Newborn Aboriginal and/or Torres Strait Islander hearing loss in Queensland 2009-2011: demographics, risk factors, hearing screening and hearing loss diagnosis

Time: 2.00 pm
Location: Riverbank 5
Presenter: Dr Trent L Calcutt
Author: Calcutt T

Aim and objectives
This retrospective Queensland-wide study reviews and compares information regarding newborn Aboriginal and/or Torres Strait Islander (ATSI) demographics, with a specific focus on newborn hearing screening, hearing loss risk factor prevalence, and infant hearing loss diagnosis. A significant disparity in acquired paediatric ear disease between older ATSI and non-Indigenous children is widely acknowledged. This study explores the relative prevalence of different forms of hearing loss in the neonatal and early childhood period.

Method/Design
Subjects were infants who underwent newborn hearing screening in Queensland between 2009–2011, with a particular focus on those identifying as ATSI. Data was provided through the Queensland Healthy Hearing database. Infants were analysed in ATSI and non-Indigenous strata for variable distribution including gender, rurality, prematurity, incidence of hearing loss risk factors, and degree and type of hearing loss.

Results
183,006 infants were eligible for analysis, 4.6% identifying as Aboriginal, 0.9% Torres Strait Islander, and 0.8% as both Aboriginal and Torres Strait Islander. Relative to non-Indigenous infants, significant differences were present in regards to rurality distribution, rates and degree of recorded premature birth, prevalence of several hearing loss risk factors, and hearing loss diagnosis. Per 1,000 infants analysed, hearing loss was present in 4.6 ATSI infants relative to 2.4 non-Indigenous infants. The rates of sensorineural hearing loss and conductive hearing loss were similar between groups, but the auditory neuropathy appeared to be of two-fold greater prevalence in ATSI infants.

Conclusion
Queensland’s Newborn Hearing Screening program is invaluable. Specific demographic and hearing loss diagnosis characteristics differed between ATSI and non-Indigenous infants. Consideration of the unique characteristics evident between these groups supports care individualisation. ATSI infants represent a logistically difficult management challenge, in regards to identification of group members, health care access and rurality. Focused higher power and qualitative research looking at ATSI neonatal hearing loss is warranted.
Vitamin D deficiency prevalence in pregnant women on Palm Island

**Time:** 2.20 pm  
**Location:** Riverbank 5  
**Presenter:** TBC  
**Author:** Wade U

**Introduction**

Palm Island is known as a tropical paradise. However, the population’s strong sun protective skin type 4–6 places them at increased risk of Vitamin D deficiency. Westernised lifestyles with indoor comforts and responsibilities take people away from outdoor activities and the sunlight that assures healthy Vitamin D levels. Vitamin D deficiency may increase the risk of cardiometabolic disease, depression/suicide and infectious diseases, which contributes significantly to the major health burdens faced by many indigenous peoples.

Vitamin D deficiency has also been linked with adverse outcomes in pregnancy and neonates.

**Aims and objectives**

This observational cohort study is to determine if Vitamin D deficiency is prevalent in pregnant women in tropical Palm Island and should be given due attention.

**Method**

Ethics approval was obtained. Various community health leaders were consulted and engaged. Statistical data was collected from routine antenatal bloods after consent was obtained. Feedback was given to community leaders and community groups. Recommendations for implementation were made.

**Results**

End of Winter: 31% (<50nmol/L) Vitamin D deficient  
End of Summer: 11% (<60nmol/L) Vitamin D deficient  
Or 35% (<70nmol/L) Vitamin D deficient

Results were in keeping with the results of the eGFR study finding a 31% Vitamin D deficiency in Northern Australia.

**Conclusion**

Vitamin D deficiency is relevant, even in the tropics. All pregnant women should be encouraged to follow OA guidelines of sun safe exposure, according to location, to maximise health through optimal Vitamin D levels. High risk patients should be screened and supplemented as per RANZCOG guidelines. This may be applicable to all communities throughout Australia.

The prevalence of Vitamin D deficiency in at risk vulnerable people groups may be significantly underestimated, possibly contributing to an already heavy burden of disease.

Encouraging sun safe exercise, exposing the arms for 15 – 45 min, according to season, may be a good option to reduce the risk of Vitamin D deficiency, especially in pregnancy.

**Being a GP in the Nordic countries**

**Time:** 2.40 pm  
**Location:** Riverbank 5  
**Presenter:** Professor Per Stensland  
**Authors:** Stensland P, Tulinius C, Hibble A, Rudebeck C

**Aims and objectives**

The postgraduate education of GPs has little focus on the trainee her/him-self. Still, the doctor’s self-reflection is a key to receptiveness in clinical encounters and to utilizing own personal resources in clinical communication. Research reports from medical educational activities are mostly wordly and fact-oriented. In other disciplines, art-based research is utilised when exploring the significance of emotional and relational perspectives. The objective of the project was to let GPs in the Nordic countries express what it means to be a GP today through art or creative writing.

**Method/Design**

In 2009 we invited GPs to participate in a workshop on the Nordic GP Conference: “Working in general practice – exhibiting and discussing what it means to work in general practice in the Nordic Countries”. We presented the contributions in congresses in 2009 and 2011 and the contributors were interviewed in the workshops. In 2013, we presented the art works and qualitative analyses of the project in a book: “Being a GP in the Nordic Countries”.

**Results**

25 GPs, many from rural areas, participated with photos, videos, installations, paintings, drawings and poems. A total of 107 GPs took part in the workshops. There was a clear voice stating a professional dissonance in GP work, a sense of being perceived as going against the main stream of the medical community. Participants expressed a value-based conflict between the concern for the individual and the purpose-rational decisions of health politics. Many contributions presented a proud identity of being a GP in a local context.

**Conclusion**

Art and creative writing may open a supplementary communication channel for professional ideas. Many of the contributing GPs had not previously utilized traditional, verbal presentation forms in the medical community.

**Translating research evidence into health service delivery**

**Time:** 2.00 pm  
**Location:** Riverbank 6a  
**Presenter:** Dr Carole Reeve  
**Authors:** Reeve C, Walters L, Wakerman J

**Introduction**

There is a large inequitable difference in health outcomes across Australia. Life expectancy is much lower for Aboriginal and Torres Strait Islander people living in rural and remote areas.
Aims and objectives

To determine what attributes of health interventions are effective in improving health outcomes for Aboriginal and Torres Strait Islander people in rural and remote Australia.

Method/Design

Seven case studies were analysed using a Context Health Service Evaluation Framework tool. The complexity of the context and the interventions required an understanding of why and how interventions worked not just whether they were effective in achieving their goal. To achieve this end, case study and logic methodology were used in line with critical realism epistemology.

Results

The case series analysis underscored the importance of aligning evaluation methods not only to the intervention but also to theory and epistemology. This ensured not only appropriate evaluation outcomes but also richer evaluation data around how and why the intervention was effective. The number of urgent care presentations did not increase and no negative outcomes were reported through providing this option. Importantly GP support and acceptance was the second most reported important component for success.

Collaborative Practice Model—making a difference to rural communities

Time: 2.20pm
Location: Riverbank 6a
Presenter: Mary Skondreas & Catherine Harmer
Authors: Skondreas M, Harmer C

Aims and objectives

In Victoria small rural health services rely heavily on GPs to provide services to people who present at their service for urgent care. In these health services the doctor is usually not on site when the patient arrives. In some communities there are no GPs and/or no pharmacists.

Conclusion

The findings of the RIPERN evaluation included better work and life balance opportunities for participating rural GPs and improved collegial relationships between GPs and nurses working in urgent care centres. The Collaborative Practice Model, which is derived from Queensland, has been implemented in Victoria since 2012 and in 2014 was evaluated. The model allowed health professionals to continuously negotiate their roles based on their respective skills and availability with the aim of strengthening the existing clinical team’s capacity to provide care to patients who present for urgent care. The model encourages health professionals and local communities to work together to achieve the best mix of services to meet the needs of the community.

