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Rare case of an elderly male presenting to the emergency department with an acute abdomen few days post accidental ingestion of his dentures. A detailed history along with a CT abdomen showed perforation in the sigmoid colon adjacent to the site of the swallowed denture.


Presentations to the emergency department with a diagnosis of hypocalcaemia-induced tetany secondary to total thyroidectomy are rare. A patient presented to the emergency department of a regional Australian hospital with hypocalcaemia-induced tetany. A case study was employed to reflect on the care provided and identify knowledge practice deficits within this unusual patient presentation. Calcium plays a central role within the nervous system and is vital for both cardiac and muscular contraction. The clinical manifestations of electrolyte disturbances such as hypocalcaemia can be life threatening, and therefore, appropriate assessment, monitoring and management are essential to ensure positive patient outcomes. Understanding the importance of calcium imbalance for the emergency and critical care nurse is paramount in preventing complications associated with cardiac conduction and muscle tone, especially the potential for airway compromise. Education is central to this and may include clinical case reviews, the application of pathophysiological presentations of electrolyte imbalance and a review of electrolyte administration guidelines. Understanding the role of calcium within the body will assist emergency and critical care nurses to assess, monitor and intervene appropriately, thereby preventing the life-threatening manifestations of hypocalcaemia.


BACKGROUND: The effective handover of patient health data from the emergency department to other hospital units is integral for the continuity of patient care. Yet no handover process has been identified as superior to others within this context. METHODS: This study within a regional Australian hospital employed mixed methods approach including focus groups and key stakeholder consultation to develop a handover form appropriate for patient transfer from the emergency department to a variety of clinical areas. Paper-based surveys and audits were then employed to evaluate the implementation and understand staff perceptions of the form. RESULTS: The implementation of a patient handover form within the emergency setting was well received. Participants indicated that the form is clear, well designed and easy to navigate. It provided prompts to standardise their clinical handover and increased their accountability and responsibility within this process. CONCLUSIONS: To deliver an optimal nursing handover from the emergency department to various wards handovers should be structured and provide standardised content. The positive reception and use of this form provides evidence that a structured handover process can ensure standardisation of emergency department to ward nursing handovers.


The aim of this study is to explore the different handover models and processes available and their efficacy in improving handover communication within nursing practice. The handover of information is a key nursing responsibility that ensures patient outcomes through continuity of care. This process is widely recognised as an opening for error that may comprise patient safety. This paper is an integrative literature review that employed an inductive exploratory design. A computerised database search was employed including CINAHL, PubMed and Science Direct and a manual citation search with included papers limited to papers published 2005-2016, in English with full text freely available. This included a
systematic search strategy, a critical appraisal of the papers utilising the Critical Appraisal Skills Programme, an inductive data extraction and thematic analysis. Sixteen papers were included in this review. The results detailed that there are various handover models in use, yet there is no evidence that any one model displays superior efficacy. The iSoBAR model and its adaptations remain the only model employed across various specialties. More research is warranted to determine if any handover model displays superior efficacy or transferability.; © 2017 John Wiley & Sons Australia, Ltd.


Background: Hospitalization and early anticoagulation therapy remain standard care for patients who present to the emergency department (ED) with pulmonary embolism (PE). For PEs discovered incidentally, however, optimal therapeutic strategies are less clear-and all the more so when the patient has cancer, which is associated with a hypercoagulable state that exacerbates the threat of PE.; Methods: We conducted a retrospective review of a historical cohort of patients with cancer and incidental PE who were referred for assessment to the ED in an institution whose standard of care is outpatient treatment of selected patients and use of low-molecular-weight heparin for anticoagulation. Eligible patients had received a diagnosis of incidental PE upon routine contrast enhanced chest CT for cancer staging. Survival data was collected at 30 days and 90 days from the date of ED presentation and at the end of the study.; Results: We identified 193 patients, 135 (70%) of whom were discharged and 58 (30%) of whom were admitted to the hospital. The 30-day survival rate was 92% overall, 99% for the discharged patients and 76% for admitted patients. Almost all (189 patients, 98%) commenced anticoagulation therapy in the ED; 170 (90%) of these received low-molecular-weight heparin. Patients with saddle pulmonary arterial incidental PEs were more likely to die within 30 days (43%) than were those with main or lobar (11%), segmental (6%), or subsegmental (5%) incidental PEs. In multivariate analysis, Charlson comorbidity index (age unadjusted), hypoxemia, and incidental PE location (P = 0.004, relative risk 33.5 (95% CI 3.1-357.4, comparing saddle versus subsegmental PE) were significantly associated with 30-day survival. Age, comorbidity, race, cancer stage, tachycardia, hypoxemia, and incidental PE location were significantly associated with hospital admission.; Conclusions: Selected cancer patients presenting to the ED with incidental PE can be treated with low-molecular-weight heparin anticoagulation and safely discharged. Avoidance of unnecessary hospitalization may decrease in-hospital infections and death, reduce healthcare costs, and improve patient quality of life. Because the natural history and optimal management of this condition is not well described, information supporting the creation of straightforward evidence-based practice guidelines for ED teams treating this specialized patient population is needed.;


