures were more likely to extend further onto the articular surface.</p> <p>Conclusions The incidence and involvement of articular fractures of the proximal humerus are related to patient demographics, mechanism of injury, and most likely osteoporosis. All of these factors are likely to have effect on the natural history, surgical challenges, and clinical outcome of proximal humerus fractures.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>CRITTENDEN, T., DEAN, N., GRIFFIN, P. ET AL</p>	<p>Women's Health</p>	<p>Wed 6th 11.30-11.45am</p>	<p>ORAL</p>	<p>Title: Does Bilateral Breast Reduction Surgery Improve the Health Burden of Macromastia?</p> <p>Abstract: Introduction Macromastia or breast hypertrophy is a cause of considerable physical and psychosocial impairment in women. The aim of this study was to evaluate the improvement in health-related quality of life following breast reduction surgery and to compare our findings with normative data to better understand the health burden of macromastia and the outcomes of breast reduction surgery.</p> <p>Methods Prospective cohort study. Eligible participants seen in consultation for breast reduction between 2010 and 2016 were invited to complete the BREAST-Q Reduction questionnaire, both preoperatively and 12 months postoperatively. The BREAST-Q is a validated patient-reported outcomes instrument which measures four areas of health: Satisfaction with Breasts, Psychosocial Wellbeing, Physical Wellbeing and Sexual Wellbeing. Scores are transformed for each domain from 0 (worst) to 100 (best). Results of this study were compared to published normative data. Paired t-tests were used to analyse the differences in mean scores.</p> <p>Results 168 participants completed the preoperative questionnaire and 156 completed the postoperative questionnaire. Statistically significant improvements were observed across every domain of the BREAST-Q following breast reduction surgery ($p < 0.001$). Mean scores preoperatively versus postoperatively were as follows: Physical Wellbeing, 44.0 (± 15.5) vs 76.6 (± 12.1); Satisfaction with Breasts, 21.9 (± 10.9) vs 73.3 (± 17.3); and Psychosocial Wellbeing, 32.4 (± 12.8) vs 69.3 (± 19.8). In comparison to the published normative data, preoperative quality of life for women undergoing breast reduction was significantly lower. Postoperatively, patients scored higher than the norm.</p> <p>Conclusion Bilateral breast reduction is a highly effective procedure for improving quality of life in women and relieving the health burden of macromastia.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>CROTTY, M., KILLINGTON, M., LIU, E., CAMERON, I., KURRE, S., BILLINGSLEY, K. ET AL</p>	<p>Aged Care</p>	<p>Mon 4th 4.30-4.45pm</p>	<p>ORAL</p>	<p>Title: Hip fracture rehabilitation for people living in nursing homes? Results of a RCT and a SA Citizens Jury’s opinion</p> <p>Abstract:</p> <p>Background: It is unclear whether people living in nursing homes benefit from post acute rehabilitation and few trials are done with this group who often suffer dementia. In a group of nursing home residents who were managing to walk (independently, with aids or with assistance) prior to fracture, our aim was to determine whether post-operative rehabilitation (which included a comprehensive geriatric assessment and interdisciplinary rehabilitation program) delivered in nursing homes would improve mobility compared to receiving usual nursing home care.</p> <p>Methods/Design: Post operatively people admitted from nursing homes with hip fractures were randomly allocated to receive a 4 week geriatric rehabilitation program (minimum 3 visits per week) or usual care. The primary outcome was mobility. Outcomes were measured at 4 and 12 months.</p> <p>Results: 240 patients were randomly allocated to treatment (n=121) and control (n=119) groups. All measurements were balanced by the randomization at baseline. The average age was 88.6 years (SD 5.6, Range 70-101) with 10% (24) of participants aged over 95 years. At 4 weeks those in the treatment group walked better than those in the control group (mean difference 1.9, 95% CI: 0.6-3.3, p=0.0055). At 12 months outcomes did not differ between treatment and control groups.</p> <p>Discussion: Even in frail older people post operative comprehensive geriatric assessment and a 4 week program of multidisciplinary rehabilitation can be tolerated and will produce benefits. We discussed these results with a Citizens Jury of randomly selected South Australians over 2 days in the context of a statewide health reform process focusing on “value”. Human rights and quality of life issues for people with dementia outweighed arguments on “return on investment” and the Jury argued to provide outreach rehabilitation to people living in nursing homes.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>DHARMAWARDA NA, N.</p>	<p>Cancer</p>	<p>Tues 5th 11.30-11.45am</p>	<p>ORAL</p>	<p>Title: Selected ion flow tube mass spectrometry for human breath analysis: A biomarker project for Head and Neck Squamous Cell Carcinoma.</p> <p>Abstract: Background Selected ion flow tube mass spectrometry (SIFT-MS) is a novel technique for analysing volatile organic compounds (VOCs) in breath. Previous studies have identified VOCs as potential biomarkers for detection of head and neck cancer. However, variations in methodology between studies make direct comparison difficult. We present a scoping review analysing different methods utilised for SIFT-MS. We also present a pilot study based on the best methodology identified from the scoping review.</p> <p>Methods A scoping review of human breath analysis was conducted using PubMed, Embase, Scopus and ProQuest to identify literature using SIFT-MS technology. A standardised collection protocol was developed for our unit, based on the current literature and a pilot dataset was collected for comparison between cancer and non-cancer patients.</p> <p>Results We identified and reviewed a total of 110 studies. Appraisal indicated substantial variability in types of breath collection bags, transport, storage and method of analysis. Our pilot study included 20 patients with 10 cancer patients and 10 non-cancer controls. We found 2-furfuryl-mercaptan, ethanol, formaldehyde, hydrogen-cyanide, methyl-mercaptan, nonanal, and propane to be detectable in head and neck cancer patients. We also found a significant reduction in methyl-mercaptan levels in patients with gastro-oesophageal reflux disease.</p> <p>Conclusion The scoping review found significant variability in the methodology and analysis of VOCs. We propose a standardised protocol for collecting breath samples from pre-operative patients for VOC analysis by SIFT-MS. We have identified potential breath biomarkers in our head and neck cancer patients in this pilot study.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>DIXON, D.,</p>	<p>Infectious Diseases</p>	<p>Thurs 7th 9.00-9.15am</p>	<p>ORAL</p>	<p>Title: Leukocyte activity in models of acute and chronic lung injury</p> <p>Abstract: Lung injury can be triggered by direct or indirect injury to the thin (approx 0.1µm) alveolar epithelium. This epithelial surface is constantly susceptible to potential injury through both its exposure to environmental air containing pathogens, toxins and particulate matter, and its close proximity to the pulmonary microvasculature which carries potent stimulants in the form of toxins, immunological mediators and activated leukocytes. Respiratory response to most forms of injury is similar ie through the release of inflammatory mediators in the lung which are responsible for the recruitment and activation of leukocytes. While inflammatory activation and neutrophil chemotaxis may be beneficial in the short term by, for example, aiding bacterial or viral killing, substantial damage is also incurred to the surrounding respiratory epithelium culminating in diffuse epithelial damage, increased capillary permeability, interstitial and alveolar oedema and cellular and protein infiltration and accumulation followed by diminished respiratory function. The Lung Injury Research Laboratory in the Intensive and Critical Care Unit, utilises both animal models and clinical studies to investigate the mechanisms, manifestations and potential therapies for many forms of lung injury, including acute respiratory distress syndrome (ARDS), chronic heart failure, bronchiolitis, radiation-induced lung injury, and fluid induced lung injury. This presentation will touch on some of the major causes of acute lung injury, the mechanisms by which they each elicit and maintain the inflammatory response and the ultimate physiological effects on respiratory function. In addition, some recent advances in potential treatments will be covered.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>DOELTGEN, S., RIGNEY, L., COCK, C., OMARI, T.</p>	<p>Gastroenterology</p>	<p>Thurs 7th 10.45-11.00am</p>	<p>ORAL</p>	<p>Title: Effects of anodal transcranial direct current stimulation on swallowing characterised by corticobulbar excitability and high-resolution pharyngeal manometry</p> <p>Abstract:</p> <p>Background: Neurostimulation, such as anodal transcranial direct current stimulation (atDCS), has emerged as a potentially effective approach to rehabilitating impaired swallowing. However, the precise neurophysiological and biomechanical effects of atDCS on swallowing remain unclear.</p> <p>Objective: To investigate the effects of atDCS on corticobulbar motor excitability, as assessed by transcranial magnetic stimulation evoked motor potentials as well as swallowing function, as assessed by high resolution pharyngeal manometry.</p> <p>Participants: 20 healthy participants (age range 19-35 years, mean 24.5 years).</p> <p>Methods: Participants underwent 20 minutes of sham or anodal tDCS at 1.5mA in separate sessions. Behavioural outcomes included: i. timed water swallow test, ii. maximal tongue pressure, iii. skilled swallowing accuracy and iv. in a subgroup, biomechanical measures related to pharyngeal deglutitive pressures and bolus flow. Neurological outcome measures consisted of motor evoked potential (MEP) amplitude in the floor of mouth muscle group at baseline and 15, 30 and 45 minutes post tDCS.</p> <p>Results: MEP amplitude increased following anodal tDCS ($p=0.016$), in particular at 30min ($p=0.015$) and 45min ($p=0.006$) post anodal tDCS, but not following sham tDCS ($p=0.47$). Clinical outcome measures did not change following either stimulation type ($p>0.05$). Biomechanically, peak pressure in the upper esophageal sphincter decreased, and bolus admittance increased, following anodal tDCS ($p<0.05$).</p> <p>Relevance: These findings contribute to evaluating the effects of tDCS as a potential rehabilitation approach to impaired swallowing. Exploring the neurophysiological mechanisms of anodal tDCS in healthy participants is an important first step before effective treatment protocols for patients with swallowing disorders can be developed.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>DUE, W.L., WATSON, D.I., BASTIAN, I. AND HUSSEY, D.J.</p>	<p>Cancer</p>	<p>Tues 5th 5.15-5.30pm</p>	<p>ORAL</p>	<p>Title: Anticancer properties of tamoxifen metabolites in oesophageal adenocarcinoma cells</p> <p>Abstract</p> <p>Background We have previously identified estrogen receptors (ER) in oesophageal adenocarcinoma (OAC) tumours and cell culture models, and demonstrated reduced cancer growth when treated with the ER modulator 4-hydroxytamoxifen. Tamoxifen is converted <i>in vivo</i> to active metabolites. One of these, endoxifen, is under investigation as therapy for breast cancer. In this study, we assessed the impact of endoxifen <i>in vitro</i> in OAC and breast cancer cells, and then developed a pre-clinical culture model in which OAC endoscopy-derived tumour biopsies were cultured and treated <i>ex vivo</i>.</p> <p>Methods Six OAC and two breast cancer cell lines were treated for 48 h with 10 µM 4-hydroxytamoxifen or 10 µM endoxifen. Response was assessed with MTS viability and annexin V/PI flow cytometric apoptosis assays. Explanted endoscopy sourced OAC biopsies were similarly treated. The response in the explants was assessed by TUNEL analysis of apoptosis and LDH assay.</p> <p>Results Both metabolites of tamoxifen were cytotoxic in all cell lines. Endoxifen was more cytotoxic than 4-hydroxytamoxifen in 5 of 6 OAC and both breast cancer cell lines; cytotoxicity in OAC cells was of a similar magnitude to breast cancer cells. Apoptosis occurred in 9.1% to 47.6% OAC cells treated with 4-hydroxytamoxifen, and 19.3% to 54.8% OAC cells treated with endoxifen. Data from the cancer explant model indicated that tissue viability was maintained throughout the culture period, and a significant cytotoxic response was seen in treated explants. TUNEL positive nuclei were higher in 4-hydroxytamoxifen (44.6%) and endoxifen (22.5%) treated explants compared with controls (1.2% and 6.2%; p = 0.0312 and p =0.0229, respectively). This response was confirmed by analysis of LDH release.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>EVERINGHAM, T. & WENZEL, T.</p>	<p>Aged Care</p>		<p>POSTER</p>	<p>Title: Investigation of Three Health Scales in End Stage Renal Disease Patients on Haemodialysis</p> <p>Abstract: Background: Frailty, the manifestation of health deficits accumulated over a lifetime, comorbidity, and functional status have all been shown to predict adverse health outcomes in older adults. The Multidimensional Prognostic Index (MPI), Charlson Comorbidity Index (CCI), and Barthel Index (BI) have been developed to quantify frailty, comorbidity, and functional status, respectively. However, the associations between these scales and their clinical use in patients with end-stage renal disease (ESRD) are uncertain. Objective: To characterise frailty amongst ESRD patients, and determine the association between the MPI, clinical characteristics, and the CCI and BI. Design: Cross-sectional study of 93 ESRD patients aged 65 years or older who had been undertaking haemodialysis for at least 3 months. Method: Participants were interviewed during their dialysis session by structured questionnaire, and their clinical characteristics and medication profiles were recorded. ANOVA and Kruskal-Wallis were used to determine associations between each dependent variable and the MPI risk groups. Spearman’s rho was used to evaluate associations between the MPI, CCI, and BI. Results: Of the 93 patients that we studied, 33 (35.5%) patients were MPI-1 (low risk), 56 (60.2%) were MPI-2 (moderate risk), and 4 (4.3%) were MPI-3 (severe risk). The mean age was 77.3±6.50 years, and the mean BMI was 28.4±6.14 kg/m². Significant differences (p < 0.05) in the CCI and BI were observed across the 3 MPI categories. There was no significant difference in age or BMI across the three MPI groups. The BI was negatively associated with the MPI (rho = -0.697), and positively associated with the CCI (rho = 0.292). Conclusion: Our findings describe the cumulative health burden of the ESRD population, with most patients falling into the moderate risk MPI category. The MPI was not associated with age or BMI, but was associated with the BI and CCI.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>FORD, J.</p>	<p>Orthopaedic</p>	<p>Wed 6th 2.30-2.45pm</p>	<p>ORAL</p>	<p>Title: Clinical Diagnosis of Instability in TKA: Design and evaluation of a new diagnostic algorithm for the diagnosis of the unstable total knee arthroplasty</p> <p>Abstract: Introduction When considering revision knee arthroplasty, the key factor in achieving a satisfactory outcome is an accurate pre-operative diagnosis. This is then used to prepare a definitive management plan prior to performing the patient's surgery. This paper describes and evaluates a new algorithm to improve diagnostic accuracy in the failing knee and reduce the risks of unnecessary surgery to the patient.</p> <p>Method In this study, we retrospectively examined the records of 45 patients who had undergone our diagnostic examination under anaesthesia (EUA) at a single hospital centre for post-operative complications following a primary TKA. All procedures were performed by the senior author. Results were analysed to investigate any associations between EUA findings and the clinical need for revision surgery.</p> <p>Results There is no difference in the rate of revision between males or females. Knee joint aspirates and inflammatory markers are unpredictable tests for predicting whether revision surgery is required. Varus instability on fluoroscopic examination was the most reliable predictor ($p > 0.001$).</p> <p>Conclusions Our results confirm it is possible to set up a standardised diagnostic and management pathway for revision TKA surgery. This has reduced the number of patients having surgery performed for pain. Higher rates of 'minor revisions' are performed with a lower rate of complications,</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>GEORGE, D.M., INGLIS, M., CAMPBELL, D., WILSON, C.</p>	<p>Orthopaedic</p>	<p>Wed 6th 2.45-3.00pm</p>	<p>ORAL</p>	<p>Title: 3d printed acetabular components for complex revision arthroplasty. a case series.