Within the Collaborative Practice Model, RIPERN (Rural and Isolated Practice Endorsed Registered Nurses) are endorsed to provide advanced clinical practice and to administer and supply primary care medications (schedule 2,3,4), as per the Victorian legislation and gazetted list, where there is no or limited access to GPs, nurse practitioners or paramedics and pharmacists.

Method/Design

An evaluation of the model was conducted from June 2014 and finalised in January 2015. This involved a quantitative, qualitative and clinical audit consultation with gazetted health services (implemented and non-implemented sites) and Bush Nursing Centres, which are currently not gazetted.

Results and Conclusion

The policy and practice implications are the importance of planning, monitoring and evaluating of new programs with community participation. This highlights the essential role of research embedded in service delivery to monitor the impact of new interventions and service delivery on the health outcomes of the population. Secondly, the need to align intervention epistemology, research theory and evaluation methodology to ensure appropriate data collection. Finally, complex health problems require complex, multi-strategy solutions and integration with existing services for efficiency and sustainability.

Academic paper abstracts

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Academic paper abstracts

Results
The literature revealed that the future provision of effective and efficient rural health care will require innovative models that cross interdisciplinary and interagency programs. There is growing evidence that the role of the Paramedic is evolving and research suggests that PAs can provide effective primary health care. The combination of the Paramedic/PA skills can create opportunities to deliver a new and effective role in health care called a Rural Paramedic Practitioner (RPP).

Conclusion
Delivery of rural health care is a challenge. Recruiting and retaining medical personnel is difficult and costs in delivery are rising. The introduction of an RPP will create a front line clinician that is able to safely and efficiently support doctors within existing health facilities and also treat patients outside this environment.

When treating outside the hospital an RPP is well positioned to link patient needs with existing healthcare systems. Introducing the RPP model will require cooperation of federal, state and territory agencies, ambulance authorities, and Primary Health Care services.

Funding, clinical governance, scope of practice, and quality control are fundamental to the success of this model. Many of these issues have been managed in Queensland.

This paper explores a proposed model of the Rural Paramedic Practitioner.

TeleDerm National: a decade of teledermatology
Time: 2.00pm
Location: Riverbank 6b
Presenter: Dr Stephen Andrews
Authors: Byrom L, Lucas L, Sheedy V, Muir J

Introduction
Tele-Derm National is an initiative of the Australian College of Rural and Remote Medicine and has been providing online educational and consultational services in dermatology to doctors Australia wide for over a decade. The site provides specific patient advice on cases submitted by treating doctors. Utilisation of this aspect of Tele-Derm National has grown steadily with over 800 cases submitted in the last 18 months alone. Additionally, TeleDerm National provides a unique educational opportunity for rural doctors, general practitioners, and medical students.

Method/Design
Retrospective case analysis was performed on a random selection of submitted patient cases. The different types of patient presentations and their reason for submission for specialist opinion were analysed. The quality of clinical information provided was also evaluated. Additionally, the range of geographical locations and the characteristics of those towns and cities were explored.

Results
There was approximately equal numbers of male and female patients submitted with almost a third being paediatric cases. Most cases were from the outpatient setting and of patients with ‘rash’ or dermatitis (66%). The average time from submission to Dermatologist reply was 5 ½ hours. Clinical photos were provided in 83% of cases and 73% were assessed as good quality. Management advice was provided in 77% of cases. Reference to the online case based learning modules was made in 21% of cases. Cases were submitted from locations Australia-wide.

Conclusion
This study has identified the common dermatological complaints presenting to rural primary care doctors. The additional provision of professional development opportunities included in TeleDerm is unique and is used as an adjunct to advice provided to the rural doctors seeking advice for patient management.
What is needed around eHealth

Dr McPhee will discuss a number of topics www.nehta.gov.au

(eHealth) record system

the personally controlled electronic health

drive the national uptake of eHealth including

industry and governments, is continuing to

consumers, healthcare provider organisations,

This year NEHTA, in collaboration with

Australian Governments (COAG) to help

transform Australia’s health system by

building the foundations for a national eHealth

infrastructure.

NEHTA’s purpose is to lead the uptake of the
eHealth systems of national significance and

to coordinate the progression and accelerate

the adoption of eHealth by delivering urgently

needed infrastructure and standards for health information.

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the personally controlled electronic health

(eHealth) record system

www.nehta.gov.au

Dr McPhee will discuss a number of topics around eHealth

• Case examples of useability and applicability

• What is needed for the future?

Getting doctors on-board

Emerald Queensland GP and obstetrician Ewen McPhee is outspoken about the value of the eHealth record system to his patients and says it surprises him more practitioners are not actively participating. “It is about improving your clinical care, improving your medical record and making sure your patient is as well looked after as they can be if you are not there to do it yourself.

Dr McPhee says he can understand that many GPs are reluctant or wary of getting their patients onto the eHealth record system. But in many ways, it is simply the next logical step in the evolution of healthcare.

“There was a time not that many years ago that many doctors were reluctant to computerise their practices” he says.

“Most would now concede that they can’t work effectively without them. We already rely on them so much in our practices to deliver quality care.

“General practice is already highly enabled in terms of using electronic record-keeping to keep accurate and comprehensive patient records. It is something that most of us already do in terms of best-practice care.

“While there are some fears on the part of some doctors around the privacy and legal aspects of uploading shared health summaries, the system is getting better and better – and with more doctors and health providers coming on-board, having an eHealth record for patients will soon be as central to good primary care as having a computerised practice.

“In my home state of Queensland, for example, almost all public hospitals are connected to the eHealth record system, so I know that my eHealth records are very likely to be used if one of my patients turns up at the hospital.

“I can also get a hospital discharge summary back in my patient’s eHealth record as soon as it is written.

“This is immensely efficient and effective, both for the patient and for me.”

Rural and remote general practice in Qld: the practice managers’ perspective

Time: 2.40pm

Location: Riverbank 6b

Presenter: Ms Sarah Venn

Authors: Mitchell C, Wellman D, Gullo D

Aims and objectives

There have been many government initiatives introduced to support health professionals to either move to or remain in rural and remote general practice. With current changes to some support programs and the introduction of Primary Health Networks (PHNs) there may be some apprehension within rural and remote general practice. The aims of this project were to better understand how general practice managers in rural and remote Qld perceived the current situation and the future outlook.

Method/Design

More than 700 general practice managers in rural and remote Qld were invited to participate in two surveys conducted by Health Workforce Queensland (HWQ). Two questions were included in the biannual surveys distributed in Sept 2014, and April 2015, which asked managers to outline positive recent initiatives, and, workforce challenges in the coming 12 months. Additionally, the April 2015 survey contained two questions related to the impending PHN commencements: positive changes the PHNs could undertake, and, local concerns the PHNs should be aware of. Thematic analyses were undertaken.

Results

Surveys were returned from 95 practice managers in 2014 and 110 managers in 2015. Recent positive initiatives included increased primary health care activities (e.g. allied health; diabetes education) and infrastructure/technology. Major challenges in the coming year included recruitment and retention of GPs and Registrars, sourcing locums, and GP work hour issues. For PHN questions, themes emerged related to
Academic paper abstracts

A focus on supporting rural and remote general practice (including education and recruitment), funding for allied health/mental health professionals, and improved communication/cooperation with general practice.

Conclusion

This paper presents a rare glimpse of issues of current concern to rural and remote general practice managers in one state of Australia. Supporting much previous research, recruitment and retention of GPs was the most commonly reported issue. However, other matters included issues that were location specific and beyond recruitment and retention of doctors.

Why do new medical graduates choose rural GP training and what aspects are associated with their retention?

Time: 2.00pm
Location: Riverbank 8a
Presenter: Professor Scott Kitchener
Authors: Kitchener S, Grabau B, Harte J, Kitchener E

Background

The Australian General Practice Training (AGPT) program is a workforce solution to address the maldistribution of doctors in Australia. The success or otherwise of this program depends not only on the perceived attractions and benefits of being recruited to the program, but also the quality of training leading to retention in rural practice. The purpose of this research is to determine why new graduates choose rural training and what aspects of training were associated with retention in rural practice.

