

Australasian College of Emergency Medicine. Responses were analysed according to level of experience, access to a neurosurgical service, state and department setting (metropolitan versus rural). **Results:** There were 878 survey respondents (response rate 24%). A total of 383 respondents (44%) agreed or strongly agreed with the statement, A normal non-contrast computed tomography scan (CT - 3rd generation or later) reliably excludes SAH if performed within 6 hours of headache onset, compared to 341 (39%) who disagreed or strongly disagreed. 116 clinicians (13%) agreed or strongly agreed that non-contrast CT was able to exclude SAH if performed within 12 hours of headache onset. A narrow majority of respondents (n=444, 51%) disagreed or strongly disagreed that CT angiography can reliably replace lumbar puncture for diagnosis of SAH, with 185 clinicians (21%) who were unsure. 467 respondents (53%) agreed that spectrophotometry is necessary for detection of xanthochromia versus visual inspection alone. **Conclusion:** Higher resolution CT technology has increased the sensitivity for detecting a bleed on non-contrast CT head. This study demonstrates a high level of disagreement concerning the preferred investigation of suspected SAH, particularly on the reliability of non-contrast CT for excluding a bleed, and highlighting the need to work towards a consensus approach.

Post-Injury Cervical Spine X-Ray Guidelines - Are They Appropriate For Older People

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Background / Aims: Older people have a greater likelihood of significant cervical spine injury with minimal trauma falls. It is important to have an assessment tool that is appropriate to this group. The National Emergency X-Radiography Utilisation Study (NEXUS) protocol is commonly used by Emergency Departments. The alternative, the Canadian Cervical Spine Rule (CCSR) requires the cervical spine x-ray (CSXR) of all patients aged over 65 years and results in large numbers of CSXRs. NEXUS reduces required CSXR by 12.6%. A case study data review is described that suggests deficiencies in NEXUS. **Case/Data Review:** An 80-year-old fell with no apparent injury. CSXR was not performed according to the NEXUS protocol. Intermittent complaints of neck and shoulder pain responded to simple strategies, only once requiring opioids. Independent ADL and mobility were maintained. Four days post injury development of paraesthesia and weakness was compatible with a C6 lesion. CSXR showed a subluxation and canal stenosis confirmed by MRI. Surgical intervention was performed. ED data showed the young (<65 yrs) were more likely to have CSXRs and that only 24% of the CSXRs were in those >75yrs of age. **Discussion:** NEXUS was validated with a cohort of 34,609 but only 2976 (8.6%) were older than 65 years, without any further age breakdown available. Age consideration is needed if using NEXUS alone. A previous cautionary report has not resulted in a change of practice. Further study is required to determine whether NEXUS or CCSR is the appropriate tool for this age group.

Pattern of Major Lower Limb Amputations at The Townsville Hospital- A Retrospective Review

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Background / Aims: North Queensland has a high prevalence of diabetes and vascular disease, particularly amongst the Indigenous population. Both are believed to contribute to lower limb amputations (LLAs), yet no local study has been conducted looking into possible contributing factors and clinical features leading to amputation. This study aimed to determine the prevalence of major LLAs and their associated risk factors at the Townsville

Hospital between the years 2009 to 2012. **Methods:** All major amputations done under vascular surgery at Townsville Hospital from 1/1/2009 to 31/12/2012 were retrospectively audited. Non-parametric analysis and Chi-Square tests were performed using SPSS 20 to identify strongly associated variables with amputation. **Results:** A total of 83 subjects had major LLAs during the period of the study, with a male: female ratio of 1.8:1. Diabetes was identified as the likely cause of LLA in 53% of patients, with the ATSI subgroup comprising 34% of the cohort. The mean age of amputation was significantly lower amongst the ATSI population (49.95 + 4.0 years), compared with non-ATSI (69.27 + 1.7 years) [P < 0.001]. The ATSI population with diabetes had a higher risk of getting amputated (RR 4.97 [95% CI 1.2-20.5] P = 0.01). When comparing previous endovascular intervention prior to amputation amongst patients, 38.5% of ATSI patients had previous intervention compared with 73% in the non-ATSI [P = 0.03]. **Conclusion:** Younger ATSI subjects with diabetes were at higher risk of LLA compared to their Caucasian counterparts, however further prospective studies are needed to confirm our findings.