</p> <p>Abstract: Introduction & aims Revision total hip arthroplasty is a complex procedure and becoming more common. Acetabular implant loosening or fracture has previously been treated with a cup and cage construct. Recent studies have shown significant failure rates with Cup Cage constructs in more complex 3B and 3C Acetabular revisions. As a result the use of 3D printed custom made acetabular components has become more common.</p> <p>Method We present 3 cases with severe acetabular bone loss that were treated with 3D printed acetabular components. The components were manufactured by OSSIS medical in New Zealand. The patient’s original femoral stem was included in all cases. Pre operatively the implant design was approved by the arthroplasty team prior to final manufacture. The implants arrived within weeks after final approval was given. Implants were provided with a sterilisable model used intraoperatively for reference.</p> <p>Results Three cases of 3D printed acetabular implants have been used locally for complex revision total hip arthroplasty with no immediate intraoperative or postoperative complications. One patient fell, five years post operatively. Sustaining a periprosthetic femur fracture requiring plate fixation, however, the acetabular component remained stable.</p> <p>Conclusions 3D printed custom acetabular implants are an efficient, durable and cost effective option in complex revision total hip arthroplasty. Early results from the design team suggest improved results compared to TM cup / cage systems.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>GERACE, A., HU, F., O'KANE, D., & MUIR-COCHRAN, E.</p>	<p>Mental Health</p>	<p>Thurs 7th 10.45-10.55am</p>	<p>ORAL</p>	<p>Title: Examination of the use of chemical restraint on acute psychiatric inpatient units in South Australia</p> <p>Abstract: Chemical restraint, the use of pharmaceuticals to control patient behaviour and manage risk of harm, has been described as a highly coercive intervention with deleterious emotional and physical outcomes for consumers. However, in comparison to other containment practices used in psychiatric inpatient settings (mechanical and physical restraint, seclusion), few studies have investigated the prevalence of chemical restraint use, characteristics of patients who are restrained, and features of these events. The purpose of this retrospective study was to examine the use of chemical restraint across 12 acute inpatient psychiatric units in South Australia over a 12-month period (6/2015-6/2016). Rates of chemical restraint use in units ranged from 0.12 to 28.78 events per 1000 occupied bed days. More males (57.5%) than females experienced chemical restraint, with over 55% of patients having a diagnosis of schizophrenia, and a greater proportion of patients in the 25-34 year age range being restrained. Restraint use occurred early in consumers' admissions, and events often occurred at staff changeover and consumer meal times. The mostly commonly used medications were olanzapine (50% of events) and clonazepam (35%). Reasons for restraint and other intervention strategies (e.g. de-escalation) attempted were variable in level of detail documented by clinicians. Implications and challenges for clinicians working in these and other settings (e.g. EDs) will be discussed, as well as an agenda for current and further research between Flinders University and SALHN in this area within the context of national priorities to reduce the use of coercive measures in mental health care.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>GILES, T.</p>	<p>Clinical</p>	<p>Fri 8th 11.00-11.15am</p>	<p>ORAL</p>	<p>Title: Family Presence during Cardiopulmonary Resuscitation: who decides and how?</p> <p>Abstract: Introduction Thousands of people suffer cardiac arrest in hospital each year and around 90% of these people die, frequently separated from their loved ones. Family presence during resuscitation (FPDR) was introduced in the 1980s so family could be with their loved ones during life-threatening events. Evidence supports important benefits of FPDR. Yet, despite endorsement from professional groups, FPDR is not practiced widely in Australia and rationales for poor uptake are unclear.</p> <p>Aim To examine factors and perceptions impacting FPDR practices in Australian hospitals</p> <p>Method Using a constructivist grounded theory method, 28 in-depth interviews were undertaken with Australian clinicians, family members and a resuscitation patient to interpret and explain their meanings and actions when deciding whether to practice/participate in FPDR.</p> <p>Results The resultant grounded theory <i>the social construction of conditional permission</i> comprises a series of value-laden judgements as part of the decision-making process of whether to practice or participate in FPDR. In the absence of formal policies, decision-making was influenced primarily by individual values, preferences, and pre-existing expectations around societal roles and status. As a result, current practices were highly subjective and variable. Conditional permission for FPDR was impacted most by the personal preferences of individuals who were seen to be ‘in charge’ of permissions.</p> <p>Conclusion The introduction of clinical protocols and associated education is recommended as an important starting point to ensure future practice is guided by evidence and standards for health consumer safety and welfare rather than by personal values and preferences of individuals ‘in charge’ of permissions.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>GUIVER, N., BEALL, J., STEEB, A.</p>	<p>Women's Health</p>	<p>Wed 6th 11.15-11.30am</p>	<p>ORAL</p>	<p>Title: Can psychosocial screening in pregnancy enhance service engagement with vulnerable families, and improve outcomes for babies? Results from a small cohort of babies born at Flinders Medical Centre.</p> <p>Abstract: The early childhood years are a time of complex and rapid development, when a child's growing brain and body are exquisitely sensitive to their environment. Research increasingly indicates that psychological and social factors can have an <i>equally</i> strong influence on early development as physical and biological factors, and that risks should be identified and addressed at the earliest opportunity. Many Australian hospitals, including Flinders Medical Centre, now incorporate psychosocial screening and referral programs within antenatal care, however evidence for effectiveness is lacking. Specifically, do such programs promote service engagement with vulnerable families <i>beyond</i> the birth of their child, and could this make a difference to babies' outcomes? In this collaborative project involving Flinders Medical Centre (FMC) and the community-based Child and Family Health Service (CaFHS), we followed a cohort of mothers and babies identified antenatally as psychosocially "at risk", through to the babies' 6-9-month health check with CaFHS. By linking clinical data from both agencies, we examined the transfer of psychosocial risk information, initial and sustained service engagement, and babies' outcomes, across this period. Results highlight that sharing antenatal psychosocial risk information can trigger assertive postnatal service practices, leading to higher rates of engagement with vulnerable families compared with the broader SA population. However, this engagement is not well sustained, and is affected by families' overall risk burden as well as several modifiable service characteristics. These findings will be used to design better services for vulnerable families, directed toward improving every child's chance of the best possible start to life.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>HUGHES, D.L., FLIGHT, I., CHAPMAN, J. ET AL</p>	<p>Cancer</p>		<p>POSTER</p>	<p>Title: Delivering health messages regarding cancer awareness and prevention to migrants attending migrant English courses in Australia: Is this feasible?</p> <p>Abstract: BACKGROUND: In Australia, cancer disparities exist between different migrant communities, and not all groups engage in cancer prevention behaviours to the same degree. Traditional health messaging may be inaccessible to migrants for cultural, language, or literacy reasons. New methods of health promotion are needed. Abroad, blending cancer literacy into English-as-a-Second-Language (ESL) education is a promising approach to reach non-English speaking migrants. Could this strategy be utilised in Australia? Guided by the RE-AIM framework, this preliminary project aimed to identify the feasibility of this approach within the Australian context.</p> <p>METHOD: Focus groups were held with teachers delivering adult migrant-ESL programs, and individual interviews were held with migrant resource personnel.</p> <p>RESULTS: Thematic Framework Analysis revealed overwhelming enthusiasm for a cancer prevention ESL resource. For successful reach to multiple communities and implementation in multiple migrant-ESL programs, this resource should be flexible to cater for multiple cultures, language levels, and incorporate varied communicative activities and media.</p> <p>CONCLUSIONS: This study offers some understanding of barriers and facilitating factors to guide development of an ESL resource feasible for inclusion in current migrant-ESL programs.</p> <p>RESEARCH IMPLICATIONS: We identified limited consideration of cultural constraints on curriculum design. Future work will address this limitation and a module will be developed and trialled.</p> <p>CLINICAL IMPLICATIONS: Merging cancer prevention literacy with available ESL education programs could be a feasible alternative to traditional health messaging for migrants to Australia</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>HUSSEY, D. CHIAM K, WANG T, WATSON DI, MAYNE GC, IRVINE TS, BRIGHT T, SMITH L, WHITE IA, BOWEN JM, KEEFE D, THOMPSON SK, JONES ME</p>	<p>Gastroenterology</p>	<p>Thurs 7th 11.00-11.15am</p>	<p>ORAL</p>	<p>Title: Circulating Serum Exosomal miRNAs As Potential Biomarkers for Esophageal Adenocarcinoma</p> <p>Abstract:</p> <p>BACKGROUND: The poor prognosis and rising incidence of esophageal adenocarcinoma highlight the need for improved detection methods. The potential for circulating microRNAs (miRNAs) as biomarkers in other cancers has been shown, but circulating miRNAs have not been well characterized in esophageal adenocarcinoma. We investigated whether circulating exosomal miRNAs have potential to discriminate individuals with esophageal adenocarcinoma from healthy controls and non-dysplastic Barrett's esophagus.</p> <p>METHODS AND RESULTS: Seven hundred fifty-eight miRNAs were profiled in serum circulating exosomes from a cohort of 19 healthy controls, 10 individuals with Barrett's esophagus, and 18 individuals with locally advanced esophageal adenocarcinoma. MiRNA expression was assessed using all possible permutations of miRNA ratios per individual. Four hundred eight miRNA ratios were differentially expressed in individuals with cancer compared to controls and Barrett's esophagus (Mann-Whitney U test, P<0.05). The 179/408 ratios discriminated esophageal adenocarcinoma from healthy controls and Barrett's esophagus (linear regression, P<0.05; area under receiver operating characteristic (ROC)>0.7, P<0.05). A multi-biomarker panel (RNU6-1/miR-16-5p, miR-25-3p/miR-320a, let-7e-5p/miR-15b-5p, miR-30a-5p/miR-324-5p, miR-17-5p/miR-194-5p) demonstrated enhanced specificity and sensitivity (area under ROC=0.99, 95% CI 0.96-1.0) over single miRNA ratios to distinguish esophageal adenocarcinoma from controls and Barrett's esophagus.</p> <p>CONCLUSIONS: This study highlights the potential for serum exosomal miRNAs as biomarkers for the detection of esophageal adenocarcinoma.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>HUYNH, K., CHEW, D., HORSFALL, M.</p>	<p>Public Health</p>	<p>Wed 6th 9.45-10.00am</p>	<p>ORAL</p>	<p>Title: Frequent Flyers in Adelaide’s Hospital Emergency Departments (ED) and the Demand for Acute Hospital Services – A Statewide study2007-2005</p> <p>Abstract:</p> <p>Background: Frequent flyers (FFs; 4 or more presentations in 12-months) have long been studied. However, these snapshots have yet to capture the position of acute hospital services in treating the community’s needs during acute illness.</p> <p>Aims and objectives: To capture the position of Adelaide’s acute hospital services in the wider care pathway, in addressing the community’s needs during acute illness. To provide insights into the relationship between acute illness and health-seeking behaviours for acute hospital services and requirements for inpatient care.</p> <p>Hypothesis: Key chronic diseases increase the likelihood for high acuity presentations to require inpatient care, and susceptibility being amenable to temporal factors and different among FFs.</p> <p>Design and setting: All adult ED presentations (n=2,156,184) in metropolitan SA from 01/07/2007-31/07/2015.</p> <p>Main outcome measures: The influence of chronic disease on acuity of illness and requirement for admission, adjusted for temporal factors, age and gender.</p> <p>Results: Over one-half of Adelaide’s population (~1.32 million) have sought acute hospital services (n=717,310). Each calendar year, total presentations rose by 0.3-0.4%, while similarly admissions rose an average of 0.4%. There were more non-FFs (n=677,703; 94.5%) than FFs (n=39,607; 5.5%), when considered at baseline. Yet FFs, considered at any timepoint accounted for 20.1% of presentations. Chronic disease was a key factor in admitted higher acuity presentations. Surprisingly, temporal factors were a stronger driver for health-seeking behaviour towards acute services.</p> <p>Conclusion: Preliminary quantification of demand for acute hospital services during acute illness indicates susceptibility to health-seeking behaviours for acute services largely driven by temporal factors, moderated by disease.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>JAENSCH, D., BAKER, N., GORDON, SU.</p>	<p>Public Health</p>	<p>Wed 6th 9.00-9.15am</p>	<p>ORAL</p>	<p>Title: Positive health experiences under Patient Centred Care Principles– a systematic review</p> <p>Abstract: This study synthesises the literature about contemporaneous experiences of patients and healthcare professionals (HCP) during health consultations to determine the principles that contribute to a positive experience. A literature review informed keywords for searching in 5 databases. PRISMA protocol and Endnote were used to maintain and reduce 1,379 papers to 9 qualitative and 5 mixed methods; assessed using Critical Appraisal Tools.</p> <p>Synthesis of the studies was performed using descriptive-interpretative method and narrative approach. According to NHMRC Hierarchy of Evidence the papers were level III-3. Critical appraisal indicated they were mostly of moderate quality. Principles identified by both patients and HPC as contributors to positive healthcare experiences included; Communication, with open dialogue between practitioner and patient based on mutual understanding, empathy and equity; Information sharing, empowering the patient in the management of their health and illness, and active decision maker in their care; an Organised health service - short wait times, friendly staff, physical comforts and longer consults. These principles were identified during care for acute through chronic conditions, primary and tertiary care settings, and across borders; North America, Europe, and Malaysia.</p> <p>This systematic review indicates shared positive patient and healthcare professional experiences occur when the principles of Patient Centred Care are the basis of care. Differences in perceptions between HCP and their patients during the same health consultation were apparent and the presentation will provide suggestions based on the literature to overcome these discrepancies and allow the industry to move from analysis to implementation of PCC principles.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>JOHN, M. & SIERAKOWSKI, K.,</p>	<p>Orthopaedic</p>	<p>Wed 6th 3.00-3.15pm</p>	<p>ORAL</p>	<p>Title: A study to evaluate the use of patient reported outcome measures in hand clinics</p> <p>Abstract: Introduction: Patient-reported outcome measures (PROMs) are questionnaires that quantify health-related quality of life. The intention of this study is to explore the integration of these PROMs into the clinical care of patients in the real world local setting of Flinders Medical Centre (FMC) hand clinics.</p> <p>Methods: Participants are randomised to complete either the Disability of the Arm, Shoulder and Hand (Group A), the Michigan Hand Questionnaire (Group B) or the Patient rated wrist/hand evaluation (Group C). Participants are asked to complete this particular type of questionnaire at intervals that coincide with their outpatient appointments.