Objective: The aim of this paper is to provide an overview of the delayed neurologic syndrome of carbon monoxide poisoning and its clinical importance in psychiatric settings. Method: A brief review of carbon monoxide poisoning is presented with a focus on the delayed neurologic syndrome and a case of deliberate self-poisoning is described. Results: As in the case described, the delayed manifestations of carbon monoxide poisoning can resemble a relapse of psychiatric illness. Conclusions: In cases of carbon monoxide poisoning it is important to consider the delayed neurologic syndrome as misdiagnosis could lead to inappropriate treatment and worsened outcome.


Femoral hernia accounts for only 3% of all the hernias and in only 0.5%-5% of the events, the appendix can travel through the femoral hernia which is called De Garengeot hernia, and the incidence of appendicitis in this type of hernia is as low as 0.08%-0.13%. We present a case of a 69-year-old healthy woman who was referred to the emergency department by her general practitioner for CT-proven appendicitis in the femoral canal. On initial assessment, she was found to have a hard, tender lump in her right groin below the inguinal ligament, and open appendectomy and herniorrhaphy were performed. Surgery is the mainstay of treatment of this type of hernia but due to the rarity of this condition, there is no specific guideline as for the surgical procedure. This article demonstrated a case of De Garengeot hernia which was diagnosed preoperatively and managed surgically.; © BMJ Publishing Group Ltd (unless otherwise stated in the text of the article) 2017. All rights reserved. No commercial use is permitted unless otherwise expressly granted.

BACKGROUND: Hypoxemia increases the risk of intubation markedly. Such concerns are multiplied in the emergency department (ED) and during retrieval where patients may be unstable, preparation or preoxygenation time limited and the environment uncontrolled. Apneic oxygenation is a promising means of preventing hypoxemia in this setting. AIM: To test the hypothesis that apneic oxygenation reduces the incidence of hypoxemia during endotracheal intubation in the ED and during retrieval.

METHODS: We undertook a systematic review of six databases for all relevant studies published up to November 2016. Included studies evaluated apneic oxygenation during intubation in the ED and during retrieval. There were no exemptions based on study design. All studies were assessed for level of evidence and risk of bias. The Review Manager 5.3 software was used to perform meta-analysis of the pooled data. RESULTS: Six trials and a total 1822 cases were included for analysis. The study found a significant reduction in the incidence of desaturation (RR=0.76, p=0.002) and critical desaturation (RR=0.51, p=0.01) when apneic oxygenation was implemented. There was also a significant improvement in first pass intubation success rate (RR=1.09, p=0.004). CONCLUSION: Apneic oxygenation may reduce patient hypoxemia during intubation performed in the ED and during retrieval. It also improves intubation first-pass success rate in this setting.


Hypoxemia increases the risk of cardiac arrest and mortality during intubation. The reduced physiological reserve and reduced efficacy of pre-oxygenation in intensive care patients makes their intubation particularly dangerous. Apneic oxygenation is a promising means of preventing hypoxemia in this setting. We sought to ascertain whether apneic oxygenation reduces the incidence of hypoxemia when used during endotracheal intubation in the intensive care unit (ICU). A systematic review of five databases for all relevant studies published up to November 2016 was performed. Eligible studies investigated apneic oxygenation during intubation in the ICU, irrespective of design. All studies were assessed for risk of bias and level of evidence. A meta-analysis was performed on all data using Revman 5.3. Six studies including 518 patients were retrieved. The study found level 1 evidence of a significant reduction in the incidence of critical desaturation (RR = 0.69, CI = 0.48-1.00, p = 0.05) and a significant increase in the lowest SpO2 value by 2.83% (CI = 2.28-3.38, p < 0.00001). There was a significant reduction in ICU stay (WMD = -2.89, 95%CI = -3.25 to -2.51, p < 0.00001). There was no significant difference between groups regarding mortality (RR = 0.77, 95%CI = 0.59-1.03, p = 0.08), first pass intubation success (RR = 1.17, 95%CI = 0.67 to 2.03, p = 0.58), arrhythmia during intubation (RR = 0.58, 95%CI = 0.08 to 4.29, p = 0.60), cardiac arrest during intubation (RR = 0.33, 95%CI = 0.01 to 7.84, p = 0.49) and duration of ventilation (WMD = -1.97, 95%CI = -5.89 to 1.95, p = 0.32). Apneic oxygenation reduces patient hypoxemia during intubation performed in the ICU. This meta-analysis found evidence that apneic oxygenation may significantly reduce the incidence of critical desaturation and significantly raises the minimum recorded SpO2 in this setting. We recommend apneic oxygenation be incorporated into ICU intubation protocol.