Method/Design

Applicants were attracted to:

- the training quality available
- were seeking to fulfill personal and career goals of developing broad practice skills
- to live and practice in rural areas based on their previous rural experiences, and
- in response to health needs in rural areas.

On completion, registrars appreciated the rural base and rural context of training, which matched the reputation of high quality training.

Overall, a high rural retention rate was achieved, of graduates choosing to remain in rural practice after completing training. Half completed additional advanced rural skill training for a broader scope of medical services. This was a strong predictor of rural retention (OR=4.3) as was progress through to FACRRM (OR=14.2).

Conclusion

Rural-based rural registrar training addresses medical workforce maldistribution by attracting motivated junior doctors seeking high-quality broad scope training to prepare them rural practice.

Near peer teaching and learning in the Kimberley, Western Australia

Time: 2.20pm
Location: Riverbank 8a
Presenters: Dr Rebekah Ledingham (nee Adams) & Dr Sally Singleton
Authors: Adams R, Singleton S, Atkinson D

Much has been written of the tsunami of medical students and junior doctors that is currently hitting our shores. In rural and remote health the ability to support and teach the workforce of tomorrow is particularly stretched. One proposed answer is vertical integration or near peer teaching and learning.

Aims and objectives

To investigate and describe near peer teaching and learning in the Kimberley for medical students at the Rural Clinical School of Western Australia (RCSWA) and GP registrars and prevocational doctors at the Kimberley Aboriginal Medical Services Ltd (KAMS). The two programs are co-located teaching and learning with the documented perceptions in existing literature, largely based in Urban and Regional settings.

Method/Design

We are conducting a retrospective cohort study, which surveys all medical students and DiT’s who spent time in the Kimberley as part of their training in 2013-2014 (total approx. 75).

This cohort is invited to participate in an online survey and quantitative and qualitative information gathered will be thematically analysed. Participants who are happy may also be interviewed to discuss key themes further.

Results/Conclusion

Preliminary data suggests we have a higher level of participation in vertical integration of teaching and learning activities in the Kimberley compared to that reported in the literature. One of the key barriers documented is loss of income. Our GP Registrars are in salaried positions. We hypothesise that this is a key facilitator of near peer teaching and learning experiences. This is significant for ACRRM given many ACRRM Registrars spend time in salaried positions during their training.
Academic paper abstracts

Do Multi-Source Feedback (MSF) or External Clinical Teaching Visits (ECTVs) identify GP Registrars who require additional training assistance? The Hallmarks of Education and Learning Progress (HELP) study

Time: 2:40pm  
Location: Riverbank 8a  
Presenter: Dr Rebecca Stewart  
Authors: Stewart R, Tunnock A, Magin P, Cooling N, Gupta S, Kippin A, Tapley A

Aims and objectives

The HELP study aims to determine predictive education activities early in training that will identify GP Registrars who require additional training assistance.

There is minimal literature regarding the activities, which may be predictive of training progress in the Australian General Practice Training program. A flagging system was introduced by a regional training provider (RTP) in order to identify whether specific activities, including Multi-Source Feedback (MSF) and ECTVs, are able to help identify GP Registrars requiring early assistance, in order to provide early and efficient support.

ACRRM GP Registrars at the RTP do MSF and ECTVs as part of their ongoing formative assessment.

Method/Design

This project utilizes mixed methodology. This presentation focuses on the statistical analysis of existing de-identified demographic and education training data against remediation outcomes. Factors reviewed included selection scores, commencing core knowledge questionnaire, commencing consultation skills, MSF, and ECTVs. Results of a survey of training program participants regarding the value of various training activities to indicate progression will also be presented.

Results

Preliminary data suggests ECTVs may predict the requirement for future training assistance for GP Registrars, and that MSF may have a role in flagging issues of professionalism.

Conclusion

Utilising existing data to increase awareness of the predictive value of education activities will enable RTPs to appropriately select, resource and time, those training activities shown to be of most benefit. By identifying training issues early, interventions can be commenced in a timely fashion in order to minimize financial and psychological impacts, improve educational effectiveness and ultimately to ensure patient safety.

Innovations in rural obstetrics: detailed statistical analysis to guide management of severe postpartum haemorrhage in one regional obstetric centre

Time: 2:00pm  
Location: Riverbank 8b  
Presenter: Dr Andrew Kirke  
Authors: Kirke A, Ang Y, Evans S, Tolman F, Napier M

Aims and Objectives

Bunbury Regional Hospital (BRH) services a regional rural and mining community in the south of Western Australia (WA). Previous audits had found a high rate of post partum haemorrhage (PPH). We conducted a detailed statistical analysis to answer the question, “In obstetric patients attending BRH, which risk factors most strongly predict a major primary post partum haemorrhage?”

Method/Design

From 2009 an electronic database recorded details on all pregnancies delivering at BRH. A retrospective analysis of this data was conducted for all singleton vaginal births from Feb 2009 to March 2012. We analysed the association of an extensive list of pre-pregnancy, antenatal, labour and post-partum factors with PPH>1000mls using chi square or Fisher’s exact test. Univariate odds ratios were calculated using logistic regression. Those factors significant at p<0.15 were included in a series of logistic regression analyses with those factors significant at p<0.01 being retained for the final model.

Results

1883 vaginal singleton births were recorded for the study period, of which 108 (5.7%) had a PPH>1000ml. Factors predictive of PPH included, induction of labour, third stage>30 minutes, total labour over 12 hours, regional anaesthesia, instrumental delivery, birth weight greater than 4000grams, perineal trauma and retained placenta. Multiparity was a protective factor, 0.38 (0.23–0.62), adjusted odds ratio (95% CI). Of all PPH, 70.3% occurred in primiparous women yet they represented only 40.3% of deliveries.

Conclusion

PPH remains a leading cause of obstetric morbidity and mortality and is potentially more of a challenge in rural settings. Our study shows that detailed statistical analysis can reveal site-specific risk factors in addition to well-recognised risk factors for PPH. We identified a risk group, primiparous women, who contribute to most cases of major PPH at BRH. This group is now the focus of further analysis and targeted management.
Academic paper abstracts

Occasional anaesthesia: an aide-memoire

Time: 2.20pm
Location: Riverbank 8b
Presenter: Dr Melanie Van Twest
Author: Van Twest M

Aims and objectives

To provide practitioners in remote and isolated contexts who have scant or disused anaesthetic skills with a simple and sound visual guide to induction for intubation and/or performance of a general anaesthetic.

Method/Design

The Occasional Anaesthesia aide-memoire takes the form of a flowchart which can be easily scanned by the practitioner for information and provides a step-by-step guide to the performance of the complex process of induction/intubation and general anaesthesia under stress.

Results

The following flowchart was developed for use on an Antarctic ship or station, and was based on the two most likely types of induction and general anaesthesia that may be required in that environment.

It has been augmented by the addition of supplementary charts to cover the following topics to adapt it to other contexts:

- drugs and doses
- airway equipment and uses
- use of anaesthetic machine and ventilator including volatile agents
- regional anaesthesia
- anaesthetic emergencies
- paediatric anaesthesia
- obstetric anaesthesia
- geriatric anaesthesia

Conclusion

This chart represents a succinct summary of a complex process which is designed for use in a high-stress situation by a practitioner with little or long-past experience in such procedures. It is here presented for discussion and comment on its potential usefulness in the remote context with a view to eventually producing a version for distribution to remote and isolated medical services.

Implementing the Victorian Children’s Tool for Observation and Response (ViCTOR) in the rural setting: preliminary findings

Time: 2.40pm
Location: Riverbank 8b
Presenter: Ms Jen Sloane
Authors: Sloane J, Kinney S, Skondreas M, Moulden A

Aims and objectives

A set of five standardised paediatric observation charts (ViCTOR) have recently been implemented in most Victorian metropolitan and regional health services. The charts provide a consistent statewide approach to the detection of, and response to, the deteriorating paediatric patient. To ensure applicability in smaller rural hospitals, the ViCTOR rural suitability pilot aims to evaluate the existing tool for appropriateness of vital sign parameters, predefined escalation of care responses and chart design factors.