Quantification of Circulating DNA in Healthy Volunteers

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Background / Aims: Circulating nucleic acids (CNAs) in plasma/serum have been known as a promising biomarker in a number of pathologies. This is a preliminary study to optimize sample preparation for subsequent study looking for pathogens nucleic acids amongst the abundance of humans nucleic acids background. The aims of present study were to quantify the level of circulating DNA and to investigate whether different methods of blood collection have an impact on DNA concentrations. **Methods:** Samples were obtained from six healthy volunteers. A microplate fluorescence assay (MFA) was performed for DNA quantification using SYBRGreen I dye. The fluorescence intensity was measured in a spectrofluorometer and the concentration of sample DNA was calculated based on the standard curve produced from a series of known DNA concentrations. The Wilcoxon Signed Ranks test was used to compare DNA concentration on: (1) plasma and serum collected using same procedures, (2) specimens collected with and without the application of cuff, (3) specimens collected by using vacuum system and those collected by using standard needle and syringe. **Results:** We found higher levels of DNA in serum compared to plasma samples (p<0.05). There was no significant difference in DNA concentrations between specimens obtained with and without cuff. Also, the use of vacuum system or standard syringe and needle did not significantly alter the levels of DNA. **Conclusion:** Quantification of circulating DNA by MFA is a simple and inexpensive method. Plasma represents the best specimen to use if one is seeking to minimize the quantity of host nucleic acids.

Review of Amputations in Patients with End-Stage Renal Failure on Haemodialysis at The Townsville Hospital

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Background / Aims: High rates of end stage renal failure (ESRF) have been reported in North Queensland. Furthermore haemodialysis has recently been identified as a risk factor for lower limb amputations. In spite of these no study has been published that analyses the magnitude and risk factors for amputation amongst haemodialysis patients. This study aims to document trends in prevalence and identify risk factors of non-traumatic lower limb amputations in subjects treated with haemodialysis in North Queens-

land. **Methods:** 102 current haemodialysis patients attending the Townsville Dialysis Centre were included in the study. Odds ratio and #967;2 tests were performed to identify variables most strongly associated with amputation. **Results:** We identified a 6.9% prevalence of lower limb amputation in 102 subjects on haemodialysis at our centre. The major risk factors of amputations in the cohort were history of ulceration (RR 4.57 [95%CI 2.4-8.8] $p=0.001$) and the presence of diabetes (RR 2.5 [95%CI 1.6-3.9] $p=0.008$). Other variables were tested but fell short of statistical significance, these included: Indigenous background, smoking history, gender and type of ulceration. **Conclusion:** Patients with ESRF on haemodialysis who have a past history of ulceration and have diabetes mellitus are at risk of having lower limb amputations. Primary prevention of diabetes in the sub-population may help in reducing the limb loss. Further prospective studies on a larger population are needed to confirm our findings.

An Evaluation of Body Surface Area Covered by School Uniforms in Queensland Primary Schools

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Background / Aims: To conduct a baseline assessment of body surface area coverage of school uniforms in primary schools in five Queensland regions. **Methods:** In 2012/2013, the surface area (SA) of the body covered by the most prominent regulation summer school uniform was assessed using body maps, allocating a percentage for each section of the body, excluding the head. **Results:** 482 uniforms (243 boys and 239 girls uniforms) from 244 primary schools (Mackay 40, Rockhampton 37, Mt Isa 21, Toowoomba 60 and Sunshine Coast 86) were assessed. 222 (91.0%) schools were metropolitan/urban and 22 (9.0%) were rural/remote. Ninety-nine (20.5%) private and 383 (79.1%) state school uniforms were assessed. The total SA ranged from 58.3% to 65%, with 91.5% covering a SA of 61.9%. The majority of dresses (81.8%) covered 50.9% of the body. Skorts, shorts, culottes, ruggers and skirts covered around 20%, shirts around 30%, and shoes/socks around 12%. The proportion of uniforms covering 62.4-65% of body SA was very low, and there were significant differences between locations: Toowoomba (12%), Rockhampton (9.6%); Mackay (6.2%), Sunshine Coast (3.5%) and Mt Isa (0%) ($p=0.014$). There were no significant differences in SA between boys and girls uniforms ($p=0.273$). 19.2% of private schools had a SA of 62.4-65%, compared to 3.4% of public schools. ($p=0.000$). **Conclusion:** The body surface area covered by summer school uniforms did not provide children with adequate protection from ultraviolet radiation and skin cancer risk. Further work with primary schools in Queensland is needed to improve sun protection afforded by school uniforms.