Background: Nursing students’ ability to learn, integrate and apply bioscience knowledge to their clinical practice remains a concern.; Objectives: To evaluate the implementation, influence, and student perspective of a team-teaching workshop to integrate bioscience theory with clinical nursing practice.; Design: The team-teaching workshop was offered prior to commencement of the university semester as a refresher course at an Australian university. This study employed a sequential explanatory mixed methods design incorporating both quantitative and qualitative items.; Methods: An evaluation survey with quantitative and qualitative items and a focus group were employed. The qualitative data were analysed using a thematic approach. The quantitative data was combined with the emergent themes in the qualitative data.; Participants: Participants were final year nursing students. Nine students attended the workshop. All students completed the evaluation (N=9) and 44.4% (N=4) attended the focus group.; Results: The results revealed six themes: (1) lectures are an inadequate teaching strategy for bioscience; (2) teaching strategies which incorporate active learning engage students; (3) the team-teaching workshop provides an effective learning environment; (4) the workshop content should be expanded; (5) pharmacology should relate to bioscience, and bioscience should relate to nursing; and (6) team-teaching was effective in integrating pharmacology with bioscience, and then translating this into nursing practice. Students had felt there was disjointedness between pharmacology and bioscience, and between bioscience and nursing care within their undergraduate studies. The workshop that was based on team-teaching bridged those gaps, utilised active learning strategies and provided an effective

Aims and Objectives: To explore new graduate registered nurses’ reflections of bioscience courses during their nursing programme and the relationship between bioscience content and their clinical practice.; Background: Undergraduate nursing students internationally find bioscience courses challenging, which may be due to the volume of content and level of difficulty of these courses. Such challenges may be exacerbated by insufficient integration between bioscience theory and nursing clinical practice.; Design: A descriptive, cross-sectional mixed methods study was conducted.; Methods: A 30-item questionnaire with five written response questions which explored recently registered nurses’ reflections on bioscience courses during their nursing degree was employed. Descriptive analyses were reported for individual items. Thematic analysis of qualitative responses was grouped to reveal emerging themes.; Results: Registered nurses’ (n = 22) reflections revealed that bioscience courses were a significant challenge during their undergraduate programme, and they lacked confidence explaining the biological basis of nursing. Participants would like improved knowledge of the relevant bioscience for nursing and agreed that bioscience courses should be extended into the undergraduate final year. The importance of relating bioscience content to nursing practice was elaborated extensively throughout written responses.; Conclusions: Although registered nurses reflected that bioscience courses were difficult with large volumes of content, having more bioscience with greater relevance to nursing applications was considered important in their current clinical practice. It is suggested that bioscience academics develop greater contextual links between bioscience content and clinical practice relevant to nursing.; Relevance To Clinical Practice: After working as a registered nurse, there was appreciation of bioscience relevance for clinical practice, and the nurses believed they would have benefitted from more nursing-related bioscience during their undergraduate programme. Focussed integration of bioscience with clinical nursing courses should be driven by academics, nurse educators and clinical nurses to provide a biological basis for patient care to nursing students.; © 2016 John Wiley & Sons Ltd.