Method/Design

An expression of interest generated 18 applications representing 25 individual hospitals. Twelve hospitals were chosen that represent a diverse range of service capacity and paediatric presentations. Each site was supported to review or develop their local paediatric observation and escalation guideline. A face to face workshop, project officer site visits and regular teleconferences assisted the sites to implement the charts from May 2015. Education on ‘how’ to use the charts was provided with a short video. Initial data collection includes monthly chart audits and informal feedback. Focus groups and staff surveys are planned for August 2015.

Results

Preliminary results indicate staff at rural sites have welcomed the implementation of a standardised paediatric observation tool. All sites needed extra support with the development of a stand-alone paediatric escalation response and a flow sheet was subsequently developed to support this. Clinicians have identified other information to be included on the ViCTOR rural charts (e.g. Glasgow Coma Scale). An education deficit on how to conduct a full set of observations, particularly blood pressure, has been consistently reported.

Conclusion

Preliminary findings suggest that the existing ViCTOR chart format will need revision to better reflect the needs of the Victorian rural hospital sector. A strategy to address education gaps has led to the development of a series of short videos demonstrating paediatric vital signs. Final recommendations will be reported in September 2015.

The Queensland Central West Health “Single Practice” model of rural health care provision

Time: 3.30pm
Location: Riverbank 5
Presenters: Assoc Prof Tom Keating, Dr David Rimmer & Prof Sabina Knight
Authors: Keating T, Rimmer D, Knight S, Douyere J

Aims and objectives

This paper describes the design and operations of the Queensland Central West Single Practice Model of health care organisation, examines its place within contemporary models of rural health care organisation, identifies its implications for the structure of rural health care delivery and examines its generalisability to other contexts.
A stab in the bush: is the PIERCE program the new standard for junior doctor rural generalist training?

Method/Design
The study has undertaken an analysis of selected national and international literature concerning the structure of rural healthcare delivery; policy analysis of the social, political and economic contexts in which the model has been developed; structural and systemic analysis of the model and the rural healthcare system within which it operates and analysis of the perspectives of key informants engaged in and delivering the model.

Results
The study found that the Central West Single Practice builds upon the success of the Queensland Rural Generalist Pathway for postgraduate medical education and service delivery. A key feature of the single practice is that it is teaching practice. The model integrates both undergraduate students and registrars in the broader environment of a teaching healthcare service and multidisciplinary education. It has provided a means by which clinical services in all the hospitals in the region could be integrated into the recently developed cohesive hub and spoke model. It has demonstrated an effective mechanism for integrating public and private practice, made explicit through a contractual system for integrating public and private practice, offering hands-on and procedural training opportunities for rural generalist interns.

Aims and objectives
The program was subjectively successful as determined by the rural generalist intern’s experiences and the observations of their preceptor. The program was subjectively successful as determined by the rural generalist intern’s experiences and the observations of their preceptor.

Method/Design
This study was a pilot retrospective audit/internal review based on case logs kept by the rural generalist interns throughout their elective term at Stanthorpe Hospital, Queensland. This includes the ACCRM Procedural Skills log document. The case log would be compared to the ACCRM curriculum for anaesthetics, paediatrics and obstetrics. It is an early descriptive paper with emphasis on participant perspective.

Results
The program was subjectively successful as determined by the rural generalist intern’s experiences and the observations of their preceptor. The program was subjectively successful as determined by the rural generalist intern’s experiences and the observations of their preceptor.
an integrated medical records system, the nurse practitioner treated a wide variety of patient presentations some which may have presented to the local hospital (including childhood immunisations, treatment of infections, wound care management, unstable angina, fractured limbs, chronic disease management, palliative care). A qualitative survey of patients and visiting medical practitioners will be used to assess the impact of a nurse practitioner to patient care and health delivery.

Results
A consented patient and medical survey will be used to quantify levels of patient satisfaction for those patients seen by the nurse practitioner and to allow for de-identified analysis of patient data such as demographic details, diagnoses, investigations and management (ie prescriptions, investigations, referrals).

Conclusion
Anecdotal evidence and preliminary review (to be confirmed upon analysis of results from surveys) has shown that the supported nurse practitioner role in a rural community is beneficial to the health of patients and the health care delivery of medical practitioners.

Evaluating the impact of Medical Rural Generalism in Queensland

Time: 4.30pm

Location: Riverbank 5

Presenters: Dr Denis Lennox & Dr Robyn King

Authors: Jones J, Lennox D, de Bruin T, King R, Dhupelia D

Aims and Objectives
Following recommendations in the 2013 Ernst and Young evaluation, Queensland Health is joining forces with the University of Queensland and James Cook University to comprehensively assess the Qld Rural Generalist Program, in particular health service, workforce and business re-design.

The study addresses two recognised problems in the healthcare service literature: a lack of high quality evaluations of the redesign impacts (Wakeman and Humphries, 2011) and a majority of studies being single cases or ‘pilotitis’ (Kupers et al, 2008). We will use an existing program logic model to document the relationships between inputs, activities, outputs and outcomes of redesign of health care service, workforce and business models (Wakeman and Humphries, 2011).

Our research question is: What constitutes the healthcare service, workforce and business redesign process developed by Queensland Country Practice (QCP) and how does the redesign and its implementation impact health and health service delivery in a rural and remote community?

Method/Design

We are adopting a quasi-experimental design using a pre and post study in a pilot site with a matched control site. Qualitative methods including interviews and archival document reviews will be used to describe the redesign process (Yin, 2013).

To assess the impact of the health changes in communities a measurement model has been designed and will be tested and extended through the study. The basis for this model is the National Health Performance and Accountability Framework incorporating measures for determinants of health; health system performance and the health status of residents serviced by health services within the community. Quantitative data from surveys, existing data sources and de-identified clinical data will be used to measure the redesign impacts on the patient experience, resident healthcare utilisation, health status, health system performance and chronic disease treatment and management, among others.
Development of independence and professional identity of interns in rural general practice placements

Time: 4.50pm
Location: Riverbank 5
Presenter: Dr James Brown
Authors: Brown J, Nestel D, Morrison J

Aims and objectives

A recent training initiative has been the placement of interns in rural general practices for ten week rotations. Anecdotally these placements contribute significantly to the development of independence and professional identity for the interns. A purpose of rural GP intern placements is to contribute to the rural pipeline for graduating confident, competent and committed rural GPs. The aim of this study was to examine the professional identity formation, development of independence and engagement of interns with rural general practice during the course of ten week rural GP placements. We were interested in what changes occurred and what contributed to these changes.

Method/Design

The research design was a multiple-case study design with five pairs of interns and supervisors. Wenger’s Community of Practice model was used as a theoretical lens. The data was sequential interviews of supervisors and interns; weekly ‘real-time’ audio-recordings of supervisory encounters between the supervisor, the intern and the intern’s patient; and post-encounter reflections by the intern and the supervisor. Analysis was exploratory and explanatory using both an inductive and a deductive approach.

Results

The interns made substantial progress in developing independence and their identity as doctors during these placements. There was a demonstrable increase in engagement with rural general practice. For the majority of the interns the placements consolidated an intention to pursue a career in rural general practice. During the placement, the change in independence and identity was mirrored by a changing relationship with their supervisor.

Conclusion

Intern placements in rural general practice are a powerful means to develop capacity for independence and to engage the intern in a career for rural general practice. Fundamental agents in this professional development are the supervisory relationship, the supervised clinical experience and the intern’s engagement in their placement.

Emancipatory learning for rural clinicians with a social conscience

Time: 5.10pm
Location: Riverbank 5
Presenter: Professor Jennene Greenhill
Authors: Greenhill J, Richards J, Campbell N, Mahoney S, Walters L

Aims and objectives

Thousands of medical students spend extended periods of time living and learning in rural communities. They learn to be good clinicians and many become leaders to improve access and equity for the health of their communities. This project explored the question: How can we encourage students to become interested and active in social change?

Method/Design

This presentation is based on a longitudinal study, which followed the learning journey of 20 medical students from 2nd year to internship learning in different rural and urban clinical contexts. Using an ethnographic approach, over 4 years, multiple in-depth interviews were conducted with each participant to determine in what way transformative learning was experienced by the medical students.