</p> <p>Results: (Interim results are given as this study currently still in progress; due for completion at the end of May. Final results can be forwarded when available. The final results will be presented at Research Week and will include demographic analysis of acceptors vs refuses, analysis of scores and missing data.) A total of 442 participants were enrolled in this study. Initial questionnaires completed per group; Group A (144), Group B (150) and Group C (148). Second questionnaire completion per group; Group A (32), Group B (49) and Group C (33). The number of people approached to participate who declined was 79, resulting in a refusal rate of 18%. The number of people who have withdrawn from the study is 7 (1.6%), 4 from Group B and 3 from Group C.</p> <p>Conclusion: The acceptance rate of 82% indicates that the integration of a patientreported outcome measure into the hand clinics at Flinders Medical Centre is acceptable to patients.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>KANDEL, H., KHADKA, J., PESUDOV, K.</p>	<p>Ophthalmology</p>	<p>Fri 11.30- 11.45am</p>	<p>ORAL/P OSTER</p>	<p>Title: Comparison of refractive error-specific quality of life issues between developed and developing country settings.</p> <p>Aim: To compare the refractive error-specific quality of life (QoL) issues between developed and developing country settings, and to determine if separate patient reported outcome instruments are required to measure refractive error-specific QoL in these settings.</p> <p>Methods: Qualitative studies were conducted in Nepal and Australia to understand the impact of refractive error on QoL. In-depth semi-structured interviews were conducted with adults (>= 18 years old) having refractive error. The interviews were recorded, transcribed and coded in the NVivo software (Version-11). Thematic analysis was carried out using deductive and inductive processes. QoL issues were compared using the coding-query matrices.</p> <p>Results: We interviewed 48 adults (Median age, 49 years; female, 29; myopia, 36; hyperopia, 12; presbyopia, 23; glass-wearers,39 ; contact lens wearers, 17; refractive surgery, 17) in South Australia. Similarly, we interviewed 101 adults (Median age, 34.1; female, 46; myopia, 56; hyperopia, 21; presbyopia, 28; glasses, 60; contact lens,17; refractive surgery, 20, uncorrected refractive error, 47) in Nepal. 296 unique QoL issues from 2,367 comments, and 308 unique issues from 3,477 comments were extracted across ten domains of QoL, in Australia and Nepal respectively. There was a difference of approximately one-third of the QoL issues between two settings. Activity limitation and health concerns were the major themes for the participants from Nepal and Australia respectively. The maximum similarity (93.3%) was observed for ocular-comfort symptoms.</p> <p>Discussion: The study enriches the understanding of the impact of refractive error on QoL. This study findings indicate a need of separate patient reported outcome measures for developed and developing country settings to assess comprehensive QoL.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>LAVAR, K., CATIONS, M., CROTTY, M., LOW, L., CLEMSON, L., ET AL</p>	<p>Aged Care</p>	<p>Mon 4th 4.00-4.15pm</p>	<p>ORAL</p>	<p>Title: Rehabilitation in dementia care: perspectives from people with dementia and health professionals to guide service design</p> <p>Relevance to research week: This research is occurring in the southern health region and is recruiting health professionals working within SAHLN services. It aims to gather the perspectives of a range of health professionals about service delivery and planning. The presentation will engage the community about current perspectives toward rehabilitation in dementia care and opportunities for improvement.</p> <p>Abstract: People with dementia consistently report dissatisfaction with post-diagnosis care pathways that are fractured and unpredictable. Structured and multidisciplinary rehabilitation programs are offered for other degenerative neurological conditions (e.g. multiple sclerosis) but frameworks for rehabilitative dementia care have not been developed. The aim of this scoping study is to gather views from people with dementia and health professionals regarding the perceived value of rehabilitation in this context, service priorities, and barriers to implementation. This information will be used to inform service design. Recruitment via targeted sampling is ongoing. People with dementia are approached to participate where they are known to advocate for rehabilitation like services. Attempts are made to gather varied perspectives from participants ranging in age, gender, location and dementia type. Health professionals in a variety of fields (e.g. geriatricians, occupational therapists, physiotherapists) and service contexts (e.g. public health services, private providers) are approached if they deliver services to people with dementia in the community. Data is collected via structured interviews and analysed for themes. Themes are emerging to suggest that people with dementia lack clarity about the services available to them after diagnosis, and advocate for a structured system to support ongoing engagement. Health professionals report concerns about offering false hope but can see the value of more structured and multidisciplinary programs. Further themes will be discussed as data collection continues.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>LEVY, T.</p>	<p>Aged Care</p>	<p>Mon 4th 4.15-4.30pm</p>	<p>ORAL</p>	<p>Title: Investigating the amount of upper limb exercise stroke patients do at home and examining factors that may influence adherence to a home exercise program</p> <p>Abstract:</p> <p>Objectives: To evaluate the feasibility and acceptability of using an iPad to monitor the amount of upper limb practice completed by stroke patients prescribed with a home program and to explore factors that influence adherence.</p> <p>Method: Ten consecutive subjects randomised to the intervention arm of a randomised controlled trial investigating therapy after spasticity management for stroke patients (ACTRN 12615000616572) were recruited for this substudy. Participants were asked to perform and record a prescribed 60-minute upper limb program on an iPad daily. Exercises were based on the Graded Arm Supplementary Program. Four randomly selected recorded sessions for each participant were analysed by the physiotherapist to assess adherence to amount of exercise and content. The Self-efficacy for Exercise Scale, Perceived Social Support for Exercise Scale, Social Support for Exercise Scale, Adherence for Exercise Scale for Older People and System Usability Scale were administered to evaluate factors which influence adherence.</p> <p>Results: Participants performed exercises on average for 50.32 minutes (range 26.42-68.37). Self-reported practice time was 59.44 minutes (range 48-67.5). Mean number of repetitions was 154.80 (range 71-388). Higher levels of social support for exercise from family correlated with the amount of exercise performed ($r=.850$). Mean score for the System Usability Scale was 85.5 (range 47.5-100) indicating that participants were accepting of the technology.</p> <p>Conclusion/Key practice points: Monitoring of patient practice using an iPad is feasible and may prove more reliable than self-report. There is variability in the amount of upper limb exercise stroke patients do at home</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>LOFFLER, K.A., HELLEY, E., FREED, R. ET AL</p>	<p>Cardiology</p>	<p>Tues 5th 10.45-11.00am</p>	<p>ORAL</p>	<p>Title: Effect of obstructive sleep apnea treatment on renal function in patients with cardiovascular disease</p> <p>Abstract: Rationale: Obstructive sleep apnea (OSA) is associated with impaired renal function, but uncertainty exists over whether OSA treatment can influence renal outcomes.</p> <p>Objectives: To determine the effects of continuous positive airway pressure (CPAP) on renal function in subjects with co-existing OSA and cardiovascular disease.</p> <p>Methods: This was a substudy of the international <u>S</u>leep <u>A</u>pnea and cardio<u>V</u>ascular <u>E</u>ndpoints (SAVE) trial that randomized 2717 patients with moderate-severe OSA and established coronary or cerebrovascular disease to receive CPAP plus usual care, or usual care alone. Renal function and adverse renal events were compared between CPAP treated (n = 102) and usual care (n = 98) groups. Glomerular filtration rate was estimated at randomization and the end of follow-up; urinary albumin:creatinine ratio was measured at study exit.</p> <p>Measurements and Main Results: In 200 substudy participants (mean age 64 years; median 4% oxygen desaturation index, 20 events per hour, mean estimated glomerular filtration rate at baseline 82 mL/min/1.73m²), the median (IQR) change in estimated glomerular filtration rate (mL/min/1.73m²/year) was -1.64 (-3.45 to -0.740) in the CPAP group and -2.30 (-4.53 to -0.71) in the usual care group (<i>P</i> = 0.21) after a median period of 4.4 years. There were no between-group differences in end-of-study urinary albumin:creatinine ratio, or the occurrence of serious renal or urinary adverse events during the trial. Level of CPAP adherence did not influence the findings.</p> <p>Conclusions: CPAP treatment of OSA in patients with cardiovascular disease does not alter renal function, nor the occurrence of renal adverse events</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>LOWE, M., YOUNG, G.P. & MICHAEL, M.Z.</p>	<p>Cancer</p>		<p>POSTER</p>	<p>Title: Enrichment of epithelial exosomes to increase the specificity of circulating microRNAs as biomarkers for colorectal cancer</p> <p>Abstract: Colorectal cancer (CRC) is a leading cause of cancer related death in Australians but, if detected early, is curable by resection. More sensitive and specific methods are being developed to enhance detection in screening programs. To identify biomarkers, changes in circulating microRNAs (miRNA) between control and CRC were identified. CRC patients often present with co-morbidities including cardiac disease, hypertension and diabetes. It is notable that some CRC associated miRNA have also been proposed as biomarkers for these diseases. Epithelial Cell Adhesion Molecule (EpCAM) is a cell surface molecule expressed on epithelium-derived exosomes. EpCAM labelled beads were used to capture epithelial tumour exosomes from serum to enrich for CRC associated miRNA miR-17, miR-19b, miR-20b, miR-21, miR-25, miR-186 and miR-486. Relative miRNA levels were determined by real time RT-PCR and were compared to unenriched sera in a cohort comprising 46 non-CRC controls (C), 51 advanced adenoma (AA), 32 stage III (SIII) and 18 stage IV (SIV) CRC patients. Significant differences in miRNA levels were seen in C participants between those with or without co-morbidities. The standout miRNA was miR-21. EpCAM enrichment enhanced CRC specificity (ANOVA $p < 0.05$) even when co-morbidities were taken into account. Poorer survival occurred in CRC patients with high EpCAM-enriched miR-21 levels (> 0.004) encompassing all SIV and 78% SIII patients ($p < 0.05$). Survival was poorest in patients with high miR-21 levels and low miR-186 levels, including 89% SIV patients ($p < 0.001$). Results show promise that exosome enrichment may help to increase diagnostic specificity and that co-morbidities can influence miRNA levels in blood.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>MAHER, D., LARCOMBE, R., POTTS, S. , WIERSEMA, U.</p>	<p>Infectious Diseases</p>		<p>POSTER</p>	<p>Title: Antimicrobial Stewardship in a Tertiary Intensive Care Unit</p> <p>Abstract: Background: Antimicrobial stewardship programs are increasingly implemented in intensive care units (ICU) to combat the emerging threat of antimicrobial-resistance. In order to optimise these programs, interventions need to be tailored to target problem areas.</p> <p>Aim: To provide an overview of the current antimicrobial prescribing patterns in a 32-bed ICU and thereby identify areas requiring improvement.</p> <p>Method: A 10-week prospective observational audit was conducted in the ICU of a public tertiary hospital. Patients on antimicrobial treatment or surgical prophylaxis antibiotics were audited. The primary outcomes were: duration of surgical antibiotic prophylaxis; duration of therapy for pneumonia, urosepsis and peritonitis; de-escalation within 24-hours of microbiological results returning for empirical therapy; appropriate prescribing in penicillin allergy. Adherence to guidelines were also assessed.</p> <p>Results: A total of 277 cases were included. Duration of surgical antibiotic prophylaxis and adherence to guideline durations are: cardiothoracic 21.6 hours (83.9% adherence), vascular 14.9 hours (81.8%), neurosurgery 20.4 hours (40.0%) and general surgery 11.1 hours (79.6%). The mean duration of therapy was 8.8±4.7 days (62.5% adherence) for community-acquired pneumonia, 8.5±4.6 days (28.6%) for hospital-acquired pneumonia and 11.9±4.6 days (46.2%) for ventilator-associated pneumonia. Urosepsis and peritonitis were underpowered and complex. De-escalation occurred 63.2% of the time, with 75% occurring within 24-hours of microbiological result availability. Antibiotic selection in 68.0% of patients with a documented penicillin allergy was appropriate.</p> <p>Conclusion: This study successfully identified baseline prescribing patterns and areas requiring improvement. With this information, tailored stewardship programs can be developed to improve antimicrobial utilisation in the critical care setting.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>MANAWAMMA, S.</p>	<p>Cancer</p>		<p>ORAL</p>	<p>Title: Prevention of Liver Fibrosis and Cancer Australia - Northern Territory: Investigating use of a urinary metabolite panel as a screening test for diagnosis of Hepatocellular Carcinoma</p> <p>Abstract Hepatocellular Carcinoma (HCC) is the most common form of liver cancer. Indigenous Australians in the Northern Territory (NT) have a six times higher incidence of HCC compared to non-Indigenous Australians (1), one major contributing factor being the endemicity of hepatitis B infection (HBV) with a seroprevalence of between 3–12% (2, 3). The NT HBV public health guideline (4) and the CARPA (Central Australian Rural Practitioners) manual (5) both recommend that Indigenous individuals with chronic HBV over the age of 50 receive 6-monthly screening for HCC with serum alphafetoprotein (AFP) testing and a liver ultrasound scan. This screening method has proven ineffective in enabling early intervention due to both logistical and accuracy challenges. This is reflected in a recent study that showed the median time from diagnosis of HCC to death for Indigenous people in the NT, between 2000-2011, was 64 days (1). The American Association for the Study of Liver Diseases (6) and its European counterpart (7) have removed AFP testing from their respective screening guideline recommendations, resulting in further research in the areas of metabolomic and proteomic based biomarker discovery. This research has identified urine metabolite panels with diagnostic superiority over AFP in detection of HCC, achieving both high sensitivity (87%) and specificity (90%) in discriminating HCC from cirrhosis (8). The aim of this project is to identify a urinary metabolite panel to screen for HCC within the context of remote Aboriginal communities. This will be achieved through collaboration with Menzies School of Health Research and the Imperial College London.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>MATTI, A.</p>	<p>Mental Health</p>	<p>Thurs 7th 10.55-11.05am</p>	<p>ORAL</p>	<p>Title: Using the Maastricht approach to improve outcomes for patients experiencing auditory verbal hallucinations: Four case reports</p> <p>Abstract: Auditory Verbal Hallucinations (AVHs) are sensory phenomenon that occur in the absence of external stimuli and are sometimes referred to by patients as the <i>experience of hearing voices or voice hearing</i>. These have been attributed by patients to traumatic events, spirits, ghosts and deceased family members etc. These vary in terms of frequency, duration, , number of voices, form of address, content, acoustic and linguistic complexity. Patients often have feelings of loss of control, helplessness, social isolation, and significant functional disability. Given AVHs are viewed as mostly distressing for patients, mental health professional’s main goal has been to treat these symptoms effectively. However, it is important to note that one in four persons who experience AVHs does not respond to antipsychotic medications despite adequate adherence. The aim of this study was to explore a novel approach to addressing AVHs.</p> <p>The Maastricht Hearing Voices Interview which is a structured interview which was developed in collaboration with patients as a way to explore the complex aspects and precipitants of AVHs. This is thought to help facilitate a better understanding of the linkages between stressors, affects, and AVHs, in order to foster better coping mechanisms for dealing with underlying distress. Four patients underwent thirteen 50-minute sessions to further understand their AVHs.</p> <p>All four patients showed improved scores on the hope, empowerment and Positive and Negative Symptoms of Schizophrenia scales. This case series supports the utility of this approach in improving patient outcomes. Further research is needed to provide further evidence of its value.