Purpose: Limited data exist that support the reproducibility of cervical auscultation (CA) use in children. This study aimed to determine the reliability of CA in detecting oropharyngeal aspiration (OPA) in children within a controlled environment.; Method: This observational study included eight speech-language pathologists who rated clips of 40 normal and 40 OPA swallowing sounds on two separate occasions (i.e.160 sound clips rated by each speech-language pathologist) to comprise a total of 1280 swallow sound clips rated. Swallowing sound clips were collected from (1) a volunteer sample of 20 healthy children from the general community (mean 16.2 ± 10.7 months; 65% female); (2) a referred sample of 19 children with demonstrated OPA (mean 22.8 ± 25.5 months; 36.8% female), as determined on videofluoroscopic swallow studies (VFSS) using the Penetration-Aspiration Scale (PAS) (≥6 score.).; Result: Inter-rater reliability was very good (kappa =0.81, 95%CI 0.79-0.84). Intra-rater reliability for each rater was good to very good (kappa range 0.72-0.98). Overall sensitivity was 93.9% (95%CI 91.8-95.6) and specificity was 94.5% (95%CI 92.5-96.2). High reliability values were found for the detection of OPA versus normal swallows using CA alone.; Conclusion: Future research should investigate the use of CA in a variety of clinical settings with less environmental control before CA can be advocated for use in routine clinical practice.;


Pressure injuries (PIs) are highest amongst the critically ill. The impact of PIs is well reported and includes increased length of stay in acute facilities, increased cost of care, decreased quality of life, and pain and disability for the patient. Over the last decade, a considerable amount of research has been undertaken in the area of PI prevention. We now know that the use of prophylactic silicone dressings can assist in reducing the incidence of PIs in critically ill patients. However, there is currently a gap in the literature in comparing the effectiveness of different silicone products available in Australia. This cluster-controlled

Background: Acute respiratory illnesses with cough (ARIwC) are predominant causes of morbidity in Australian Indigenous children; however, data on disease burden in urban communities are scarce. This study aimed to determine the incidence of ARIwC, the predictors of recurrent (> =4 episodes) ARIwC, and development of chronic cough following an ARIwC in urban, predominantly Indigenous, children aged <5 years from northern Brisbane, Australia. Methods: Prospective cohort study of children aged <5 years registered with a primary healthcare center. ARIwC episodes and outcomes were collected for 12 months. Recurrent ARIwC was defined as > =4 episodes in 12 months. Chronic cough was defined as cough lasting > =4 weeks. Children who developed chronic cough were reviewed by a pediatric pulmonologist. Incidence densities per child-month of observation were calculated and predictors of recurrent ARIwC and chronic cough were evaluated in logistic regression models. Results: Between February 2013 and November 2015, 200 children were enrolled; median age of 18.1 months, range (0.7-59.7 months) and 90% identified as Indigenous. A total of 1,722 child-months of observation were analyzed (mean/child = 8.58, 95% CI 8.18-9.0). The incidence of ARIwC was 24.8/100 child-months at risk (95% CI 22.3-27.5). Twenty-one children (10.5%) experienced recurrent ARIwC. Chronic cough was identified in 70/272 (25.7%) episodes of ARIwC. Predictors of recurrent ARIwC were presence of eczema, mold in the house, parent/carer employment status, and having an Aboriginal and Torres Strait Islander mother/non-Aboriginal and Torres Strait Islander father (compared to both parents being Aboriginal and Torres Strait Islander). Predictors of chronic cough included being aged < 12 months, eczema, childcare attendance, previous history of cough of > 4 weeks duration, having an Aboriginal and Torres Strait Islander mother/non-Aboriginal and Torres Strait Islander father (compared to both parents being Aboriginal and Torres Strait Islander), and a low income. Of those with chronic cough reviewed by a pediatric pulmonologist, a significant underlying disorder was found in 14 children (obstructive sleep apnea = 1, bronchiectasis = 2, pneumonia = 2, asthma = 3, tracheomalacia = 6). Discussion: This community of predominantly Aboriginal and Torres Strait Islander and socially disadvantaged children bear a considerable burden of ARIwC. One in 10 children will experience more than three episodes over a 12-month period and 1 in five children will develop chronic cough post ARIwC, some with a serious underlying disorder. Further larger studies that include a broader population base are needed.


