

for the year prior to the opening of the new ED (19 July 2010 to 18 July 2011) and the year after the opening (19 July 2011 to 18 July 2012) was retrieved from the emergency departments information system (EDIS). Access block was defined according to the Australian Council on Healthcare Standards (ACHS) and the Australasian College of Emergency Medicine (ACEM) as the percentage of all patients admitted, transferred or dying in the ED where their total time exceeds eight hours and compared across the two time periods. Secondary comparisons examined performance on the recently implemented 4-hour National Emergency Access Target for the two time periods. **Results:** More patients attended the ED during the 2011/2012 period than during 2010/2011 (N=57,585 vs. N=51,815). There was an overall decrease in the proportion of patients experiencing access block from 55.1% to 48.8% ($p<0.001$). There was also a reduction in the median length of stay in ED by 17 minutes for all patients seen, from 224 to 207 minutes, and by 58 minutes for patients admitted to hospital from 526 to 468 minutes (both analyses $p<0.001$). Statistically significant results were also obtained for the 4-hour National Emergency Access Target. **Conclusion:** Within the limitations of this retrospective study, the new emergency department did appear to favourably affect ED access block. It must be noted that this was only one aspect of a complex system, and we were unable to control for all potential confounding factors.

Clinical Audit of Children with Empyema and Parapneumonic Effusion Admitted to a Major Referral Centre in North Queensland

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Background / Aims: The Townsville Hospital (TTH) is a major referral centre for children with empyema for North Queensland. We compared its clinical approach with the current position statement the Thoracic Society of Australia and New Zealand (TSANZ). **Methods:** A retrospective clinical audit was performed. Between January 2009 and June 2011 patients were identified via ICD-10 coding for pyothorax and pleural effusion. The search was limited to the age range 3 months to 16 years. **Results:** We identified 22 patients. Nearly half of the patients (10/22) were Aboriginal and/or Torres Strait Islander (ATSI). Most (16) were transferred from other hospitals. The most frequently identified organisms were Staph aureus (8) and Strep pneumoniae (4). A high number of different antibiotics were used: 5 in surgical patients (range 2-9) and 3 in the conservatively managed patients (range 2-4). Changes to antibiotics prescribed most often occurred at the time of operation and on transfer to ICU. A regularly used investigation was chest X-rays, but less frequently used were chest CTs (5) and chest ultrasounds (3). 18/22 patients required a surgical procedure; 15/22 required thoracotomy. 4 patients did not have a diagnostic tap and were classified as parapneumonic effusion. Children transferred to TTH had longer pre-operative and total hospital stays than those admitted from Townsville (mean 5 days). **Conclusion:** Compared to the position statement from the TSANZ, the management of empyema differed in many areas. The differences in care are multi-factorial. However, earlier transfer from other centres and adopting the TSANZ guidelines may help to improve outcome.

Using the Dutch Resident Educational Climate Test to Assess the Learning Climate of Interns at The Townsville Hospital

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Background / Aims: Government regulators and medical boards place a high degree of importance on intern learning. In all clinical settings there is a balance between service provision and medical education. Evaluating the learning climate is a means of determining the educational function-

ing within the clinical environment. The aim of the study was to assess the learning climate of interns at The Townsville Hospital and determine whether it differs between departments using the Dutch Residency Educational Climate Test (D-RECT). The method has previously been validated in Holland and was adapted for an Australian hospital. **Methods:** Interns at The Townsville Hospital completed the D-RECT survey and returned it anonymously. At the end of the questionnaire there was space for additional comments. **Results:** The D-RECT questionnaire was completed by fifty three of sixty three interns (84% completion rate). The questionnaire was easy to use and took less than ten minutes to complete. Internal consistency was good, as indicated by the Cronbachs alpha for each of the eleven subgroups within the questionnaire. The additional comments did not provide additional information not already gleaned from the questionnaire. The strengths and weaknesses of the major rotations were analysed and provide an opportunity for improvement. **Conclusion:** Interns overall perceived the learning climate at The Townsville Hospital positively but the significant areas for improvement must be addressed.