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>MILL, D., BAKKER, M., SHARRAD, S. ET AL</p>	<p>Neurosurgery</p>		<p>ORAL</p>	<p>Title: Shaken not deterred; Parkinson’s patients as a vulnerable group during hospital admission; a retrospective audit of inpatient medication related problems</p> <p>Abstract: <i>Background:</i> Hospital admissions for patients with Parkinson’s disease pose challenges related to timely administration of medicines. International data suggests people with Parkinson’s experience symptom control deterioration during admission, following medication dosing delays and/or omissions. There is currently a lack of data to validate this in the Australian setting. <i>Aim:</i> 1) Assess the frequency and type of Parkinson’s medication-related problems reported through an incident management system of a tertiary teaching hospital and 2) Compare the frequency and type of Parkinson’s medication-related problems identified through a retrospective case note audit. <i>Methods:</i> A structured search of incident management system reports from a tertiary teaching hospital over 3 years identified reports pertaining to Parkinson’s medication. A discharge diagnoses search identified admissions for patients with Parkinson’s disease over the same time period. A retrospective case note review was performed to describe and quantify medication-related events. <i>Results:</i> Nineteen Parkinson’s medication-related problems were reported through the incident management system (9 wrong dose, 7 omitted doses, 3 wrong formulation). Whereas case note review identified 236 medication-related problems during the first 50 admissions over the same time period (121 omitted doses, 97 delayed doses, 6 wrong orders). <i>Discussion:</i> Twelve times as many medication-related problems were identified via case note review vs. incident management system reporting, suggesting significant barriers exist to the use of incident reporting systems. Under reporting may limit development of innovations to improve practice. <i>Conclusions:</i> Despite relatively few incident management system reports, case note review indicates patients with Parkinson's disease are at risk of symptom control deterioration resulting from medication delays or omissions in the Australia hospital setting.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>MILL, D., DAWSON, J., JOHNSON, J.L.</p>	<p>Public Health</p>	<p>Wed 6th 8.30-8.45am</p>	<p>ORAL</p>	<p>Title: Managing acute pain in a patient who reports lactose intolerance: The tolerability of an old excipient reviewed</p> <p>Abstract: Background: Lactose intolerance reportedly affects up to 70% of the world’s population, leading to abdominal and systemic symptoms. Given lactose is one of the most commonly used excipients in the pharmaceutical industry, consideration must be given to the lactose content and subsequent safety of pharmacotherapy prescribed for patients with lactose intolerance. Aim: Summarise current literature examining the likelihood of inducing adverse effects through administration of lactose-containing pharmaceutical preparations in patients reporting lactose intolerance, describe how to assess individual patient risk and to review suitable analgesic options for this population in the context of a case-study. Method: Ovid MEDLINE database was searched using the terms: lactose intolerance OR lactose non-persistence OR lactase deficiency AND treatment OR therapy, lactose AND excipient. Data pertaining to specific formulations were obtained from MIMS. Results: It is evident that lactose intolerance is a highly variable, patient dependent, clinical condition and for most patients the lactose content of medications is not sufficient to induce symptoms. However, for a few adverse events may occur following ingestion. Discussion: When managing these patients clinicians should determine likely tolerability based upon the patient’s dietary lactose tolerance and the total calculated lactose exposure from the medication regimen. If unable to establish lactose tolerance or in a highly sensitive individual, options include: lactose free formulations (eg. oral liquid); alternative route of administration (eg. rectal) or trialing concurrent lactase replacement therapy. Conclusions: For patients reporting lactose intolerance, the individual’s’ likely tolerability should be determined and for those unable to tolerate any lactose there are various options.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>MILL, D., JOHNSON, J., COCK, V. ET AL</p>	<p>Public Health</p>	<p>Wed 6th 8.45-9.00am</p>	<p>ORAL</p>	<p>Title: Counting the costs of over-the-counter codeine misuse: A retrospective review of hospital admissions</p> <p>Abstract: Background: Numerous case reports detail life-threatening morbidities arising from misuse of, and dependence on, over-the-counter (OTC) combination analgesics containing codeine (CACC). While CACC-related harms are well documented, the cost of CACC-related complications to the health care system have not been evaluated. Aims: 1) Identify and describe patients hospitalised due to serious adverse effects relating to OTC CACC and; 2) Estimate the costs of identified OTC CACC-related hospital admissions. Methods: A search of International Classification of Diseases (ICD-10) discharge codes was performed to identify admissions to a tertiary teaching hospital relating to OTC CACC misuse, over a 5-year period. A retrospective case note review was performed and patient characteristics, presenting morbidities, and resultant interventions were detailed. The hospital costing analyst supplied cost data for admissions identified. Results: Ninety-nine OTC CACC-related admissions (for 30 individual patients), were identified. Most related to gastrointestinal morbidities secondary to ibuprofen/codeine misuse. Patients consumed a daily mean of 28 OTC CACC tablets for a mean duration of 606 days prior to admission. These admissions were estimated to cost \$1,008,082 with a mean cost per admission of \$10,183. Discussion: Difficulty in identifying these patients and their misuse was also evident, highlighting that clinicians need to be vigilant with these types of presentations and where a history of misuse has been previously documented, clinically suspicious of the presentation in order to better prevent re-admission and therefore unnecessary costs. Conclusions: The outcomes of OTC CACC misuse are serious and come at a significant cost to patient health and the Australian healthcare system.</p>
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<p>MS,RP, SHAH, R., MAHONY, R., FLETCHER, J., FULLER, J.S.</p>	<p>Cardiology</p>		<p>POSTER</p>	<p>Title: Identification of Atypical Fabry Disease in an Australian Cardiac Population</p> <p>Abstract: Background: Fabry disease (FD) is a rare genetic disorder arising from a deficiency of the lysosomal enzyme, α-galactosidase A (α-GalA), vital for sphingolipid ceramide trihexoside (CTH) degradation. Cardiac involvement is the most common clinical manifestation of FD with left ventricular hypertrophy (LVH) being the predominant finding. Screening studies in other countries observed varying prevalence rates (0-12%) of the cardiac variant of FD. Hence, the aim of this study was to determine the prevalence of atypical FD in Australian cardiac patients with unexplained mild-moderate LVH.</p> <p>Methods: Study participants were selected from echocardiography database at Flinders Medical Centre (Studies 2010-2015). Participants were of ages 18-75 presenting with unexplained mild-moderate LVH(12-15mm). Exclusion criteria included known >mild AS, >moderate HT and cardiomyopathy. 3499 patients were invited to participate, of whom 405 consented, and had α-GalA levels tested using a dried blood spot (DBS) card. Patients with reduced α-GalA activity then underwent a confirmation testing with lyso-CTH and if indicative of FD, molecular testing. Genetic testing involved α-GalA mutation searching (using next generation sequencing) for cardiac mutations responsible for atypical FD.</p> <p>Results: Seven out of 405 (1.7%) participants had α-GalA levels in 0.2-2.3 range and required further mutation testing; 2 of these were confirmed as FD despite being under routine cardiac care. Hence, the prevalence of undiagnosed FD in this population was 0.5%</p> <p>Conclusion: FD is underdiagnosed in patients with unexplained LVH. Simple and inexpensive testing measures for α-GalA may be employed using DBS methods to reduce the number of patients with undiagnosed FD in this population.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>MULLER, K., WANG, J., DAVIES, J.</p>	<p>Cancer</p>	<p>Tues 5th 11.145-12mid</p>	<p>ORAL</p>	<p>Title: Prevention of Liver Fibrosis and Cancer Australia - Northern Territory: Investigating use of a urinary metabolite panel as a screening test for diagnosis of Hepatocellular Carcinoma</p> <p>Abstract Hepatocellular Carcinoma (HCC) is the most common form of liver cancer. Indigenous Australians in the Northern Territory (NT) have a six times higher incidence of HCC compared to non-Indigenous Australians (1), one major contributing factor being the endemicity of hepatitis B infection (HBV) with a seroprevalence of between 3–12% (2, 3). The NT HBV public health guideline (4) and the CARPA (Central Australian Rural Practitioners) manual (5) both recommend that Indigenous individuals with chronic HBV over the age of 50 receive 6-monthly screening for HCC with serum alphafetoprotein (AFP) testing and a liver ultrasound scan. This screening method has proven ineffective in enabling early intervention due to both logistical and accuracy challenges. This is reflected in a recent study that showed the median time from diagnosis of HCC to death for Indigenous people in the NT, between 2000-2011, was 64 days (1). The American Association for the Study of Liver Diseases (6) and its European counterpart (7) have removed AFP testing from their respective screening guideline recommendations, resulting in further research in the areas of metabolomic and proteomic based biomarker discovery. This research has identified urine metabolite panels with diagnostic superiority over AFP in detection of HCC, achieving both high sensitivity (87%) and specificity (90%) in discriminating HCC from cirrhosis (8). The aim of this project is to identify a urinary metabolite panel to screen for HCC within the context of remote Aboriginal communities. This will be achieved through collaboration with Menzies School of Health Research and the Imperial College London.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>NADEEM, K. DETTWILLER, P., & FITZPATRICK P.</p>	<p>Public Health</p>		<p>ORAL</p>	<p>Title: Burden of disease: a four-year retrospective study from an Indigenous sample from Wurli Wurlinjang Health Service in Katherine (NT)</p> <p>Abstract: Aboriginal populations of Australia have higher levels of comorbidities compared to their non-Aboriginal counterparts, predominantly due to the much higher prevalence of cardiovascular disease, diabetes, diabetic complications, and renal disease leading to complicated polypharmacy challenges. Thus, characterising, monitoring and management co-morbidities are important for the better health outcomes. Method: A retrospective clinical audit was conducted in February over four year (2012-2016) to review annual medical records from the Communicare© system of an Aboriginal Medical Services (Wurli Wurlinjang, NT). Clients' data was de-identified; varied characteristics from 104 male and 118 female classified as long term disease patients, were recorded. Descriptive statistics was applied to the data using Excel. Results: Over the four years, 31% (n=67) out of the total sample (n=220) of clients had an increase in number of co-comorbidities, while majority of patients had no change in their number of co-morbidities (69%). A burden of disease stratification by age group has been used to compare to a similar data set from AIWH showing that the studied group was comparable in level burden of disease with a slight less CVD burden. The majority of patients (45%) had an increase of their medication while 30% of patients whose medication number decreased and 25% stayed the same. Conclusion: This comparative study has highlighted the importance of the continuity of primary care in remote settings. The current findings suggest that access to a community health clinic is associated with positive health outcomes, including stabilization of polypharmacy and co-morbidities. 25%) had no change in the number of medications.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>NUSSIO, A., GEORGE, S., LIDDLE, J., BARR, C., ET AL.</p>	<p>Neurosurgery</p>	<p></p>	<p>POSTER</p>	<p>Title: CarFreeMe TI: a driving cessation intervention for people who have sustained complex trauma injuries in South Australia.</p> <p>Abstract: Aim: To determine the effectiveness of a community based education and support program (CarFreeMe TI) on community participation for individuals who are unable to return to driving following a trauma injury. Background: For people with complex trauma injuries, including spinal cord and traumatic brain injury, no longer being able to drive often leads to poorer physical and mental health outcomes and reduced community participation. Methods: Eligible participants will participate in a randomised cross over trial comparing the effects of the CarFreeMe TI intervention with standard care. CarFreeMe TI intervention involves six half day sessions that addresses the practical and psychological adjustment to driving cessation. Sessions are facilitated by an Occupational Therapist and peer leaders. Community participation will be measured through the use of a Global positioning System (GPS). Secondary outcome measures will provide a wider picture of quality of life, transport use and confidence with maintaining community participation without driving. A record of program costs will support a preliminary economic evaluation of the CarFreeMe TI intervention. Results: Analysis of data is currently underway and preliminary program outcomes will be presented. An overview of new software used for GPS data analysis will be presented. Discussion: The results of this study will provide information to inform the allocation of resources in community rehabilitation post trauma injuries.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>O'CALLAGHAN, M.E., RAYMOND, E., CAMPBELL, J., VINCENT, A.D. ET AL</p>	<p>Registry</p>	<p>Wed 6th 2.00-2.10pm</p>	<p>ORAL</p>	<p>Title: Tools for predicting patient reported outcomes in prostate cancer patients undergoing radical prostatectomy: a systematic review of prognostic accuracy and validity</p> <p>Abstract: Background Radical prostatectomy is a common surgical procedure performed to treat prostate cancer. Patient reported outcomes after surgery include urinary incontinence, erectile dysfunction, decreased quality of life and psychological effects. Predictive tools to assess the likelihood of an individual experiencing patient reported outcomes have been developed to aid decision making when selecting treatment.</p> <p>Methods A systematic review was undertaken to identify all papers describing tools for the prediction of patient reported outcome measures (PROMs) in men with prostate cancer treated with radical prostatectomy. To be eligible for inclusion, papers had to provide a summary measure of accuracy. PubMed and EMBASE were searched from July 2007. Title/abstract screening, and full text review were undertaken by two reviewers whilst data extraction and critical appraisal was performed by a single reviewer.</p> <p>Results The search strategy identified 3,217 potential studies, of which 191 progressed to full text review and 14 were included. From these studies, 27 tools in total were identified, of which 18 predicted urinary symptoms, six predicted erectile function and one predicted freedom from a group of three outcomes ("trifecta") (biochemical recurrence, incontinence and erectile dysfunction). Based on tool accuracy (>70%) and external validation, two tools predicting incontinence and two tools predicting erectile dysfunction are recommended.</p> <p>Conclusions A small number of tools for the prediction of patient reported outcomes following radical prostatectomy have been developed. Four tools were found to have adequate accuracy and validation and are recommended for implementation for the prediction of urinary incontinence and erectile dysfunction.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>PEGOLI, M.A., DEDIGAMA, M., MANGONI, A.A., RUSSELL, P.T. ET AL</p>	<p>Aged Care</p>	<p>Mon 4th 5.00-5.15pm</p>	<p>ORAL</p>	<p>Title: Proton Pump Inhibitors and Risk of Readmission and Mortality in Older Patients Discharged from a Tertiary Hospital to Residential Aged Care Facilities</p> <p><u>Abstract</u> Increasing evidence indicates that proton pump inhibitors (PPIs) are being overprescribed and are associated with numerous adverse effects. We sought out to investigate whether the use of PPIs, specifically in older hospital patients discharged to residential aged care facilities (RACFs), had any impact on hospital readmission rates and mortality.