Aim: There are no published data on factors impacting on acute respiratory illness (ARI) among urban Indigenous children. We describe the characteristics and respiratory risk profile of young urban Indigenous children attending an Aboriginal-friendly primary health-care practice.; Methods: We conducted a cross-sectional analysis of data collected at baseline in a cohort study investigating ARI in urban Indigenous children aged less than 5 years registered with an Aboriginal primary health-care service. Descriptive analyses of epidemiological, clinical, environmental and cultural factors were performed. Logistic regression was undertaken to examine associations between child characteristics and the presence of ARI at baseline.; Results: Between February 2013 and October 2015, 180 Indigenous children were enrolled; the median age was 18.4 months (7.7-35), 51% were male. A total of 40 (22%) children presented for a cough-related illness; however, ARI was identified in 33% of all children at the time of enrolment. A total of 72% of children were exposed to environmental tobacco smoke. ARI at baseline was associated with low birthweight (adjusted odds ratio (aOR) 2.54, 95% confidence interval (CI) 1.08-5.94), a history of eczema (aOR 2.67, 95% CI 1.00-7.15) and either having a family member from the Stolen Generation (aOR 3.47, 95% CI 1.33-9.03) or not knowing this family history (aOR 3.35, 95% CI 1.21-9.26).; Conclusions: We identified an urban community of children of high socio-economic disadvantage and who have excessive exposure to environmental tobacco smoke. Connection to the Stolen Generation or not knowing the family history may be directly impacting on child health in this community. Further research is needed to understand the relationship between cultural factors and ARI; © 2017 Paediatrics and Child Health Division (The Royal Australasian College of Physicians).


AIM: Emergency departments are characterised by a fast-paced, quick turnover and high acuity workload, therefore appropriate staffing is vital to ensure positive patient outcomes. Models of care are frameworks in which safe and effective patient-to-nurse ratios can be ensured. The aim of this study was
to implement a supportive and transparent model of emergency nursing care that provides structure - regardless of nursing staff profile, business or other demands; improvement to nursing workloads; and promotes individual responsibility and accountability for patient care. METHOD: A convergent parallel mixed-method approach was used. Quantitative data were analysed using descriptive statistics and the qualitative data used a thematic analysis to identify recurrent themes. RESULTS: Data post-implementation of the model of emergency nursing care indicate improved staff satisfaction in relation to workload, patient care and support structures. CONCLUSION: The development and implementation of a model of care in an emergency department improved staff workload and staff’s perception of their ability to provide care.


Background: Respiratory morbidity in Australian Indigenous children is higher than their non-Indigenous counterparts, irrespective of urban or remote residence. There are limited studies addressing acute respiratory illness (ARI) in urban Indigenous children, particularly those that address the upper airway microbiome and its relationship to disease. We aimed to describe the prevalence of upper airway viruses and bacteria in symptomatic and asymptomatic urban-based Australian Indigenous children aged less than 5 years.; Methods: A cross-sectional analysis of data collected at baseline in an ongoing prospective cohort study of urban Aboriginal and Torres Strait Islander children registered with a primary health care service in the northern suburbs of Brisbane, Australia. Clinical, demographic and epidemiological data and bilateral anterior nasal swabs were collected on enrolment. Polymerase chain reaction was performed on nasal swabs to detect 17 respiratory viruses and 7 bacteria. The primary outcome was the prevalence of these microbes at enrolment. Logistic regression was performed to investigate differences in microbiome prevalence between children with and without acute respiratory illness with cough as a symptom (ARIwC) at time of specimen collection.; Results: Between February 2013 and October 2015, 164 children were enrolled. The median age at enrolment was 18.0 months (IQR 7.2-34.3). 49.4% were boys and 56 children (34.2%) had ARIwC. Overall, 133/164 (81%) nasal swabs were positive for at least one organism; 131 (79.9%) for any bacteria, 59 (36.2%) for any virus and 57 (34.8%) for both viruses and bacteria. Co-detection of viruses and bacteria was more common in females than males (61.4% vs 38.6%, p = 0.044). No microbes, alone or in combination, were significantly associated with the presence of ARIwC.; Conclusions: The prevalence of upper airways microbes in asymptomatic children is similar to non-Indigenous children with ARIwC from the same region. Determining the aetiology of ARIwC in this community is complicated by the high prevalence of multiple respiratory pathogens in the upper airways.; Study Registration: Australia New Zealand Clinical Trial Registry Registration Number: 12,614,001,214,628. Retrospectively registered.;


Introduction: Emergency Department (ED) workers are prone to occupational violence, however the extent and impact of this may not be evenly felt across all roles in the ED.; Aims: Explore: 1) the rate of verbal abuse and physical assaults experienced by ED staff, 2) perceptions of safety, 3) attitudes towards security officers, and 4) formal reporting of incidents.; Methods: 330 ED workers were surveyed at four public hospitals in one metropolitan health service district in Queensland, Australia, including 179 nurses, 83 medical staff, 44 administration staff, 14 allied health, and 9 operational.; Results: Nurses were more likely to have been physically assaulted in the last six months and were less likely to feel safe. Most ED staff across all roles experienced verbal abuse. Nurses were better than medical staff at reporting instances of occupational violence although overall reporting across all roles was low. Staff who thought that security officers respond to incidents quickly and are a visible presence in the ED were more likely to feel safe in the ED.; Conclusions: Workers in the ED, particularly nurses, experience high rates of verbal abuse and physical aggression and there may be a case for having designated security guards in the ED.;