Results

Emancipatory Learning originates from a radical tradition in adult learning, concerned with how learning, knowledge and education can assist individuals and groups to overcome social disadvantage and discrimination, challenge economic and political inequalities to promote social change. There are parallels between the continuity of learning in longitudinal integrated clerkships (LICs) and the trajectory of transformative learning.

Conclusion

The findings reveal that some students experienced emancipatory learning because they gained an understanding of the stark realities of poverty and inequalities in the context of rural and urban underserved communities. By facilitating a deep understanding of inequalities in relation to cultural recognition and social diversity, LICs are preparing doctors with a commitment to create social change.

Training for the future: how are rural placements perceived and how do we give our students what they are looking for?

Time: 3.30pm
Location: Riverbank 6a
Presenter: Mr Greg Mundy
Authors: Mundy G, Chapman J, Wall A
Academic paper abstracts

Aims and objectives

A recent study by an Australian university found that only 18% of their rural-origin graduates were practising rurally. While significantly greater than the 7% from an urban background in rural, it is evident that strategies are needed to encourage more students from both urban and non-urban backgrounds to ‘go rural’.

Providing positive rural training experiences is a proven strategy to increase the likelihood of rural practice. In this context, a clear understanding of what motivates our students and junior doctors to undertake rural training placements is crucial to refine the targeting and marketing of rural training, as well as improve placements to ensure the experience they deliver matches student expectations.

This paper presents the findings from a study exploring student perceptions of the strengths and weaknesses of rural and metropolitan placements and why students choose rural placements.

Method/Design

Responses to an online survey were received from over 700 medical students regarding perceptions of both rural and metropolitan clinical placements and the factors considered in undertaking placements and rotations. Respondents were members of one of the 28 Rural Health Clubs at Australian universities.

Results

Key findings:
- students are motivated by the evaluation of a rural clinical experience as being more advantageous than a metropolitan one
- opportunities for hands-on learning, quality teaching, professional support from supervisors and distance from family and friends are the most important factors when considering clinical placements, and
- rural placements are strongly associated with a number of the issues that students consider important in a placement however metropolitan placements are perceived as more prestigious and more well regarded by specialist colleges.

Conclusion

In the context of the increasing cost of degrees and doubling of medical undergraduate places, students are more-than-ever looking for quality experiences that they perceive as ‘professionally advantageous’. While rural placements offer some perceived benefits, more needs to be done to remove the stigma associated with rural rotations – particularly in terms of issues such as prestige, reputation, lack of infrastructure and IT and how they are viewed by specialist colleges.

Inspiring the next generation of rural health professionals: impact of health careers workshop in rural secondary schools

Aims and objectives

Assess the impact of the Rural High School Visit (RHSV) program delivered by university health students on the interest of rural secondary students in becoming a health professional. The aim of the RHSV program is to increase rural health professional recruitment by promoting health careers and university to rural secondary students. No published evaluation of the program has been completed.

Design

Pre and post intervention survey of the National Rural Health Student Network (NRHSN) RHSV program delivered nationally by locally based Rural Health Clubs. Setting encompassed rural secondary schools in the Riverina, Illawarra and South East regions of New South Wales (NSW). Participants included secondary students from selected schools visited by Australian National University Rural Medical Society in 2014.

Results

Of the sixty participants, 100% enjoyed the workshop (n = 60) and 85% found the workshop useful (n = 51). Participants (n = 31) favoured the clinical skills stations component of the workshop. First ranked health professionals in order: Psychologist (n = 6), Paramedic (n = 5), Doctor (n = 4), Nurse (n = 3) and Midwife (n = 3). Interest in becoming a health professional improved from 17% to 23% following the program while the non-interested proportion did not change (McNemar test, p > 0.05). Students who knew a health professional showed greater interest in becoming a health professional compared to those who did not know one (Chi squared test, p > 0.05).

Conclusion

The workshop is undeniably enjoyable, particularly the rotating clinical skills component. Discussing different health professionals and perceived barriers to attending university engages participant knowledge. Although participant interest in becoming a health professional did not alter significantly, a larger longitudinal study is needed to adequately assess the impact of the RHSV program.
Linking the workplace to vocational training and higher education: the new Masters in Remote and Polar Health in Tasmania

Time: 4.10pm
Location: Riverbank 6a
Presenter: Assoc Prof Edi Albert
Authors: Albert E, Ayton J, Watzl R

Aims and objectives
The aim of this project was to develop a Remote and Polar Health stream within the existing MPH program at the University of Tasmania. It is a joint project between the School of Medicine and the Australian Antarctic Division.

The initial concept was to provide an integrated educational pathway for Antarctic Medical Practitioners, some of whom are undertaking their remote medicine AST or other ACRRM training, but also to design a program that would be attractive to a much broader group of health professionals with an interest in remote and polar healthcare.

The design of the program allows recognition of the specialised training that doctors receive prior to departure, but is structured so as to make it generically accessible to others.

Where possible practical skills training is aligned with industry recognised training so as to be of dual benefit to students.

This program provides an ideal combination between the academic rigour of a traditional MPH and a unique theoretical and pragmatic series of units that will prepare the student to practice in austere environments.

Method/Design
The curriculum was developed using a modified Delphi technique and drew heavily from ACRRM’s remote medicine curriculum, pre-departure training requirements for AAD doctors, and the syllabi of the major reference texts on expedition and environmental medicine. In addition, the curriculum was developed so as to address gaps in, rather than overlap with, other higher education programs in remote medicine.

Results
Two complementary new online units – “Introduction to Remote and Polar Health” and “Medicine in Extreme Environments” have been developed. An existing practical course in Expedition Medicine has been converted to an elective unit and a fourth unit in practical skills can be undertaken flexibly at the student’s convenience. The stream also draws on an existing unit in Human Behaviour in Extreme Environments.

Students commenced this stream in July 2015.

Conclusion
This is an innovative and unique program that addresses the needs of health practitioners preparing for a career in remote and polar health care.

Expanding Queensland Health’s Rural Generalist Pathway: strategies to double the intake and strengthen the pipeline

Time: 4.30pm
Location: Riverbank 6a
Presenter: Dr Tarun Sen Gupta
Authors: Manahan D, Sen Gupta T, Taylor N, Lennox D, Bond D, Browning L

Aims and objectives
The Queensland Rural Generalist Pathway (QRGP) commenced with 30 interns in 2007 as a pipeline to rural practice with two objectives: an attractive supported pathway for trainees and a high-quality workforce solution for rural and remote Queensland.

This paper describes the QRGP response to the 2013 announcement of an increased Rural Generalist intake from 37 to 80 in 2016.

Method/Design
Many strategies were employed to increase training capacity including marketing to University students, growing training capacity within prevocational rural generalist hospitals, addressing advanced skills training capacity, and preparation for the flow-on effects on rural vocational training.

Results
Early results appear encouraging, with indications the 2016 intake will be close to 80. The mix of strategies used included enhancement of existing processes, and new approaches such as marketing videos like Take the Great Adventure (http://www.health.qld.gov.au/ruralgeneralist/content/greatadventure.asp).

Stakeholder engagement was vital. Funding, support and accreditation was sought for the innovative PIERCE (Pre-vocational Integrated Extended Rural Clinical Experience) term, which saw junior doctors undertake longer supervised rural placements while acquiring skills and experiences that were increasingly hard to acquire in larger hospitals.

Conclusion
The QRGP has adapted within the training environment since 2007, having established its position amongst the many training organisations, cementing its purpose within the hospital and specialty groups vital to prevocational and advanced skills training, and managing capacity as intakes have grown. An adaptive operational ethos has underpinned this.