</p> <p>Patients ≥ 75 years, originally from home or a RACF, admitted to general medicine wards between 30th October 2014 and 1st May 2015 and discharged to a RACF, were recruited into the study. A comprehensive list of all pre-admission medications completed by a clinical pharmacist was utilised as the list of medications on admission. A discharge medication chart for each RACF, completed by a medical officer and countersigned by a clinical pharmacist, was utilised as the list of medications on discharge.</p> <p>The mean (SD) age of participants (N=102) was 87 (6) years, and 62 (60.8%) were female. Of the total population, 51 (50%) were taking a PPI on discharge. In adjusted analyses, PPI use was associated with an 82% increased rate of hospital readmission [IRR, 1.82; 95% CI (1.13-2.94), P = 0.014], and 124% increased rate of mortality [HR, 2.24; 95% CI (1.01-4.96), P = 0.047] within 6-months from initial discharge from hospital. The majority of patients (n=30/51; 59%) had an identifiable indication for a PPI based on their medical discharge summary, the most common of which was Gastro-Oesophageal Reflux Disease (n=16/30; 53%).</p> <p>Our study further highlights the need for physicians and pharmacists to continually review PPI use, especially in the older inpatient population.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>PESUDOVS, B., BAKER, R.A.,& BENNETTS, J.</p>	<p>Cardiology</p>		<p>POSTER</p>	<p>Title: The Lighthouse Hospital Project – Phase 3, Flinders Medical Centre Cardiac and Thoracic Surgical Unit.</p> <p>Abstract:</p> <p>The Lighthouse Hospital Project – Phase 3 is a three-year initiative by the Heart Foundation in partnership with the Australian Healthcare and Hospitals Association, funded by the Australian Government Department of Health, that aims to improve outcomes for Aboriginal and Torres Strait Islander (ATSI) peoples experiencing acute coronary syndrome.</p> <p>The project aims to achieve systemic change in the acute care sector through a quality improvement approach and builds on a Quality Improvement Toolkit that was developed and tested in eight pilot hospital sites, including Flinders, focusing on governance, cultural competence, workforce and care pathways.</p> <p>Phase 3 extends the project to 18 hospitals across Australia, capturing 40% of all cardiac admissions for ATSI peoples, and aims to ensure evidence-based, responsive and accessible, clinically appropriate and culturally competent care.</p> <p>In consultation with our Karpa Ngarrattendi Team and representatives from our local, country South Australia and Northern Territory communities, we will establish an action plan to complement our Phase 2 achievements (which concentrated on the pre-surgery and hospital stay of ATSI patients). We will enhance our cultural awareness and safety, staff education and plan to support our patients by developing the role of the Aboriginal Health Worker as part of our team. Integral to this is improving the patient pathway after surgery - including securing suitable accommodation, ensuring Primary Health Care support in the immediate post-operative period and improving post-surgery support and rehabilitation, which will support our ATSI patients from the time they leave hospital until well after they have returned to their community.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>PULFORD, E., HUILGOL, K., MOFFAT, D., HENDERSON, D.W. & KLEBE, S.</p>	<p>Cancer</p>		<p>POSTER</p>	<p>Title: The Prognostic and Diagnostic Implications for BAP1 in Malignant Mesothelioma</p> <p>Abstract: Malignant Mesothelioma (MM) is an aggressive malignancy of the serosal membranes, directly correlated with asbestos exposure. Accurate and early diagnosis and prognosis are difficult to determine, and treatment response is limited. <i>BAP1</i> is a tumour suppressor gene commonly mutated in MM, but its role in pathogenesis is not well understood. Although loss of <i>BAP1</i> has been reported as an adverse prognostic factor in other malignancies, in MM it is often associated with favourable prognosis. This project aimed to determine prognostic significance of <i>BAP1</i> expression in histology and cytology specimens in 81 MM patients, and to identify any association with VEGFA, an established prognostic marker in MM, to better understand disease pathogenesis pathways.</p> <p><i>BAP1</i> status was determined by immunohistochemistry on archival tissue and cytology blocks available through SA Pathology. ELISA was used to determine VEGFA protein concentration in pleural effusion samples. This work was approved by the Southern Adelaide Clinical Human Research Ethics Committee (approval number 381.09). <i>BAP1</i> mutation was found in 58% of histology and 59% of cytology specimens. Loss of <i>BAP1</i> expression in both surgical and cytology specimens was significantly associated with poorer survival in a multivariate analysis when controlling for age, sex, and histological subtype. Increased levels of VEGFA in pleural effusions were associated with poor survival as expected, and were also associated with <i>BAP1</i> expression. In conclusion, it is likely that the prognostic significance of <i>BAP1</i> is subject to individual variation, and precautions should be taken in interpretation of <i>BAP1</i> labelling in MM patient diagnostic reports.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>QUINN, E. & CARR, J.</p>	<p>Infectious Diseases</p>		<p>POSTER</p>	<p>Title: Clinical features and laboratory findings of travellers returning to South Australia with dengue infection</p> <p>Abstract: Background: Dengue is an arboviral disease which is endemic in tropical and subtropical regions globally. There has been a rise in imported dengue cases in Australia over the past decade. This study aims to identify the clinical and laboratory characteristics of patients diagnosed with dengue upon return to South Australia from travel. Methods: Retrospective analysis of cases for which dengue serology was requested from SA Pathology databases between 1 January 2014 and 31 January 2015. SAC HREC approval number 200.15. <i>Results:</i> There were 488 dengue requests identified, and 50 unique patients were positive for at least one of IgG, IgM or NS1. 51 patients with negative dengue tests were selected for comparison. Dengue was most commonly acquired in Indonesia (42%) and Thailand (12%). The most common clinical features in patients with dengue were fever (95%), headache (41%), myalgia and/or arthralgia (56%), and rash (36%). Dengue warning signs were noted in 14% of dengue patients, but no cases of severe dengue were identified. Common laboratory results included leukopenia and thrombocytopenia, and dengue patients also tended to have lower CRP values than the patients in the dengue negative group. Conclusion: Clinical features of patients with dengue in South Australia are consistent with those described in the WHO 2009 Dengue Guidelines. Common laboratory features for dengue included leukopenia, thrombocytopenia and relatively low CRP for febrile illness, and this picture was less commonly seen in patients for whom dengue testing was requested but returned negative results.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>RAGHAVENDRA, P., WOOD, D., GRACE, E., HUTCHINSON, C., NEWMAN, L.</p>	<p>Public Health</p>	<p>Wed 6th 10.00-10.14am</p>	<p>ORAL</p>	<p>Title: Impact of social media use training on the social networks of youth with disabilities living in rural South Australia</p> <p>Abstract: <i>Objective:</i> The aim of the study was to investigate whether social media use training enhances the social networks of young people with developmental disabilities living in rural South Australia. It was predicted that the mean number of online communication partners would increase after the social media use training. <i>Methods:</i> 17 young people (8 with communication difficulties) with a mean age of 16;3 years with intellectual disabilities or Autism Spectrum Disorder participated. The Canadian Occupational Performance Measure (COPM) was administered before and after intervention to measure performance and satisfaction in aspects of social media use. Goal Attainment Scaling was used to develop goals (e.g., to put photos on Facebook independently, to connect with friends). The Circles of Communication Partners tool mapped the number and type of offline and online communication partners before and after intervention. An individualised home intervention including appropriate assistive technology was provided to teach how to use social media. Participants and their parents were interviewed after the intervention regarding their views of the intervention as well as benefits and challenges. <i>Results:</i> Mean self-rated performance and satisfaction with performance on COPM increased post-intervention demonstrating an increase in social media skills. Wilcoxon signed ranks showed that significant increases were observed in Circle 6 (online communication partners, $p = .001$). Perceived improvements to speech and literacy, improved confidence and independence in social media use was reported by parents and participants. <i>Conclusion:</i> Individualised training can significantly improve social media skills of young people with disabilities living in rural areas and enhance their social networks.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>RAHIMI, M. HEATH, M., O'GRADY, A., MERCER, J., ET AL</p>	<p>Resp Sleep</p>		<p>POSTER</p>	<p>Title: A preliminary analysis of brief arousal and awakening responses associated with posture shifts in sleep, and the impact of supine-avoidance alarm treatment</p> <p>Abstract: This study aims to assess the frequency and duration of arousal and awakening responses associated with posture shifts during sleep, and to examine how quickly sleep resumes following posture shifts with and without supine avoidance alarm device. Inactive vs active supine-avoidance responses were examined in 20 patients with supine-predominant OSA. Kaplan-Meier and Cox regression analyses were used to examine effects of prior state (wake vs sleep), posture (supine vs non-supine) and treatment (vs baseline) on the time spent in supine vs non-supine postures, and sleep onset latency after each posture shift. Data from 20 patients (65% Males, mean±SD age 55.7±13.1 years, BMI 29.4±6.3 kg/m²) were available for preliminary analysis. From a total of 99 (baseline) vs 71 (treatment) sustained posture shifts (median [IQR] 5 [3-7] vs 2 [2-5] per patient), most [96%; 95/99 vs 68/71] were associated with full awakening or brief arousal, followed by 4.3±8.7 vs 2.2±5.6 min before sleep resumed. Fewer but residual sustained shifts to supine vs non-supine postures on treatment (18 vs 53, Fisher's p=0.034) vs baseline nights (41 vs 58), and a trend for faster sleep onset after shifts to supine (mean±SEM 0.6±0.2 vs 4.0±1.2 min, p=0.062) on treatment vs baseline nights suggest residual false negative and/or alarm sleep-through events. Most posture shifts occur shortly after an arousal/awakening or during established wake supporting higher centre involvement in posture shifts. Thus, supine-alarm device events occurring after supine shifts from sleep typically coincide with a brief posture-shift related return to wake, followed by a rapid return to sleep minimally impacted by the alarm per se.</p>
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RESEARCH WEEK ABSTRACTS Presented

RAMAN, K.	Cardiology	Tues 5 th 11.00-11.15am	ORAL	<p>Title: Cardiac Magnetic Resonance (CMR) Evaluation of Left Ventricular (LV) Functional, Morphological, And Structural Features in Children and Adolescents Vs. Young Adults with Isolated Left Ventricular Non-Compaction (iLVNC)</p> <p>Abstract:</p> <p>Background: Isolated left ventricular non-compaction (iLVNC) is a rare myocardial disorder however, most studies to date have focused on adults with iLVNC, while fewer CMR data in pediatric patients. The aim was to investigate the LV functional, morphological, and structural features revealed by CMR in children/adolescents with iLVNC, and compare them with those observed in young adults with iLVNC and healthy children/adolescents.</p> <p>Methods: The study population included 44 subjects: 12 consecutive children/adolescents (mean age 15±3 years, 75% male) and 20 consecutive young adults (mean age 35±7 years, 75% male) with a first diagnosis of iLVNC, and 12 healthy children/adolescents (mean age 15±3 years, 75% male). CMR with late gadolinium enhancement (LGE) imaging was performed to evaluate the LV function, the extent of LV trabeculation, and the presence/extent of LV LGE, a surrogate of myocardial fibrosis. Tissue-tracking analysis was applied to assess the LV global longitudinal (GLS), circumferential (GCS) and radial (GRS) strain.</p> <p>Results Compared to the healthy children/adolescents and the children/adolescents with iLVNC, the young adults with iLVNC had significantly lower LVEF, with no significant difference between the other two groups. The extent of LVNC and the presence/extent of LV LGE in the children/adolescents and the young adults with iLVNC was similar. Compared to the healthy children/adolescents, both the children/adolescents and the young adults with iLVNC had significantly impaired LV GLS ($p=0.036$ and $p<0.001$, respectively), GCS ($p=0.044$ and $p<0.001$, respectively), and GRS ($p=0.047$ and $p<0.001$, respectively).</p> <p>Conclusion: Complete phenotypic expression, subclinical impairment of myocardial deformation properties, and cardiac injury occur quite early in iLVNC patients.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>ROSLI, MOHD, KUMAR, R., WIKLENDT, L. ET AL</p>	<p>Gastroenterology</p>	<p>Thurs 7th 11.15-11.30am</p>	<p>ORAL</p>	<p>Title: Abnormal Distal Colonic Motor Patterns In Response To Meal In Patients With Diarrhoea Predominant Irritable Bowel Syndrome</p> <p>Abstract: BACKGROUND: Diarrhoea predominant irritable bowel syndrome (IBS-D) commonly occurs in the community and has a huge impact on the well-being and social function of sufferers. Although there are likely to be many aetiologies underpinning the condition, altered colonic motility is likely to underlie their clinical manifestations. However, the colonic dysmotility specifically responsible for symptoms in IBS-D has never been adequately described. METHODS: After overnight fasting, a 72-sensor (spaced at 1cm intervals) manometry catheter was colonoscopically placed and the tip clipped at the ascending colon in 13 patients (8 males, 5 female; mean age 42yr) with IBS-D (defined by Rome III criteria). Manometric recordings were taken for two hours pre and post a 700kCal meal. These data were compared to data from healthy controls recorded previously. In those healthy controls the colonic meal response was characterized by a significant increase in a retrograde cyclic motor pattern which occurred predominantly in the sigmoid colon. RESULTS: When compared to healthy controls, the increase in the 3-4 cycle per minute postprandial retrograde motor activity was significantly reduced in IBS-D (P < 0.05). CONCLUSION: A failed increase in the number of the postprandial distal colonic retrograde cyclic motor pattern represents a novel discriminative manometric marker for abnormal colonic motility in adult patients with IBS-D. In health we have hypothesised that this motor pattern may act as a brake preventing premature rectal filling. Its absence in patients with IBS-D may contribute to symptoms of postprandial urgency.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>ROSLI MOHD, LIEBBRANDT, E., LUKASZ, W. ET AL</p>	<p>Gastroenterology</p>	<p>11.30-11.45am</p>	<p>ORAL</p>	<p>Title: High-resolution colonic impedance manometry: can we track gas movements in the human colon?</p> <p>Abstract: BACKGROUND: The use of high-resolution impedance manometry is well-established in the oesophagus for detailing the relationships between bolus transit and motor patterns. Relating such movements in the colon in real time remains poorly defined. METHOD: After an overnight fast and bowel preparation, a high-resolution impedance manometry catheter (32 pressure sensors at 1cm intervals, 16 impedance at 2cm) was positioned in the distal colon of 10 healthy volunteers (7 male; 45.5±9.5 years). Recording sensors spanned the descending/sigmoid colon and proximal rectum (determined by x-ray). Data were recorded 2hrs prior to and after a 700kCal meal. RESULTS: As previously described in the distal colon, the meal induced a rapid and significant increase in the amount of cyclic propagating activity. In the hour prior to the meal the admittance (inverse of impedance; in milisiemens, mS) began to drop (mean decrease=0.069mS, 95% CI=0.111-0.241mS; p=0.059). During meal consumption there was a significant decrease in admittance (mean decrease=0.176mS, 95% CI=0.023-0.115mS; p=0.026). Identified propagating contractions or periods of flatus were associated with a drop in admittance. Regions of gas in the colon at end of study (identified by x-ray) matched regions of low (gas) or high (no gas) admittance in 8 of 10 subjects. CONCLUSION: The rapid post-prandial drop in admittance may suggest an increasing volume of gas in the descending colon. The temporal relationship between the change in admittance and the increase in the cyclic motor patterns may provide evidence for a distal colonic continence mechanism controlling the passage of gas to the rectum.