An Evaluation of Sun Protection Policies in Queensland Primary Schools

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Background / Aims: To conduct a baseline assessment of sun-protection policies in primary schools in seven Queensland regions. **Methods:** Sun protection policies were obtained from primary schools in Queensland's 7 largest population centres. They were evaluated according to criteria developed from The Cancer Councils guide to being SunSmart. Points were awarded for each criterion up to a maximum total score of 12. **Results:** In 2012/2013, sun protection policies were obtained from 533 primary schools (Brisbane 230, Sunshine Coast 84, Gold Coast 72, Toowoomba 51, Mackay 41, Rockhampton 36, Mt Isa 19). 512 (96.1%) schools were metropolitan/urban; 21 (4.0%) were rural/remote; 528 (99.1%) were co-educational; 485 (91%) were primary only; and 335 (62.9%) were public. Sun protection policy scores ranged from 0-12 (with 12 the highest score); median score was 2.0. 69.8% of policies scored 0, 1 or 2. SunSmart hats and clothing were mentioned in the majority (87.8% and 95.1%) but all 10 other elements suggested by The Cancer Council were mentioned in less

than 23%. The worst performing element was the sun protection policy is used when planning all outdoor events at 4.3%. 26 of 35 policies that scored 11 or 12 (74.3%) were from public schools, 31 (88.6%) from primary only, 32 (91.4%) from co-educational, and 33 (94.2%) from urban schools. **Conclusion:** Generally, quality of sun protection policies was poor. Further work with Education Queensland and Queensland primary schools is needed to improve the quality of sun protection policies, and better protect school children from risk of skin cancer.

Pattern of Diabetes Limb Amputations: Review of Two Regional Centres in Queensland

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Background / Aims: Diabetes limb amputation (DLA) is common in Australia's Queensland with notable regional variations in clinical features. Despite this, there is no comparative study of DLA in the 2 regions -north and south Queensland. The aim of the study was to determine clinical characteristics of DLA at The Townsville Hospital (TTH) compared with South Queensland's Gold Coast Hospital (GCH). **Methods:** Clinical data for all DLAs from the 2 tertiary hospitals were retrospectively reviewed for a 3 year-period from 2009 to 2011. **Results:** Fifty DLAs were recorded at GCH and 31 for TTH. 35% of the subjects at TTH who had DLAs were Aboriginal and Torres Strait Islanders (ATSI) compared to 2% in GCH $X^2 = 17.3$, $P<0.001$. The mean age, number of previous amputations and male-female ratio were similar in both centres. **Conclusion:** We reported high proportion of DLAs in the ATSI's North Queensland. Primary prevention of diabetes foot ulcer in the Indigenous Australian diabetic population may reduce DLA in the region. Further studies on larger population are suggested to confirm our findings.

Prevalence of Limited Joint Mobility in Elderly Diabetics at The Townsville Hospital

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Background / Aims: Limited joint mobility is a form of musculoskeletal complication affecting system well described in young diabetics (DM). Its prevalence in the elderly DM is not extensively investigated. Identifying LJM by simple clinical examination is likely to help as a screening tool for further assessment of other complications of DM in the geriatric population who are at a higher risk of co-morbidities. The aim of the study was to evaluate whether presence of diabetes increase the risk of LJM in the elderly subjects. **Methods:** A total of 88 subjects aged >70 years were prospectively assessed at the Townsville Hospital diabetes and gerontology departments. Of this number 47 were diabetics while 42 non-DM subjects served as control group. Clinical prayer sign examination and quantitative goniometric assessment of DM and non-DM controls were done. **Results:** Prevalence of LJM among DM patients was higher 19/47 (40.4%) compared to 7/41 (17%) in non-DM controls $X^2=5.72$, $P<0.05$. Mean age for DM was lower 76 ± 0.8 (SE) vs 81 ± 1 years; $P = 0.027$. Duration of DM was higher 23.8 ± 3.4 years compared with 12 ± 2 in non-DM, $p<0.05$. Retinopathy was commoner in DM with LJM 42% vs 11% in DM without LJM $X^2 = 6.2$, $P<0.05$. **Conclusion:** We report high prevalence of LJM in the elderly. The musculoskeletal complication correlates with occurrence of DM eye disease. Further prospective studies are required to confirm our findings.