The growth in intake has an important flow-on effect into other parts of the training pipeline. There remains a need for strong management of the vocational training needs of the increased cohort numbers including adequate numbers of supervisors for this training group in all sectors and a requirement for strong local leadership and advocacy.
The ACRRM Generalist in Emergency Medicine (GEM) program: experience to date

Time: 4.50pm
Location: Riverbank 6a
Presenter: Nigel Moore
Authors: Margolis S, Arvier P, Saul L, Moore N

Aims and objectives

The Generalist in Emergency Medicine program (GEM) is the first post Fellowship qualification offered by ACRRM. GEM was developed to provide a formal training and assessment pathway for rural and remote doctors seeking high-level advanced emergency medicine (EM) training and skills, enabling them to tackle any EM situation they may encounter as well as the tools to manage EM departments. In particular, the GEM program addresses the specific challenges presented by emergency departments in rural and remote locations, where limited physical resources, fewer specialist staff, and long lead times for retrieval to more specialised centres demerit from their metropolitan counterparts. The GEM program builds upon the key emergency medicine training components in the core ACRRM program and the one-year experience of the Advanced Skills Training in Emergency Medicine program (AST-EM).

With the program reaching maturity, this is an opportune time to consider the experiences across program development, training and assessment, as well as future directions.

Method/Design

This paper will present an overview of how and why the program was developed, where it sits in relation to other EM programs offered by ACRRM and the College of Emergency Medicine (ACEM), qualitative and quantitative outcomes, including the training process, assessment preparation programs and the examination and planned further development.

Results

GEM has unique features separating it from other ACRRM and ACEM EM programs. Interest in joining the GEM program is steadily increasing, with participants coming from a range of backgrounds. The education and exam preparation program is evolving to provide greater synergy between candidate expectations and the set standards.

Conclusion

The GEM program maturation progression is in sync with earlier released ACRRM programs including the AST-EM. GEM meets the specific needs of advanced ED doctors working in rural and remote medicine.

Teach to sustain

Time: 5.10pm
Location: Riverbank 6a
Presenter: Dr Simon Hay
Authors: McArthur L, Hay S, Morris R

Aims and objectives

Training registrars across vast rural and remote geographical regions presents many challenges including isolation and difficulty with accessing medical education and support. Investment in teacher development of junior registrars builds foundations for sustainable rural and remote training. A model was developed to provide registrars with skills in small group peer teaching, with the aim of nourishing a teaching rural workforce.

Method/Design

A deliberative strategy to develop teaching competency in junior registrars was implemented in 2014. Registrars take part in regular small group peer learning days in their first 12 months of community training. During these days each registrar develops and delivers multiple teaching sessions. Medical educators delivered the registrars’ teacher development training. Topics included small group dynamics, teaching knowledge, skills and attitudes, learning objectives, teaching methodologies and written lesson plans. Registrars were surveyed before, half way through and at the end of their year regarding confidence and skills in planning, developing, and delivering a teaching session. Qualitative feedback on the model of training was sought from the registrars and medical educators.

Results

Registrars survey results showed increased confidence and skills. Registrars felt well supported, were positive about medical student involvement in the group teaching and were positive about local GP involvement. Medical educators highlighted that the group teaching and learning was more engaging, inclusive, focused and effective. There are early indicators of wider impact eg peer groups developing into local study groups and registrars’ increased active involvement in teaching in their practices.

Conclusion

Providing a model of rural and remote training that incorporates small peer group regional nodes and deliberative teacher development training has improved registrar learning, registrar teaching ability and confidence, and has increased registrar involvement in teaching GPs and other health professionals in their practices.
Survey of rural doctors supports the establishment of a national rural responder network

Time: 3.30pm
Location: Riverbank 6a
Presenter: Dr Tim Leeuwenburg
Authors: Leeuwenburg T, Hall J

Background

Rural doctors have an important role in the provision of not just primary care, but also oncall emergency and procedural services. A significant proportion of critical illness presents as prehospital incidents. Many State trauma systems do not include the skills of rural clinicians to respond to these patients, relying on the expertise of ambulance services which are often volunteer-based in rural & remote Australia.

Aims and objectives

This study explored attitudes of rural doctors to formal training and involvement in rural prehospital care in their community, via a National Rural Responder Network.

Method/Design

An online survey of rural clinicians was disseminated via social media in 2014.

Results

420 rural GPs responded, with an overwhelming commitment to be involved in prehospital incidents in their community (98% in favour).

Conclusion

Rural GPs are well-placed to value-add to delivery of timely critical care. South Australia has an embryonic scheme (Rural Emergency Responder Network, RERN), whilst UK and NZ have established schemes (BASICS and PRIME respectively). Utilisation of self-nominated volunteer members of the rural doctor workforce would appear to offer a solution to the current problems of relatively unskilled (often volunteer-based) ambulance services in rural & remote Australia.

References

Leeuwenburg T. Access to difficult airway equipment and training for rural GP-anaesthetists in Australia: results of a 2012 survey
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British Association of Immediate Care Schemes (BASICS) http://www.basics.org.uk
Rural Emergency Responder Network (RERN) in SA http://ruraldoctors.net/rern/ethos/

Surviving Sedation Campaign 2015

Time: 3.50pm
Location: Riverbank 6a
Presenter: Assoc Prof Minh Le Cong
Author: Le Cong M

Background

The emergency sedation of the acutely agitated patient is a high risk procedure for both the patient as well as the treating providers. Recurrent cases of sedation related misadventures and deaths have motivated the authors of this document to produce this evidence and practice based consensus guideline. We have coined the title “Surviving Sedation Guidelines” as a paraphrase to the well known “Surviving Sepsis” campaign to draw attention to key principles of safe sedation that we believe to be the pillars of quality care and patient safety.

Aims and objectives

Improve acute sedation safety and efficacy by:

• Early Goal Directed Sedation (EGDS) – titrated sedation to an objective level using a validated sedation scoring system
• consideration of emergency sedation as a form of procedural sedation/anaesthesia
• minimum standards of patient assessment, resuscitation equipment and clinical monitoring, and
• de-emphasis on sedative drug choices with more emphasis on continuous clinical assessment and titration to effect.

Method/Design

An online collaborative process involving emergency physicians, toxicologists and rural general practitioners in Australia. Current guidelines from states of Australia were reviewed along with latest research on acute sedation. A Google Document internet based word processing platform freely available was the main working arena for development.

Results: An evidence and consensus based guideline was produced and published along with explanatory notes on the medical education blogsite, prehospitalmed.com

Conclusion

There is a need for improved acute sedation safety in rural medicine and this project demonstrated that an online consensus process can produce updated set of guidelines using best available evidence and existing guidelines. The use of online blog based platform and technology demonstrates how remote authors/contributors can work together without ever physically meeting to provide more rapid knowledge translation into rural medicine.
Angel Flight Australia: an overview, an update, and a reflection on more than a decade of non-emergency medical flights in Australia

Time: 4.30pm
Location: Riverbank 6a
Presenters: Dr Stephen Andrews & Marjorie Pagani
Authors: Andrews S, Pagani M

Abstract

Founded in 2003 by Mr Bill Bristow AM, Angel Flight Australia is a charitable organisation which coordinates non-emergency flights to assist country people in accessing specialist medical treatment that would otherwise be unavailable to them because of vast distance and high travel costs.

Patients are referred by their local health professional (doctor, nurse, social worker) and the flight/s conducted by a volunteer pilot, using their own aircraft. Angel Flight also coordinates the movement of patients to and from their flights with the help of volunteer drivers, who assist with ground transportation.

All participants in a flight are volunteers, although arrangements are in place to offset the fuel and aeronautical logistics charges incurred. The service is provided at no cost to the patient.

To date over 18,000 flights have been carried out, helping almost 3,000 patients access their medical care more comfortably. There are over 2,800 volunteer pilots, 4,100 volunteer drivers and 3,200 referring health practitioners registered with the charity.

We aim to provide an overview of the service for those practitioners either unfamiliar with the organisation, or uncertain about aspects of the logistical process. We will highlight the types of patient appropriate for an Angel Flight, and clarify the referral process. Dr Andrews, a pilot himself who has been involved with the charity since 2010, will also offer some insight into his experience with the charity from an aviator’s perspective.

Health students eager for multidisciplinary teamwork opportunities

Time: 4.50pm
Location: Riverbank 6a
Presenter: Ms Rebecca Irwin
Author: Irwin R

Aims and objectives

To evaluate inter-professional health student networking and skills night. Multidisciplinary teamwork is core to creating a sustainable and skilled rural and remote health workforce. However university multidisciplinary teamwork opportunities are limited. This compromises the ability for health students to successfully work together in the future.