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>ROY, A., INGLIS, M., WILSON, C. ET AL</p>	<p>Orthopaedic</p>	<p>Wed 6th 3.15-3.30pm</p>	<p>ORAL</p>	<p>Title: Short-term follow up of the PROSTALAC Implant in primary Total Hip Arthroplasty for patients with an infected native hip</p> <p>Abstract Introduction The Prostalac implant was developed to treat infected THR's with two stage revision surgery. It was a temporary anti-biotic loaded prosthesis. However, in a select subset of patients who declined a second stage revision have continued to function well. At our hospital 8 patients (9 hips) were treated with the Prostalac for an infected native hip and have not been revised.</p> <p>Methods Ethics committee approval was obtained. Patients were followed up with routine clinical review and x-rays and blood results. Those that are implanted for more than 12 months review annually. Treatment was cross checked with our ID team at monthly multi-disciplinary meetings to ensure antibiotic therapy and duration is appropriate. An Ad Hoc AOANJJR report was requested to ensure no patients were revised in other centres.</p> <p>Results There were 8 patients and 9 hips. Mean age =64.7 years and mean follow up was 14.2 months. There was no wound healing issues, loosening, dislocation, or neurovascular complications. One patient sustained a peri-prosthetic fracture after a fall and it was revised to a long stem Prostalac. No patients were revised in other centres. At the last follow up all patients were doing well and none wanted to be revised to a definitive prosthesis.</p> <p>Conclusions This is the first study looking at Prostalac in aninfected native hip. The use of a multi-disciplinary ID team is essential for obtaining good results.The Prostalac is a safe option in the background of a painful hip which previous septic arthritis.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>SALUJA, H., MENG, R., SIMPSON, K. ET AL</p>	<p>Cancer</p>	<p>Tues 5th 12mid-12.15pm</p>	<p>ORAL</p>	<p>Title: Risk factors for developing neoplasia in a colonoscopy surveillance program.</p> <p>Abstract: Introduction: Interval surveillance colonoscopy is recommended by NHMRC clinical guidelines in those at high risk for colorectal cancer. Despite colonoscopic polypectomy, advanced neoplasia is present in >20% of patients at next surveillance. The aim of this audit was to investigate the risk factors associated with the development of neoplasia.</p> <p>Methods: A retrospective cohort study of surveillance colonoscopies in 2015 was undertaken using patient databases of the Southern Cooperative Program for the Prevention of Colorectal Cancer (SCOOP). Familial colorectal cancer syndromes, inflammatory bowel disease and patients who had symptoms prior to scheduled surveillance colonoscopy were excluded from the analysis. Demographics, reason for enrolment, colonoscopy quality and findings were determined. Factors associated with developing neoplasia were assessed with multivariable logistic regression.</p> <p>Results: A total of 337 patients were included in this audit. 51% (n=173) were male with mean age 64 years (SD 11.2). Over 95% of colonoscopies were of high quality with a good bowel preparation score and appropriate intubation distance. 53.7% of the colonoscopies were performed more than 3 months later than recommended. Neoplasia was found in 180 (54%) and it was significantly associated with age>65y and history of neoplasia (p<0.05).</p> <p>Conclusion: This audit shows that while many colonoscopy procedures are delayed, the quality is good and the main risk factors for neoplasia at future colonoscopies are older age and prior history of neoplasia.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>SCHAR, M., WOODS, C., COCK, C. ET AL</p>	<p>Resp Sleep</p>	<p>Mon 4th 4.45-5.00pm</p>	<p>ORAL</p>	<p>Title: Uvulopalatopharyngoplasty And Coblation Channelling Of The Tongue For Osbtructive Sleep Apnoea Syndrome: Potential Impacts On Swallowing Function</p> <p>Abstract: Introduction: Uvulopalatopharyngoplasty with Coblation Channelling of the Tongue (UPPP+CCT) surgery is used to treat Obstructive Sleep Apnoea (OSA). The extent to which UPPP+CCT alters swallow modulation, due to potential removal of afferent innervation, is unknown. We conducted a pilot study to quantify the swallowing-related biomechanics following UPPP+CCT.</p> <p>Methods: Ten OSA patients (mean age 48y; range 28-63) who previously underwent the UPPP+CCT surgery (1-6 years; mean 3) were compared to 10 control subjects (mean age 28y, range 24-33) (SAC HREC #283.11). Swallowing function was assessed by Sydney Swallow Questionnaire (SSQ) and pharyngeal high resolution manometry with impedance (HRIM) was performed (MMS Solar GI System; 8Fr HRIM catheter). Testing consisted of 3-5 repeats of Thin (IDDSI 0) and Extremely Thick (IDDSI 3) boluses. HRIM data were analysed by online AIMplot software which calculated a global Swallow Risk Index (SRI), pharyngeal intrabolus pressures (IBP) and UES maximum admittance (defining UES opening).</p> <p>Results: Three of the UPPP+CCT patients returned an abnormal SSQ score (>234). Patients compared to controls had a higher SRI per volume, elevated IBP (RM-ANOVA F 9.103, p = 0.008) and reduced UES opening (F 11.828, p = 0.003). The swallow modulation response to increasing volumes was markedly dampened in the patients.</p> <p>Conclusion: Our findings suggest that UPPP+CCT surgery may induce a specific sensory deficit, which alters the modulation of the swallowing mechanism to changes in bolus volume. Further studies are required to determine if the documented reduction in swallowing reserve is a feature of OSA or as a consequence of surgery.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>SENTHIL, M., KHADKA, J., PESUDOVS, K.</p>	<p>Registry</p>	<p>Wed 6th 2.10-2.20pm</p>	<p>ORAL</p>	<p>Title: Title: Psychometric assessment of the hereditary retinal diseases item banks</p> <p>Abstract: Background: The existing questionnaires in ophthalmology are static (paper-and-pencil based), limited in their content, not comprehensive enough to measure quality of life (QoL), and outdated. Therefore, a project is designed to develop and validate technologically advanced questionnaires in the form of item bank (a long questionnaire) implemented via computer adapting testing (CAT) which can precisely measure ophthalmic QoL. This study aims to develop comprehensive item banks for hereditary retinal diseases (HRD).</p> <p>Methods: Items were generated from 11 pre-existing questionnaires, 3 qualitative studies and 32 interviews. Item revision and refinement were done during three stages, namely binning and winnowing, expert panel discussion and cognitive interviews. At the end of the content development the HRD item banks had 345 items across ten QoL domains (activity limitation, mobility, social, emotional, economic, symptoms, health concerns and coping). Rasch analysis was used to assess the psychometric properties of the item banks and to establish item calibration for CAT.</p> <p>Results: The item banks were administered to 233 participants (mean age 56 years; females, 59%). Five domains (activity limitation, emotional, social, mobility, convenience and symptoms) required minor modifications. Three domains (activity limitation, emotional and health concerns) demonstrated multidimensionality, requiring substantial modifications. Our CAT simulations indicated that only 7 items were needed to gain precise measurement of each QoL domain.</p> <p>Conclusion: These item banks will enable clinicians and researchers to comprehensively explore the impact of HRD from the patients' perspective. Our CAT system is likely to be time efficient modality for use in clinics and research settings.</p>
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SHAH, R., LEE, J., GILLEBERT, C., SMITH, E. ET AL	Cardiology		POSTER	<p>Title: Quantification of Infarct Size in Acute and Chronic Ischemic and Non-Ischemic Heart Diseases: Reproducibility of Different Techniques</p> <p>Abstract: BACKGROUND. Several techniques have been proposed for the quantification of late gadolinium enhancement (LGE), a surrogate of myocardial replacement fibrosis or necrosis, including: 1) manual planimetry; 2) manual thresholding; 3) the signal threshold versus reference myocardium technique (STRM) and 4) the full width at half maximum (FWHM) technique. However, uncertainty remains regarding the most reproducible method of LGE quantification in both ischemic and non ischemic heart disease. Intra- and inter-observer reproducibility of LV scar quantification is clinically important, for both prognostication and follow-up purposes. Hence, aim of the present study was to compare the intra- and inter-observer reproducibility of the aforementioned quantification techniques across different disease processes that give rise to LV scar/necrosis, i.e. acute myocardial infarction (AMI), acute myocarditis (AMy), chronic ischemic heart disease (CIHD), hypertrophic cardiomyopathy (HCM) and non-ischaemic dilated cardiomyopathy (NICM). METHODS. A total of 100 patients (20 AMI patients, 20 AMy patients, 20 CIHD patients, 20 HCM patients and 20 NICM patients) referred to cardiac magnetic resonance (CMR) with LGE imaging and having visually detectable LGE were included in the study. LGE images were analysed offline (CVI⁴², Circle Cardiovascular Imaging, Calgary, Canada) by two independent observers using the following techniques: manual thresholding; STRM-2SD, STRM-3SD, STRM-5SD; FWHM; manual planimetry (this last technique was used for AMI and CIHD patients only). Intra- and inter-observer agreement of each technique was reported using the intraclass correlation coefficient (ICC). RESULTS. Among AMI patients, all quantitative techniques had excellent intra- and inter-observer agreement (ICC values ≥ 0.95). Among AMy and CIHD patients, FWHM was the only method that performed well (intra- and inter-observer ICC were 0.96 and 0.92 among AMy patients and 0.95 and 0.93 among the CIHD patients). Among HCM and NICM patients, all quantitative techniques had good intra- and inter-observer agreement (ICC values ≥ 0.90), except manual thresholding, which had ICC values < 0.90; FWHM presented the highest intra- and inter-observer ICC (0.97 and 0.94, respectively). CONCLUSIONS. The present study provides useful information regarding the reproducibility of quantification techniques across different disease processes that give rise to LV scar. FWHM technique performs well in all cardiac conditions; all STRM techniques represent a valid alternative in AMI, HCM and NICM.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>SHANAHAN, E.M., ALLCROFT, P., GRAF, S. ET AL</p>	<p>Rheumatology</p>	<p>Mon 4th 5.00-5.15pm</p>	<p>ORAL</p>	<p>Title: Suprascapular nerve block for shoulder pain in motor neuron disease.</p> <p>Abstract: Introduction. Musculoskeletal pain is a common and yet under recognised complaint among individuals with a diagnosis of motor neuron disease (MND). Shoulder pain in particular affects patients with motor neuron disease at a rate far higher than that of the general population. This pain greatly affects the sufferer's quality of life, but is often neglected or poorly managed. Suprascapular nerve block (SSNB) is a simple and safe treatment for shoulder pain which has an increasing evidence base for its use in a number of rheumatological conditions. To date there have been no studies examining the efficacy of this therapy in patients with MND. Methods Patients suffering from shoulder pain in one or both shoulders with MND were identified by the MND service at the Southern Adelaide Local Health Network were recruited. Patients underwent a single SSNB or a bilateral SSNB performed by experienced rheumatologist. The principle outcome measures included the pain subscale score of the Shoulder Pain and Disability (SPADI) scale. Secondary outcome measures included patient satisfaction with the pain relief, the use of analgesic medication and the ease of the procedure. Results. 28 patients with MND (57% male) were recruited and a total of 37 SSNBs were performed. Pain subscale scores fell from a mean of 5.9 on a 10 point scale (range 2.66-10) at entry to the study to 1.83 (range 0-6.25) at week 1, 1.6 (0-4.5) at week 6 and 2.33 (0-7.5) at week 12. Patients were generally highly satisfied with the pain relief obtained and the ease of the performance of the procedure. Conclusions. These data suggest that this treatment is highly effective in this patient population and can be considered as a safe, simple treatment option for patients with MND who have difficulty to manage shoulder pain.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>SHARMA, Y., THOMPSON, C., KAAMBWA, B., SHAHI, R., ET AL</p>	<p>Aged Care</p>	<p>Mon 4th 3.15-3.30pm</p>	<p>ORAL</p>	<p>Title:</p> <p>Malnutrition in older patients discharged from acute care-does intervention really matters?</p> <p>Background. The benefit of early provision of a nutrition intervention and its continuation post-discharge in older hospitalized patients is unclear. This study examined the efficacy of such an intervention on nutritional and clinical outcomes in older patients discharged from acute care.</p> <p>Methods. In this randomized controlled trial, 148 malnourished patients were randomized to receive either a nutrition intervention or usual care. Intervention included an individualized nutrition care plan plus a two month post-discharge telehealth follow-up whereas control patients received dietetic intervention only upon referral by their clinicians. Nutrition status was determined by the Patient Generated Subjective Global Assessment (PG-SGA) tool. Clinical outcomes included changes in length of hospital stay, complications during hospitalization, Quality of life, mortality and re-admission rate.</p> <p>Results. Fifty-four males and 94 females (mean age, 81.8 years) were included. Both groups improved their nutritional status from baseline with no significant between group difference noted in PG-SGA scores at three month follow-up 6.9 (95% CI 5.6 to 8.3) vs 5.8 (95% CI 4.8 to 6.9), (P=0.09), in control and intervention groups respectively. Median total length of hospital stay was 6 days shorter in the intervention group (11.4 (IQR 16.6) vs 5.4 (IQR 8.1), (P=0.01). There was no significant difference in complication rate during hospital stay, Quality of life and mortality at 3-months or readmission rate at 1, 3 or 6 months following hospital discharge.</p> <p>Conclusion. In older malnourished inpatients, an early and extended nutrition intervention showed a trend towards improved nutrition status and significantly reduced length of hospital stay.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>SIDDIQUEE, S., FRASER, R., YEOH, E.,K.</p>	<p>Cancer</p>	<p>Tues 5th 12.15-12.30pm</p>	<p>ORAL</p>	<p>Title: Endorectal balloon versus hydrogel – a systematic review of dosimetry and clinical outcomes following radiotherapy for prostate carcinoma</p> <p>Abstract: Background: Despite advances in radiotherapy for prostate cancer, treatment-related anorectal dysfunction is common. Hydrogels and endorectal balloons have been developed to increase prostate-rectum separation and thereby reduce toxicity but the most appropriate technique is unknown. Material and methods: A systematic review of the literature was undertaken using PUBMED/MEDLINE databases to assess comparative efficacies of endorectal balloons and hydrogels in reducing toxicity following prostate radiotherapy. The review focused on dosimetry and clinical outcomes following use of these spacers in prostate cancer radiotherapy. Results: 20 papers were included in this review, of which 15 were cohort studies and 6 were retrospective. A randomised trial of hydrogel spacers versus standard care found less rectal toxicity (grade ≥1 9.2% vs 2.0%; P=.028; grade ≥2 5.7% vs 0%; P=.012) in the hydrogel arm at 3 years. However only one case of rectal toxicity was seen in the control group and the evaluation scales were suboptimal. A second multicentre randomised trial reported significant reduction (12.4% vs 3.3%, P<.0001) in mean rectal V70 (volume of rectum receiving 70 Gy dose) using hydrogels. There are no published randomised trial data on outcomes with endorectal balloons. Conclusion: Further high quality randomised clinical trials, particularly of endorectal balloons, are needed to determine the value of prostate-rectum spacers in radiotherapy for prostate cancer.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>SIMPSON, K.Y., COATS, M., CHAPLIN, A. ET AL</p>	<p>Cancer</p>		<p>ORAL</p>	<p>Title: Response of patients at moderate risk for colorectal cancer to targeted surveillance recall letter</p> <p>Abstract: Background NHMRC guidelines (2011) included stopping rules for colonoscopic surveillance including age-based criteria, with a recommendation to stop routine surveillance in those aged > 74 years. The implementation impact of this recommendation on list management is unknown.</p> <p>Methods In 2013 the Southern Program for prevention of colorectal cancer (SCOOP), began an “over 75 years recall system” where older patients visited their GP to discuss risks/benefits of colonoscopy before a decision on undergoing the procedure. A retrospective audit of data collected between 2013 and 2015 was undertaken to evaluate outcomes in moderate risk patients. For patients undergoing colonoscopy, age, findings and subsequent surveillance plans were analysed.</p> <p>Results Only 28% of the patients chose surveillance colonoscopy, 19% declined further surveillance and 7% asked for specialist review. 42% did not respond. The mean age of those undergoing colonoscopy was 79 (75-89yrs). Findings at colonoscopy (n=98) included 3 cancers and 14 patients had advanced adenoma. 37% had no neoplasia. Based on these outcomes, 73% of patients had no further procedures scheduled.</p> <p>Conclusion Two thirds of patients ≥75 yrs enrolled in a CRC surveillance program do not want colonoscopy. Of those fit enough and willing to have colonoscopic surveillance, only 14% had significant findings. Including patient choice in surveillance programs for patients ≥75 has the potential to reduce colonoscopy workloads.</p>