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Background: Psychotic disorders affect up to 3% of the population and are often chronic and disabling. Innovation in the pharmacological treatment of psychosis has remained stagnant in recent decades. In order to improve outcomes for those with psychotic disorders, we present a protocol for the trial of a common food preservative, sodium benzoate, as an adjunctive treatment in early psychosis.; Methods: Persons experiencing early psychosis (n = 160) will be recruited through hospitals and community mental health services in Queensland, Australia. Patients will be randomized to receive either 12-week treatment with 1000 mg (500 mg twice daily (BD)) sodium benzoate or placebo. Patients will undergo fortnightly outcome assessments, in addition to weekly ongoing capacity to consent, drug compliance...
and safety assessments. The primary outcome measure is the Positive and Negative Syndrome Scale (PANSS) total score. Secondary outcomes are Global Assessment of Function (GAF), Assessment of Quality of Life Scale (AQOL), the Activity and Participation Questionnaire (APQ6), International Physical Activity Questionnaires (IPAQ), Simple Physical Activity Questionnaire (SIMPAQ), Physical Activity Questionnaire, Clinical Global Impression (CGI), Hamilton Depression rating Scale-17 items (HDRS), Opiate Treatment Index (OTI) and the Patients' Global Impression of Improvement (PGI-I). As a tertiary objective, changes from baseline to endpoint in to serum markers related to D-alanine, L-alanine, D-serine, L-serine, glycine and glutamate will be investigated.; Discussion: Consumers and clinicians are keen to help develop better treatments for those with psychosis. This study, part of the wider Cadence clinical trials platform will examine if a safe and accessible food preservative can help optimize outcomes in those with psychosis.; Trial Registration: Australian New Zealand Clinical Trials registry (ANZCTR), ACTRN12615000187549. Registered on 26 February 2015.;


Challenges in treating severe neonatal jaundice in low and middle-income country settings still exist at many levels. These include: a lack of awareness of causes and prevention by families, communities and even sometimes health care professionals; insufficient, ineffective, high quality affordable diagnostic and therapeutic options; limited availability of rehabilitation provision for kernicterus. Collectively these challenges lead to an unacceptably high global morbidity and mortality from severe neonatal jaundice. In the past decade, there has been an explosion of innovations addressing some of these issues and these are increasingly available for scale up. Scientists, healthcare providers, and communities are joining hands to explore educational tools, low cost screening and diagnostic options including at point-of-care and treatment modalities including filtered sunlight and solar powered phototherapy. For the first time, the possibility of eliminating the tragedy of preventable morbidity and mortality from severe NNJ is on the horizon, for all.


BACKGROUND: Infection with multidrug-resistant (MDR) Gram-negative organisms leads to poorer outcomes in the critically ill burn patient. The aim of this study was to identify the risk factors for MDR Gram-negative pathogen infection in critically ill burn patients admitted to a major tertiary referral intensive care unit (ICU) in Australia. METHODS: A retrospective case-control study of all adult burn patients admitted over a 7-year period was conducted. Twenty-one cases that cultured an MDR Gram-negative organism were matched with 21 controls of similar age, gender, burn size and ICU stay. Multivariable conditional logistic regression was used to individually assess risk factors after adjusting for Acute Burn Severity Index. Adjusted odds ratios (ORs) were reported. P-values < 0.25 were considered as potentially important risk factors. RESULTS: Factors increasing the risk of MDR Gram-negative infection included superficial partial thickness burn size (OR: 1.08; 95% confidence interval (CI): 1.01-1.16; P-value: 0.034), prior meropenem exposure (OR: 10.39; 95% CI: 0.96-112.00; P-value: 0.054), Gram-negative colonization on admission (OR: 9.23; 95% CI: 0.65-130.15; P-value: 0.10) and escharotomy (OR: 2.66; 95% CI: 0.52-13.65; P-value: 0.24). For cases, mean age was 41 (SD: 13) years, mean total body surface area burned was 47% (SD: 18) and mean days in ICU until MDR specimen collection was 17 (SD: 10) days. CONCLUSION: Prior meropenem exposure, Gram-negative colonization on admission, escharotomy and superficial partial thickness burn size may be potentially important factors for increasing the risk of MDR Gram-negative infection in the critically ill burn patient.