Cannabis Withdrawal among Indigenous Detainees and Inmates

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Background / Aims: Cannabis Withdrawal Syndrome is proposed in the DSM-5 due for release 2013. Problematic cannabis use among remote Indigenous communities has been reported and 'stressing out' has been reported when cannabis is not available. Sudden cessation of cannabis use by remanded/sentenced inmates could further increase risk of 'stressing out' however, the experience of withdrawal has not been considered. **Methods:** Indigenous inmates aged 18-40 years were recruited from a far north Queensland Correctional Centre. Retrospective cannabis use, dependence and withdrawal measures prior to incarceration were self-reported. Assessments included other drug use, Time Line Follow Back, Severity of Dependence Scale, Indigenous Risk Impact Screen and Cannabis Withdrawal Checklist. **Results:** From 101 males inmates, 89% (n=90) reported lifetime use and 70% (n=70) used cannabis <3 months before prison. Of the 70 current cannabis users, 57% (n=41) believed use was excessive, 63% (n=44) met dependence criteria and reported an average of 2.9 withdrawal symptoms (most likely: irritability/anger/aggression, nervousness/anxiety, sleep difficulties, depression and physical symptoms). **Conclusion:** Results reveal heavy and problematic cannabis use and dependence symptoms however, withdrawal is not well defined. To improve assessment and timely treatment of cannabis withdrawal within custodial settings, studies are needed to document onset, time course and severity of symptoms and to assist in management of withdrawal. Findings from this study contributed to NHMRC#1020514 (commencing October 2012) to interview new entrants to prison on eight occasions over 28 days. Assessments validated with biological markers, will examine onset and severity of cannabis withdrawal and psychological distress.

Effect of using Standardised Queensland Statewide Diabetic Ketoacidosis Management Protocol

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Background / Aims: Diabetic Ketoacidosis (DKA) is a serious acute complication of diabetes mellitus and causes significant morbidity and mortality if not effectively managed. A standardised statewide DKA management protocol was introduced at the Townsville hospital in 2010, but its effect on clinical outcomes has not been reviewed. This study aimed to analyse whether using the standardised protocol improves clinical outcomes compared to previous non-standardised practice in the acute management of DKA. **Methods:** A retrospective hospital record audit was carried out on 71 DKA admissions between 1 January 2008 and 14 March 2012. Patients younger than 16 years were excluded. The protocol group consisted of eligible admissions managed as per protocol (from 01/01/2010 to 14/03/2012).

Admissions prior to 01/01/2010 served as the control group. Groups were compared on total dose and duration of IV insulin, total amount of IV fluid, average BGL reduction, mean time taken for normalisation of serum bicarbonate, length of hospitalisation, incidence of hypokalaemia and incidence of hypoglycaemia. **Results:** 35 admissions (n=35) in the protocol group, and 36 admissions (n=36) in the control group were analysed. The protocol group had shorter mean time to normalise serum bicarbonate (15.1hr for protocol vs. 24.6hr for control, P=0.01), and mean length of hospitalisation (37.9hr vs. 49.2hr, P=0.01). Incidence of hypokalaemia (28.6% vs. 52.8%, P=0.038) and hypoglycaemia (8.6% vs. 28%, P=0.036) was also lower in the protocol group compared with the control group. **Conclusion:** Using the standardised Queensland statewide DKA protocol improved several clinical outcomes in acute management of DKA.

Long term Outcomes of Autologous Peripheral Blood Stem Cell Transplantation at The Townsville Hospital

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Background / Aims: To evaluate the safety and outcomes of autologous peripheral blood stem cell transplants (PBSCT) performed at The Townsville Hospital. **Methods:** A retrospective chart review on all patients who have undergone an autologous PBSCT at The Townsville Hospital between July 1998 and June 2012. Overall survival was calculated using Kaplan-Meier estimates. **Results:** Two hundred and fifty-one (251) patients have undergone 271 autologous PBSCT at The Townsville Hospital from July 1998 until June 2012. Ten year overall survival for acute myeloid leukaemia, Hodgkin lymphoma, non Hodgkin lymphoma and multiple myeloma was 57%, 54%, 50% and 30% respectively. Overall transplant related mortality (TRM) was 3% (9/270) and in the last five years TRM was 1% (1/97). Specifically in the last two years (July 2010 until June 2012), there have been 50 autologous PBSCT in 49 patients with no deaths secondary to TRM. **Conclusion:** The data demonstrates that having designated cancer centres acting as regional hubs is a safe and feasible way of delivering highly specialised and best practice care to rural and regional residents. This approach helps combat deficiencies in cancer services in rural and regional Australia.