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RESEARCH WEEK ABSTRACTS Presented

SIRES, J.,	Orthopaedic	Wed 6 th 3.30-3.45pm	ORAL	<p>Title: Early Results of the Attune Total Knee Replacement</p> <p>Abstract: Total knee replacement (TKR) is performed in patients suffering from arthritis, aiming to reduce pain, restore function, correct mechanical mal-alignment, ensure ligamentous balancing and restore the joint line.</p> <p>Despite the increasing number of TKRs up to 20% of patients continue to report dissatisfaction. The ATTUNE knee was designed for better patella tracking and function with an anatomic trochlear groove and medialised dome patella component, aiming to improve patient outcomes.</p> <p>The aims of this study were to evaluate patient function and satisfaction after undergoing an ATTUNE TKR and to assess its clinical results.</p> <p>A retrospective review was undertaken of patients who underwent a primary TKR between September 2014 and January 2016. A total of 162 TKRs were included. Patient satisfaction was measured using the Multi-Attribute Arthritis Prioritization Tool (MAPT) questionnaire and comparing pre-operative and post-operative scores. Secondary outcome measures included early post-operative knee range of motion (ROM), complications and revision. A minimum follow up time of 12 months was required.</p> <p>The early results of this study are promising showing a mean ROM 6 weeks post operatively of 100 degrees. An Ad Hoc report was requested from AOA registry, which showed an early revision rate of 1%, which is comparable with other TKR systems.</p> <p>The early clinical results of this study are promising and the low revision rate suggests the ATTUNE TKR is comparable to other implants currently being widely used in Australia.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>SNAITH, N. (NEE BUTTERFIELD)</p>	<p>Mental Health</p>	<p>Thurs 7th 11.05-11.15am</p>	<p>ORAL</p>	<p>Title: Yoga for stress, anxiety and depression: developing an appropriate intervention for mental health consumers</p> <p>Abstract: Background The Yoga and Mental Health research project is a PhD project being undertaken at the University of Adelaide and SALHN. The aim of this research project is to examine the role of yoga in the development of skills in mindfulness and self-compassion and determine if there are relationships to mental health outcomes for stress, depression, anxiety and well-being in consumers with a chronic mental health condition. Recommendations for future health care delivery and the role of nursing practice will be developed from research findings.</p> <p>Methods Phase 1: Surveys with South Australian yoga teachers and students was undertaken 2014 -2015. Phase 2: Focus groups and interviews with SALHN mental health staff and consumers and yoga teachers undertaken 2016-2017. Phase 3: Pilot Study: Yoga course with mental health consumers, a Randomised Controlled Trial, will be undertaken September 2017.</p> <p>Results Phase 1: Results showed significantly higher mindfulness and self-compassion levels with two or more classes per week and mindfulness levels with regular meditation practice. Practice experience showed a positive correlation with higher mindfulness and self-compassion and lower Depression, Anxiety and Stress scores with months of practice. Phase 2: Yoga practice frequency, duration of 60 minutes maximum, gentle relaxing style, breath work, class environment, teacher qualities, home practice and mental health focus were important factors.</p> <p>Conclusions Findings provide important information to guide the development of the next stage of the research, Phase 3: Pilot Study: The effectiveness of a 10-week yoga course on outcomes in a consumer group: a randomised controlled trial.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>SY, S. AND MACKAY, M.</p>	<p>Infectious Diseases</p>	<p>Thurs 7th 9.15-.930am</p>	<p>ORAL</p>	<p>Title: Factors that Influence Hospital Inpatient Length of Stay of Patients with Respiratory Infections and Inflammations</p> <p>Abstract: Background For the same service, Length of Stay (LOS) can vary between hospitals and this paper will examine factors that affect LOS and cause variation, specifically looking at inpatient Respiratory Infections and Inflammations.</p> <p>Research This study obtained data from 135 Australian hospitals from 11 April 2012 to 30 June 2013, which resulted in 61,819 inpatient episodes. Data per episode included information such as demographics, LOS and discharge location. The relationship between LOS and these factors were examined using Excel and IBM SPSS. The significant p-value was 0.05.</p> <p>Key Findings Average LOS did not decrease with increased hospital size. LOS did not have a normal distribution and was right skewed. The average is a poor KPI in this situation. Average LOS is higher for patients that experience catastrophic complications/co-morbidities compared to patients that do not. Furthermore, if an episode is classified as complex, then the average LOS, as well as variability, increases in comparison to non-complex episodes. Having a procedure in hospital increases average LOS. Age and gender also has an effect on LOS, but not in a linear fashion. Expected LOS does not completely predict actual LOS, which may indicate that there is room for improvement in regards to discharge planning.</p> <p>Implications We need to focus on patients that use the most resources, which are normally complex patients. Unfortunately, LOS does not measure complexity, therefore there may be an opportunity to look at clinical pathways that can provide earlier intervention for complicated patients.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>TAN, W., BEATTY, L., KOCZWARA, B.</p>	<p>Cancer</p>	<p>Tues 5th 12.30-12.45pm</p>	<p>oral</p>	<p>Title: How do cancer patients use the term resilience?: A systematic review of qualitative studies</p> <p>Abstract: Purpose: Resilience is a dynamic process which explains how individuals adapt positively to adversity such as cancer, but little is known about how cancer patients use the term resilience. To address this gap we examined studies exploring cancer patient experiences and perceptions of resilience to understand: (a) their experiences and definitions of resilience, and (b) the definitions of resilience as used by researchers. Methods: A search of four electronic databases (MEDLINE, PsycINFO, SCOPUS and CINAHL) was conducted from database inception to October 2016. Eligible papers were qualitative studies on cancer patients or survivors over the age of 18 which included resilience and cancer (or derivations) in the title, abstract or medical subject headings. Articles were excluded if they did not include resilience as a theme or outcome, or discussed resilience primarily in the context of non-individuals (i.e. families). Results: Four hundred and seventy non-duplicate citations were screened, resulting in 61 citations being screened for full-text review. Of these, 30 were excluded, leaving 31 studies in the review. Four main thematic categories emerged; coping strategies, social support, spirituality and growth, within which 79 individual resilience themes were identified. Seven author-definitions of resilience were extracted, while no patient definitions of resilience were identified. Conclusion: This review found that cancer patients do not use the term resilience directly, that resilience is poorly defined, and definitions range widely. Various coping strategies, spirituality and growth contribute to individual resilience as internal resources, while social support contributes as an external resource.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>TANTIONGCO, J., BARRATT, C., BENNETTS, J., SELVANAYAGAM , J., BAKER, R.</p>	<p>Cardiology</p>		<p>POSTER</p>	<p>Title Preoperative statin use lowers myocardial damage after cardiac surgery</p> <p>Purpose</p> <p>Abstract: Perioperative optimisation of patients undergoing surgery is more important than ever with an ageing population and presentations with concomitant disease. Statins have been shown to possess other beneficial cardiovascular effects beyond its lipid lowering capabilities. These include improved endothelial function and nitric oxide bioavailability, antioxidant, antithrombotic and anti-inflammatory properties. We looked at the effect of preoperative statin treatment on patient undergoing cardiac surgery.</p> <p>Method We used local Registry data to determine preoperative statin status (naive, low, high) prior to coronary graft and/or valvular surgery from January 2006 to July 2015. Blood were collected at 0 hr, 6 hr, 12 hr and 72 hr after ischaemia. Cardiac troponin T (cTnT) concentration was log transformed for better model fit and linear mixed modeling was used.</p> <p>Results We report on 1605 patients (264 naive, 918 low dose statin and 426 high dose statin). Univariate analysis, shows that the patients that were either low dose or high dose statin, had lower cTnT detected that was statistically significant compared to patients that were statin naive. Multivariate analysis shows only patients on high dose statin therapy was associated with decreased cTnT detected at 6 and 12 hours (Table 1). The amount of reduction compared to naive was almost 10% (Table 2).</p> <p>Discussion Patients on statins preoperatively before cardiac surgery had a dose-related decreased myocardial damage as measured by cTnT postoperatively. The effect of preoperative statin therapy requires further investigation</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>VAN DEN BERG, M., HASSETT, L., WEBER, H. ET AL</p>	<p>Aged Care</p>	<p>Mon 4th 3.30-3.45pm</p>	<p>ORAL</p>	<p>Title: Amount (activity and mobility using technology) rehabilitation trial: technologies used and participant perceptions in the inpatient setting.</p> <p>Aim: To determine if participants perceived technologies as enjoyable and easy to use and which factors influenced this within inpatient rehabilitation.</p> <p>Design: Process evaluation within a randomised controlled trial (n=300).</p> <p>Methods: One hundred and forty nine participants (52% male; mean age 70 (SD18)) were randomised to the intervention group. In the month prior to hospitalisation, 41% of participants had not used a computer, tablet, smartphone, pedometer or gaming console. The intervention was additional to standard care, prescribed individually according to a protocol which matched games/exercises from eight technologies to participants' mobility limitations. Both commercially-available (Nintendo Wii; Xbox Kinect; Fitbit; Smartphone apps) and rehabilitation-specific devices (Humac; Fysiogaming; Stepping Tiles; exercise iPad apps) were used. Outcome measures were technology use and Physical Activity Enjoyment (PACES; 18-126) and System Usability Scales (SUS; 0-100), for which higher scores indicate more enjoyment and better usability.</p> <p>Results: Participants used on average 4 (SD1) technologies with the Fitbit (84%), iPad apps (77%) and Humac (61%) most prescribed and commercially-available exergames and Smartphone apps used least. At 3 weeks, participants perceived technology use as enjoyable (mean (SD) PACES 95.4 (23.2)) and rated usability above average (mean (SD) SUS 72.2 (18.8)). Enjoyment and usability were positively related to previous technology use ($p < 0.01$) and younger age ($p \leq 0.03$). Previous technology use remained associated with usability after adjustment for other factors ($p = 0.003$).</p> <p>Conclusions: Tailored prescription of technologies enables enjoyment and ease of use for people participating in inpatient rehabilitation. Previous technology use should be considered when prescribing technology in rehabilitation.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>VAN DEN BERG, M., KILLINGTON, M., KWAKKEL, G. ET AL</p>	<p>Neurosurgery</p>	<p></p>	<p>POSTER</p>	<p>Title: Caregiver-Mediated Exercises Supported By Telerehabilitation Following Stroke: Participants' Experiences</p> <p>Abstract:</p> <p>Background A recent proof-of-concept trial combined the concept of caregiver-mediated exercises with telerehabilitation services as a novel approach to increase intensity of exercise after stroke. This study aimed for an in-depth exploration of participants' experiences.</p> <p>Methods In this qualitative sub-study we asked participants about their perceptions of the program, including usability of the iPad and videoconferencing technology, levels of caregiver burden, and any preferences between a traditional and alternative rehabilitation model. Following transcription by SmartDOCS, qualitative thematic analysis was undertaken with the assistance of NVivo 11.</p> <p>Results Ten stroke survivors (6/10 male, median age 61 years) agreed to take part. Three overarching themes emerged from the data: (1) Carer role bearable or burdensome: depends who you ask; (2) Ipad technology provides opportunities for ongoing mentoring and coaching; and (3) "You need the mental (support) as well as the physical to be one person".</p> <p>Conclusions Overall, participants found the new rehabilitation model a good alternative to traditional physiotherapy sessions. The combined key components of caregiver involvement and telehealth were valued by most. All caregivers reported increased confidence by actively taking part in the program. Although not for everyone, participants generally coped well with the technologies and the majority found the use of the technologies engaging and encouraging. Program implementation should consider the reported burden related to time constraints and the characteristics of patients who reported reduced motivation. Patients emphasized the importance of an individualized program as well as a more holistic approach by complementing the physical exercise program with psychosocial interventions.</p>
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RESEARCH WEEK ABSTRACTS Presented

VENNING, A.	Cardiology		POSTER	<p>Title: None listed</p> <p>Abstract Complaints of chest pain are one of the most common reasons that people visit Emergency Departments (EDs). However, more than 50% of patients that present to EDs with chest pain do not have identifiable cardiac disease or other serious medical conditions, and are two to three times more likely to suffer from common mental health problems than those patients with coronary artery disease or the general population. With this in mind, a pilot study was conducted to investigate if using Low Intensity (Li) Cognitive Behavioural Therapy (CBT) in the ED at Flinders Medical Centre, South Australia, reduced the psychological distress, the re-presentation rates, and the associated cost of patients presenting to the ED with non-cardiac chest pain compared to the usual presentation rates. Results showed a decrease in self-reported levels of depression and anxiety after six treatment sessions, along with a 59% decrease in ED admissions and 69% cost saving. These preliminary findings warrant further investigation in a large scale randomized control design, and suggest that the provision of a LiCBT program for patients who present to EDs with non-cardiac chest pain may not only reduce an individual’s psychological distress, but the reduce resource and economic burden associated with it as well</p>
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RESEARCH WEEK ABSTRACTS Presented