Design

Evaluation survey of the inter-professional health student night at The Canberra Hospital. Health student participants from Australian National University, Australian Catholic University and University of Canberra included. Data collected from consenting student attendees on the night. Descriptive and qualitative analysis performed.

Results

Of the fifty-six participants (n=56), Paramedicine (18%), Pharmacy (18%), Medicine (16%), Nursing (14%) and Occupational Therapy (9%) accounted for three-quarters of the health students present. On evaluation, the majority of participants (61%) had little experience with other health disciplines prior to the event. Afterwards, participants (96%) noted an increase in knowledge of other health professional’s scope of practice. Similarly, participants (88%) agreed the event improved how they would approach their future work environment. Overwhelmingly, participants (98%) agreed the event was highly valued. Health student comments clearly supported the need for greater multidisciplinary teamwork opportunities at a university level.

Recommendations

1. Student run multidisciplinary events should be encouraged and supported
2. University health courses should include a strong multidisciplinary component

Emergency surgery in the rural context: setting up a trauma unit

Time: 3.30pm
Location: Riverbank 8a
Presenter: Mr Hasanga Jayasekera
Author: Jayasekera H

Aims and objectives

Assessment of the feasibility of having a Trauma capable Theatre and Operative Team in a Rural (Level III Hospital) capable of managing single or dual person emergency "Damage Control" trauma. The aim of the Trauma Team will be to save life and limb and stabilize a patient adequately to allow transfer to the nearest Tertiary (Level VI) Referral Centre.
Academic paper abstracts

Laparoscopic sleeve gastrectomy: perspective from rural Australia

Time: 3.50pm
Location: Riverbank 8a
Presenter: Dr Ya-Chu May Tsai
Authors: TsauI Y, Muir J, Tsai H, Clifforth S, Ooi W

Aims and objectives
The demand for bariatric procedures has risen dramatically in recent years due to the growing obesity epidemic. Whilst there are many published papers on bariatric surgery, there is limited information within the rural Australian context. Our objective was to assess results of weight loss and complications of laparoscopic sleeve gastrectomy (LSG) performed in rural Australia, describing patient characteristics and assessing significant predictors of outcomes.

Methods
Review of 141 consecutive patients who underwent LSG at a rural Australian hospital was obtained. Data on patient demographics, mean weight loss and complications were collected. Significant predictors for length of stay calculated using multivariate analyses.

Results
141 patients underwent LSG. Mean (SD) preoperative body mass index was 45kg/m^2 (7.8kg/m^2). Mean follow-up and length of hospital stay were 15 months (10 months) and 2.2 days (0.78 days) respectively. Mean excess weight loss (SD, available patient data) was 30% (17%, 141 patients), 41% (20%, 56 patients), 51% (21%, 36 patients), 68% (13%, 11 patients) and 65% (16%, 4 patients) at 3, 6, 9, 18 and 24 months, respectively.

3(2.1%) patients required return to theatre for management of staple line leak. Post-op blood transfusion rate was 2.1% (3 patients). There were no mortalities. All-cause 30-day readmission rate was 7.1% (10 patients).

Adjusted for preoperative characteristics, significant predictors of hospital stay duration were female sex (p=0.008), past history of hypercholesterolemia (p=0.012) and operation time (p=0.049).

Conclusion
Laparoscopic sleeve gastrectomy can be performed safely and effectively in rural Australia. Significant pre-operative predictors of length of hospital stay include female sex and past history of hypercholesterolemia.

Knowledge, attitudes and practice of GPs regarding advance care planning and palliative care for older Australians

Time: 4.10pm
Location: Riverbank 8a
Presenter: Assoc Prof William Silvester
Authors: Silvester W, Sands A

Aims and objectives
Advance Care Planning (ACP) is a process whereby people plan for their future health care and treatment should they become incapable of communicating their wishes. The Australian Government Department of Health has funded "Decision Assist" to enhance the delivery of ACP and palliative care to older Australians, whether living in the community or in Residential Aged Care Facilities. An important component is providing education on ACP and palliative care to GPs nationally. Prior to developing the education component a national survey was conducted to identify GPs’ knowledge, attitudes and practices regarding ACP and palliative care.

Method/Design
GPs were invited to complete an on-line survey.
Academic paper abstracts

Opioid-induced constipation: an ongoing challenge that requires proactive management

**Results**

The ACP results of the survey are presented. Of the 60 surveyed GPs 86% reported that they assisted older patients with ACP, mostly at their clinic. On average, the GPs discussed ACP with 20 patients a year and generally rated their knowledge of ACP as high. The most common sources of advice on ACP were fellow GP colleagues and specialist palliative care services. The three most common barriers to undertaking ACP with patients were: lack of time, patient reluctance and patient cognitive impairment. Insufficient remuneration was seen as a barrier by 36% of the GPs. Almost half the GPs surveyed had received education in ACP.

**Conclusion**

Findings from the survey identified strategies for optimising the implementation of ACP and, therefore, the provision of education. These included: identifying triggers and opportunities to raise ACP with patients; presenting ACP as feasible and practical in general practice in manageable steps; demonstrating how ACP can be adequately remunerated within the MBS service structure; providing guidance on where to access further information and support; assessing competence of patients to undertake ACP and showing how to undertake ACP with the family and substitute decision-makers of non-competent patients.

Opioid-induced constipation: an ongoing challenge that requires proactive management

**Time:** 4.30pm

**Location:** Riverbank 8a

**Presenters:** Dr Peter Piazza & Mr George Krassas

**Authors:** Piazza P, Katelaris P, Krassas G

**Background**

Opioid-induced constipation (OIC) is a common and troublesome side effect of opioids that typically persists for the duration of therapy. Despite its high prevalence, OIC is often not managed proactively and many patients do not discuss it with their doctor.

**Aims and objectives**

The aim of this ACRRM accredited clinical audit was to encourage GPs to evaluate and improve their management of OIC in patients prescribed a strong opioid for chronic pain.

**Method/Design**

Using quantitative questionnaires completed by both the GP and audited patients, GPs prospectively evaluated their management of constipation in 15 patients with chronic pain prescribed a Schedule 8 opioid (10 in cycle 1 and 5 in cycle 2).

**Results**

Data from 64 GPs who audited 956 patients over the two audit cycles confirmed that OIC is common with 50.5% of patients being constipated despite current laxative use by 45% of patients. GPs underestimated the prevalence of OIC in approximately a third of patients. This is not without clinical consequences with 1 in 5 patients reporting constipation that was impacting their pain management and/or quality of life.

Increasing the clinical focus on OIC via the audit process resulted in improved patient care:

- Proactive co-prescribing of a treatment for constipation (opioid antagonist or laxative) at the time of opioid initiation increasing from 28.2% in cycle 1 to 49.1% in cycle 2 (p<0.0001)
- Routinely asking patients about constipation increasing from 23.8% in cycle 1 to 61.0% in cycle 2 (p<0.0001)

**Conclusion**

OIC continues to be suboptimally managed. For rural GPs with limited access to tertiary support, clinical focus needs to shift to pre-emptive management and routine review for all patients prescribed opioids.

**References**

1. Benyamin R et al. Pain Physician 2008;11:S105-S120

Chronic disease risk factors among farmers attending agricultural field days in southern Queensland

**Time:** 4.50pm

**Location:** Riverbank 6a

**Presenter:** Professor Scott Kitchener

**Authors:** Kitchener S, Brumby S, Harte J, Pindiyapathirage J, Baratiny G, O’Shannessy M

**Background**

Australian farmers form one of the oldest workforces in the country, living and working in locations with relatively fewer health services than the more populous areas of Australia. However, little is known of the health risks and common non-communicable diseases (NCD) prevalent in this population.

**Aims**

This study aims to assess lifestyle risk factors, prevalence of common NCD and associations with demographic and wellbeing indicators among Australian farming communities in rural Queensland.