Hip Fracture Management at a Tertiary Hospital: A Retrospective Study Pre- and Post-establishment of an Orthogeriatric Unit

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Background / Aims: There has been a worldwide trend to manage hip fractures with the input of an orthogeriatric service. This study was undertaken to evaluate the impact of the services at The Townsville Hospital, Queensland, Australia. **Methods:** A retrospective audit of patients aged over 70 years old admitted to Townsville Tertiary Hospital with a fragility hip fracture during June November 2009 (pre- orthogeriatric service[pre]) and 2011 (post- orthogeriatric service[post]). Access to discharge summaries, pathology and pharmaceutical databases was gained for the audit. **Results:** 127 patients were identified (63 in 2009 and 64 in 2011). Both groups had similar demographics. The post group were significantly more likely to receive a complete osteoporotic workup (11% vs. 88%, p value <0.001); were significantly more likely to be commenced on treatment for osteoporosis (18% vs. 69%, p <0.001). There was no difference in mortality or length of stay; however, there was a non-significant trend to decrease mortality in the post group (15% to 8%, p= 0.21). Delay in surgery of >36 hours was directly correlated with an increased length of stay (15 to 20 days, p value 0.02). **Conclusion:** The input of an orthogeriatrician to the care of older patients with fractured hips results in some improvements of care; moreover, the trend with these small numbers suggests the benefits may extrapolate to improvements in hard outcomes such as decreased

mortality and decreased length of stay. Avoiding delays in getting patients to theatre may help decrease overall length of stay.

Sex and the City: A Community Screen in Response to a Syphilis Outbreak in Regional Australia

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Background / Aims: Over the past 18 months an outbreak of syphilis was observed in a remote health service district in Queensland. Notifications rose from 2 cases in 2009 to 134 cases between January 2011 and July 2012. Most notifications were in the 15 to 24 years age group from Indigenous people. The aim of this presentation is to describe the results of a community screen undertaken in response to this outbreak. **Methods:** A community screen targeting the population of 1,200 young, Indigenous persons in the area was conducted. **Results:** The screen was attended by 239 persons from the target population (coverage rate of 19.9%). Of the participants 117 (49%) were female. The mean age of participants was 18.4 years (SD 3.2). Overall, 27 of 239 (11.3%; 95%-CI = 7.6%; 16.0%) participants tested positive for syphilis; seven required treatment. Chlamydia was diagnosed in 10 (4.2%; 95%-CI = 2.0%; 7.6%) and gonorrhoea in 7 (2.9%; 95%-CI = 1.2%; 5.9%) participants. One participant was co-infected with syphilis and chlamydia and there were no cases of co-infection of syphilis and gonorrhoea. The treatment rate for syphilis was 71% (5 of 7) with a median treatment interval of 8.5 days. **Conclusion:** A community screen following a syphilis outbreak reached only 20% of the target population. This was the first screen of this kind in this remote area of Queensland. While further strategies to engage young Indigenous adults in community screens will need to be developed, additional strategies including opportunistic screening in primary care and emergency departments or the implementation of routine opt-out testing systems should be considered in the meantime.

POSTER ABSTRACTS

Medical Research Symposium

Thursday, 11 October, 2012

12:30-4.30 pm (lunch from 12 pm)

Robert Douglas Auditorium, The Townsville Hospital

Effective Use of Pathology Services

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Background / Aims: Pathology is the study of the nature and causes of diseases. It underpins every aspect of medicine, from monitoring of chronic diseases, to genetic research, to the diagnosis of every detected cancer in the world. The aim of this poster is to present the most effective methods of determining, influencing and sustaining good diagnostic practices whilst analysing the cost benefits to the health care budget. **Methods:** Benchmarked pathology cost information and ordering profiles were discussed with clinical user groups. Outliers were examined with a view to validating clinical practice and reviewing protocols. Impact on treatment times and length of stay as a result of analytical, pre, and post analytical factors are examined and quantified. The most effective methods of data collection, analysis, presentation, feedback and clinician engagement are evaluated and suggested for use on a routine basis. Where laboratory service delivery was found to be sub-optimal workflow analysis was examined to maximise a leaner approach. **Results:** Effective strategies for influencing the quality use of pathology have been identified and are presented. **Conclusion:** As