WALSH, T.	Mental Health	Thurs 7 th 11.15-11.25am	ORAL	<p>Title: None listed</p> <p>Abstract:</p> <p>Introduction: Body composition and poor mental health are risk factors for developing foot pain, but the role of different fat deposits and psychological features related to chronic pain are not well understood. The aim of this study was to investigate the association between body composition, psychological health, and foot pain.</p> <p>Method: Eighty-eight women participated in this study: 44 with chronic, disabling foot pain (mean age 55.3 SD 7.0 years, BMI 29.5 SD 6.7 kg/m²), and 44 age and BMI matched controls. Disabling foot pain was determined using the Manchester Foot Pain and Disability Index. Body composition was measured using dual x-ray absorptiometry, psychological health (catastrophisation, central sensitisation, and depression) was measured using three validated questionnaires and other joint pain (external to the foot) was recorded.</p> <p>Results: Between-group analyses found foot pain was not significantly associated with body composition, but was significantly associated with all psychological health measures (P<0.001-0.047) and multi-site joint pain (P=0.001). Within-group analyses found foot pain severity was significantly correlated with body fat mass (total, android, gynoid, visceral), fat mass ratios (visceral/subcutaneous (VAT/SAT), visceral/android), fat mass index (FMI), and depression. In multivariable analysis, VAT/SAT (β 1.27, 95%CI 0.28-2.27), FMI (β 0.14, 95%CI 0.02-0.25) and depression (β 0.06, 95%CI 0.00-0.12) were independently associated with pain severity.</p> <p>Conclusions: Psychological health and multi-site joint pain, not body composition, were associated with prevalent foot pain. For women with foot pain, VAT/SAT, FMI, and depression were associated with severity. Further work is needed to determine if a change in these variables reduces pain.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>WECHALEKAR, M., LESTER, S., NAGPAL, S., COLE, S., PETERS, J. ET AL</p>	<p>Rheumatology</p>	<p>Mon 4th 5.15-5.30pm</p>	<p>ORAL</p>	<p>Title: Seropositivity Predicts Bone Biomarker (BB) Change in an Inception Cohort of Rheumatoid Arthritis (RA) Patients Treated-to-Target with Combination Conventional DMARD Therapy</p> <p>Abstract: Background There are limited data regarding the role of and response to treatment, of BB in conventional-DMARD-treated early-RA. We evaluated whether BB of osteoclast activation [RANKL and Dickkopf-1 (Dkk-1)] or inhibition [osteoprotegerin (OPG)] correlated with treatment response. Methods Patients with early RA (n=112) received triple therapy (methotrexate, sulfasalazine, hydroxychloroquine) escalated to achieve remission. RANKL, OPG and Dkk-1 were analysed by Luminex (0/6/12 months) and in healthy controls (n=33). Correlations between BB and changes following treatment were analysed using Spearman’s rank coefficient and mixed-model longitudinal regression respectively. Results At baseline, 69% were positive (‘seropositive’) for RF and/or anti-CCP, mean (±SD) age was 58(13) years, 72% were females, 60% current/past smokers and mean DAS28 was 5.52(1.30). At baseline, compared to controls, OPG was elevated in seronegative (p<0.001) and seropositive (p<0.001) patients. In seropositive patients, RANKL was more frequently detectable (p<0.001) and negatively correlated with Dkk-1 (p<0.05). In contrast, seronegative patients had higher Dkk-1 (p<0.001) which strongly correlated with OPG (p<0.001); RANKL was not significantly different from controls. Following treatment, in seropositive patients, there was a significant reduction in proportion of patients with detectable RANKL (p=0.002) and increase in OPG (p<0.01) but no significant change in Dkk-1. Seronegative patients, in contrast, had no change in proportion of patients with detectable RANKL or OPG, but had a significant reduction in Dkk-1 (p<0.001). Conclusions Individual BB show significant differences at baseline and following conventional DMARD treatment, between seropositive and seronegative patients. This differential response may help direct therapeutic decisions to optimise prevention of joint damage.</p>
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<p>WHITE, R.</p>	<p>Cancer</p>		<p>POSTER</p>	<p>Title: Quantitative Mass Spectrometry to Identify Metabolomic and Protein Markers for Malignant Pleural Mesothelioma</p> <p>Abstract: Malignant pleural mesothelioma is a highly aggressive tumour closely associated with asbestos fibres. Current prognosis is less than 12 months. As diagnosis typically requires invasive biopsy treatment is delayed. This project aimed to identify potential proteomic diagnostic and prognostic markers and possible treatment targets. Ethics approval was obtained from Southern Adelaide Clinical Human Research Ethics Committee (OFR 381/09). 5 matched malignant pleural mesothelioma, lung adenocarcinoma and benign reactive pleural effusions collected from patients were selected. Samples were purified from abundant nonspecific proteins and then equal sample was achieved by fluorescence assay. Lysates were treated using dithiothreitol, iodoacetamide and digested overnight using sequence-grade trypsin. HPLC was then used to separate digested peptides. Relative quantisation was then achieved by a MS/MS SWATH Triple-TOF and subsequent bioinformatic analysis using ABSCIEX™ Reactome. A total of 155 unique proteins were detected in the 15 pleural effusions. For mesothelioma relative to adenocarcinoma; Protein S100, Keratin 5/6, and Serum amyloid A-2 protein were elevated and Vitamin D-binding protein, Collagen alpha-1(I) chain, and Dermcidin were down regulated. Protein S100, Keratin 5/6, Serum amyloid A-2 protein, and cytoplasmic Actin 2 were upregulated mesothelioma compared to benign reactive effusions. However, Galectin-3-binding protein was relatively down regulated. For lung adenocarcinoma compared to benign reactive effusions; Annexin A1 and Dermcidin were upregulated, while inter-alpha-trypsin inhibitor heavy chain was down regulated. Although commonly proposed biomarkers were not found in malignant pleural mesothelioma samples keratin 5/6 was consistently elevated and MS/MS SWATH was verified as a potential means of diagnosis.</p>
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<p>WHITE, S.L AND DOELTGEN, S.</p>	<p>Education</p>		<p>POSTER</p>	<p>Title: Flipping Anatomy and Physiology for Speech Pathology Students</p> <p>Abstract Background: Students entering our Bachelor of Speech Pathology (BSP) program are increasingly diverse in their approaches to education and arrive at university with a breadth of skills, aptitudes and knowledges. As educators, our challenge is to connect our students from the level of readiness they arrive with, to the content and skills needed for success in both the academic and clinical environments. Traditionally, anatomy teaching has been instructor-driven with content delivered to students in lectures at a lecturer-driven pace. Problems with this approach can occur when the students do not have the same pace of learning. The anatomy and physiology component of the first year BSP program was chosen to explore an innovative flipped classroom approach, as traditionally it has placed a high cognitive load on students and as such provided an ideal opportunity to make a significant difference to student learning and resilience. Results: Academic performance was determined via written essay and examination assessments. In comparison to the traditional lecture model (n=69, 29% failure rate), topic failure rate was greatly reduced (n=65, 11% failure rate). Student engagement was informally measured by attendance and participation in lectures, and was greater than with the traditional lecture model. Discussion: Our innovative approach to teaching a first year BSP topic, by providing strategic scaffolding to address student diversity led to increased student engagement and reduction in topic failure rate. We are now evaluating whether this approach enables student’s deep learning and transfer of content skills into clinical practice.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>WILSON, C, KOERBER, J., WATTS, A., QUINN, S., KRISHNAN, J..</p>	<p>Orthopaedic</p>	<p>Wed 6th 3.45-4.00pm</p>	<p>ORAL</p>	<p>Title: A double blinded, randomized, controlled proof of concept study to compare post-operative analgesic and mobilization outcomes of local infiltration analgesia, single shot femoral nerve block and intrathecal morphine in primary total knee Arthroplasty</p> <p>Abstract: Aims Total knee arthroplasty is associated with early postoperative pain. Appropriate pain management is important to facilitate postoperative rehabilitation and positive functional outcomes. This Randomized, Controlled and Blinded study compares outcomes in TKA with three techniques; local infiltration analgesia, single shot femoral nerve block and intrathecal morphine.</p> <p>Patients & Methods Forty-five Patients undergoing elective TKA were randomized into one of three anesthetic treatment groups, receiving either local infiltration analgesia (LIA), femoral nerve block (FNB) or Intrathecal Morphine (IM). . The surgeons and anesthetists were blinded to which group patients were allocated to. Pain intensity scores associated with rest and mobilization were recorded, along with post-operative use of analgesic drugs. Patient reported outcome measures (OKS, KOOS & KSS) were completed pre-operatively and at 6 weeks post-operatively.</p> <p>Results Length of stay was lowest in the LIA group although LIA and FNB were better than control. LIA had the lowest use of analgesics at all time points. LIA had the best pain VAS scores (P=0.06) There was no significant difference in nausea scores. Patient reported outcome measures in KOOS show statistically significant improvements in symptom scores for LIA (p=0.02) and clinically significant improvements for FNB (0.08) in comparison to IM. The LIA group used the lowest amount of analgesics at all time points.</p> <p>Conclusions LIA showed good Improvement in Pain VAS, Analgesic Consumption & LOS. There were no significant complications from Local Infiltration. This technique has become part of our culture of early mobilisation and early discharge in arthroplasty patients.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>WILSON, C., SALUJA, H., WONG, G., KRISHNAN, J.</p>	<p>Registry</p>	<p>Wed 6th 2.20-2.30pm</p>	<p>ORAL</p>	<p>Title: Design & Construction of a formal Local Revision Knee Arthroplasty Registry</p> <p>Abstract:</p> <p>Aim National Registries for lower limb arthroplasties have been a very successful means of quality control and a powerful research tool. However, revision arthroplasty is more heterogeneous and challenging for gathering registry information. By designing and following a local revision registry a detailed analysis of the type and outcomes of surgery is possible.</p> <p>Methods Using the patient record system (EPAS) at the RGH a comprehensive evaluation was performed on all hip and knee revision cases in our centre from April 2014-January 2016. The data was cross checked with all available electronic and paper records to reduce errors. The system was then activated ongoing to allow long-term prospective collection of this data.</p> <p>Results Data was recorded for 36 revision knee arthroplasties. The data was analysed to evaluate the reason for revision, type of revision performed and patient factors. Our results were then compared with our historical AOANJRR figures and the national 2015 report. Our early results for knees have shown a reduction in revisions for pain and a reduction in isolated patellar resurfacings. 47% of our patients undergo ‘minor’ revisions compared to 21% in the national registry.</p> <p>Conclusion Our study shows that a local registry can be designed and constructed for revision arthroplasties. Data can be evaluated to a high level of detail and by ongoing collection and comparison with historic and current AOANJRR data, trends can be assessed and quality maintained. Our early results suggest our team is ‘ahead of the curve’ in reducing patient complications and risk of re-revisions.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>WONG, G., SALUJA, H., KRISHNAN, J., WILSON, C.</p>	<p>Registry</p>	<p>Wed 6th 2.30-2.40pm</p>	<p>ORAL</p>	<p>Title: Design of and Early Results of a local revision hip arthroplasty registry</p> <p>Abstract:</p> <p>Aim: To design and evaluate the results of a new local revision arthroplasty registry and to determine the causes and types of revision hip arthroplasty at Repatriation General Hospital (RGH). Prospectively to monitor trends and improve outcomes for our patients.</p> <p>Methods: Data was collected prospectively from 2014 in our revision registry database. Relevant parameters were collected electronically from Enterprise Patient Administration System (EPAS). Data was compared with both historic local Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR) results and current national registry figures.</p> <p>Results: A total of 49 patients' data were included in the analysis. The most common causes of revision hip replacement are loosening /lysis (42.9%), prosthesis dislocation (22.4%) and fracture (14.3%) compared to AOANJRR 2015 - loosening/lysis (47.8%), infection (14.1%) and prosthesis dislocation (14.1%). The most common types of hip revision done at RGH involved femoral head + acetabular (cup + liner) (40.8%), all components (22.4%) compared to 2015 AOANJRR - acetabular component only (32.3%), all components (28.8%) and femoral component only (17.7%).</p> <p>Conclusion: This study shows it is possible to design and construct an effective local revision hip arthroplasty registry. Our indications for surgery are similar to both our historic figures and the national. The ongoing collection of this data combined with our rigorous diagnostic and management algorithms for revision surgery will hopefully allow us to reduce unnecessary surgery or complications for our patients. Trends can be monitored to allow us to critically appraise our protocols ongoingly and improve patient outcomes.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>XING, G., PRABHAKARAN, S., PULFORD, E., JONAVICIUS, L., HUSSEY, M., KLEBE, S.</p>	<p>Cancer</p>	<p>Tues 5th 5.30-5.45pm</p>	<p>ORAL</p>	<p>Title: Differences in sensitivity of TTF-1 antibodies in diagnostic use and clinical implications</p> <p>Abstract: Thyroid transcription factor-1 (TTF-1) immunohistochemistry is considered to be a specific and sensitive tool for diagnosis of lung and thyroid neoplasms. This was based on early work utilising a mouse monoclonal antibody (8G7G3/1 clone). The introduction of new monoclonal antibody clones (SPT24 and SP141) initially seemed to increase sensitivity, but then a proportion of extra-pulmonary adenocarcinomas were found to be positive, indicating reduced specificity. This can impact diagnosis.</p> <p>It was the aim of this study to determine the incidence of labelling for TTF-1 in colonic adenocarcinomas, which are typically negative with this antibody, using the three clinically applicable clones (8G7G3/1, SPT24 and SP141). Tissue microarrays were constructed for 106 colorectal adenocarcinomas, and a database linked summarizing relevant clinical information. Nuclear labelling for TTF-1 was detected in 6 cases (5.7%) with the SPT24 and SP141 antibodies and 2 cases (1.9%) with the 8G7G3/1 antibody. To confirm that labelling correlated with actual protein (i.e. not false positive labelling) mRNA was extracted from these tumours and a PCR test is currently underway to confirm the presence of actively transcribed protein. Because TTF-1 is a transcription factor involved in growth, we hypothesized that positive expression may be linked to prognosis. The survival analysis is in progress.</p>
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RESEARCH WEEK ABSTRACTS Presented

<p>YASIN, N., SLADE, L., GRIVELL, R., SCROGGS, S., ATKINSON, E.</p>	<p>Women's Health</p>	<p>Wed 6th 11.45-12mid</p>	<p>ORAL</p>	<p>Title: Multidisciplinary Management of Invasive Placentation: A 10-year retrospective review</p> <p>Aim: To assess the incidence, characteristics, management and Outcomes of all cases of invasive placentation at Flinders Medical Centre, South Australia.</p> <p>Methods: A retrospective cohort study was conducted of pregnancies complicated by invasive placentation between February 2006 and January 2016. Electronic and Medical case records were examined to obtain patient demographics, antenatal and surgical, findings and postnatal outcomes.</p> <p>Results: A total of 67 cases were identified with either antenatal imaging or surgical diagnosis. Overall incidence of invasive placentation was 2.1 per 1000 deliveries. Mean gestation at delivery was 33.9 weeks and the majority of cases were delivered electively (65% v.s. 35%). A hysterectomy was performed in 66% of cases All cases had multidisciplinary involvement care and 78% had 3 or more teams involved. Median estimated blood loss was 2000mL and there were no Cases of maternal or neonatal mortality in the study group.</p> <p>Conclusion: Morbidly adherent or invasive placentation is associated with increased Morbidity and mortality for both mother and baby. Antenatal identification with thorough perioperative planning by a multidisciplinary team is crucial for optimization of outcomes. At Flinders Medical centre, our multidisciplinary approach has enabled us to achieve excellent outcomes, comparable with other similar tertiary centres In Australia.</p>
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