**Method/Design**

Participants were recruited from attendees of agricultural field days held across southern Queensland from June 2013 to June 2015. Four separate cross-sectional studies including sites at Kingaroy, Kingsthorpe, Warwick and Charleville were used to collect data with the same method.
Academic paper abstracts

General health and wellbeing and lifestyle risk behaviour data were collected using a self-administered questionnaire. Mental health was measured using the Kessler Psychological Distress Scale (K10). Physiological measurements were taken by supervised medical students. Ethics approval for the study was obtained from the Deakin University Human Research Ethics Committee.

Results

The majority of the sample (n=709) identified as farm workers. Smoking was less common, though they were more likely to report a sedentary lifestyle compared to the Australian population. Over 30% of our sample was classified as obese, but >70% had central obesity. Two thirds of the sample had some form of dyslipidemia and over one third were hypertensive. We found otherwise undiagnosed diabetics (random BSL > 11.1 mmol) approximately every 20 participants. A high proportion of psychological distress was detected, but no differences were found between farm and non-farm worker rural participants.

Conclusion

This method of investigation has described the health of a population that has otherwise been poorly defined. It also both raises awareness in farming communities and identifies health risks for further

Can innovative models of care improve outcomes in regional and rural cancer care provision - an update on South Australian experience

Time: 5.10pm
Location: Riverbank 8a
Presenter: Dr Dagmara Poprawski
Author: Poprawski D

Aims and Objectives

With cancer becoming a diagnosis in one in three patients, rural practices in Australia have to care for more patients undergoing therapy of malignant conditions. Traditionally, it is well documented that care of rural and remote patients has been delivering worse outcomes due to the tyranny of distance, inability to seek specialist care, and isolation of patients during therapy from their support systems at home. A review of 2.5 years of cancer care in South Australia (SA) to provide rural and regional cancer care will be undertaken during the discussion to highlight how innovative care provision can have positive outcomes on patients and their families.

Method/Design

A database of 2.5 years of patients cancer care will be reviewed in terms of medical oncology. Demographics will be presented to show the breadth of malignancy care provided, with a patient need for regional or rural care. Innovative models will be highlighted in terms of consultations, including telemedicine by linking more than two sites to ensure seamless provision, utilisation of nurse practitioner roles, and multidisciplinary approach to patient care. Complex patient transition of care will be discussed in terms of metropolitan to rural, as well as follow up models of shared care. Non-chemotherapy interventional therapies will be shown as options for rural patients in order to minimise need for ongoing therapy. Special groups will be discussed such as ATSI, AYA, onco-generiatrics, and mental health groups, in order to look at holistic care provision in regional and rural SA. Results will be shown in terms of outcome improvements as well as potential financial savings.

Conclusion

South Australia has decentralised cancer care and found that patients can be managed in a non-metropolitan service provision system. This has shown improvements in cancer patient care and the outcomes, but there have been challenges to overcome by having to provide innovative models of care, and also providing future potentials in SA Cancer Care.
Developing a protocol for engaging Indigenous communities in rural and remote Australia to allow them to decide about strongyloidiasis control is a priority. Good patient management and stopping transmission should be our goal.

**Laboratory implementation of nucleic acid tests for the diagnosis of Strongyloides stercoralis in human stool**

**Presenter:** Dr Matthew Watts

**Authors:** Watts M, Lee R

PCR and loop-mediated isothermal amplification methods are available for the detection of *Strongyloides stercoralis* in stool. There are features of strongyloidiasis that affect the validation of these tests for diagnostic use.

- Low-larval output in chronic strongyloidiasis reduces the sensitivity of techniques that allow a morphological (gold standard) diagnosis. This is an important consideration when interpreting the sensitivity and specificity calculations for non-gold standard tests. This effect can be minimized by multiple collections and using multiple methods of morphological identification, though it may not be feasible in practice.

- The removal of reaction inhibitors during DNA extraction is necessary for the detection of low larval loads in stool. A limit of detection calculation, that includes the DNA extraction, can be used to compare different extraction methods. An extraction control is necessary for quality assurance.

The measurement of analytical specificity against known gut organisms, and negative stools from a low prevalence area, is useful for result interpretation. Due to the variable sensitivity of gold standard methods, negative specimens, which are then positive on nucleic acid tests, may represent an increased sensitivity of DNA detection or non-specific amplification.

Nucleic acid tests may be subject to sampling error, if comparatively low volumes of stool are extracted. However, they have a short turnaround time and do not rely upon live larvae, like the most sensitive conventional tests. They can complement existing diagnostic methods.

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**Strongyloidiasis academic paper and poster abstracts**

**Poster abstracts**

Academic poster abstracts have been listed in alphabetical order by title.

**A student and evidence driven assessment of Indigenous Health and Cultural Immersion Training at Deakin University Medical School**

**Presenter:** Mr Adrian Luscombe

**Authors:** Luscombe A, Tagell L, Cheah T, McCoombe S, Bell C, Martin E

**Aim and Objectives**

Gaps remain in Indigenous health outcomes and culturally sensitive medical practice in Australia making targeted cultural training in medical schools essential. His project aims to delve into student perceptions of this need, and how these learning outcomes are best delivered to improve future outcomes.

The model developed at Deakin Medical School involves an Indigenous Cultural Immersion Program (ICIP) undertaken in the first year followed by careful curriculum integration in the following 3 years.

**Method/Design**

The design of this project was based on a student-led survey conducted on three consecutive cohorts of medical students. The method involved asking questions to determine pre and post-knowledge of Indigenous Health issues, the requirements of culturally adept medical practice and prevailing attitudes towards the ICIP. Additional Student interviews were conducted once students had entered the clinical environment.

**Summary of results**

The results highlighted the strengths, weaknesses and challenging situations encountered within their cultural training and particularly the ICIP.

Overall students considered the content valuable for future practice, although it also raised cultural safety apprehensions within the student cohort. In particular, lecture-based learning pertinent to the students’ own cultural background created dissatisfaction compared to field-based learning.

**Conclusion**

With refinement of the ICIP, Student engagement with learning opportunities has improved over the three years of this project.

The included a more solution-oriented approach to culturally sensitive medical practice, which continues to influence students through the remainder of their medical training.

**Take home message**

Student Insight has driven the development of a more engaging and appropriate cultural curriculum aimed at addressing the considerable cultural gaps in Australian medicine.
A student-led Indigenous health program to inspire future doctors to work in Indigenous health

Presenter: Miss Xi Li

Authors: Li X, Warren J, Insh G, Purbrick B, Li J, Fitzpatrick D, Faull R

Aims and Objectives

Indigenous Australian people living in remote communities suffer from a higher burden of chronic disease and poorer access to health-care (“the inverse care law”). Substantial government funding has gone into encouraging doctors to work in remote Indigenous communities, but there remains a high job vacancy rate in these areas. Since 2011, the Insight Indigenous Health Program, a student-led program at the University of Adelaide, has sent 28 medical students on Indigenous outreach trips with experienced clinicians to rural Indigenous communities and conducted Indigenous cultural awareness training for 93 students. This presentation aims to evaluate the development and impact of the Insight Indigenous Health Program.

Method/Design

Participating students completed pre- and post-trip surveys (6-point Likert scales) examining the impact of the trip on their perception of Indigenous health and desire to work in Indigenous health. An evaluation of the development of the Insight Indigenous Health Program will also be presented.

Results

Data were available in n=24 participants. Following their Indigenous outreach trip, the participants expressed a significantly higher mean likelihood of working in an Indigenous community in the future [mean ± SD, pre-trip 3.2 ± 1.1 vs. post-trip 4.0 ± 0.8, p=0.007]. The Insight Indigenous Health Program has expanded from its pilot trip in Indigenous ophthalmology in 2011 to offering 13 trips in rural Indigenous ophthalmology, general practice, psychiatry, respiratory medicine and paediatric cardiology in 2014.

Conclusion

Participation in an Indigenous outreach trip can increase medical students’ desire to work in Indigenous health. The Insight Indigenous Health Program is expanding to offer students more opportunities for exposure to Indigenous health in a variety of specialties. Ultimately, nationwide development of similar programs may encourage more doctors to work in Indigenous health in the future. A supervisor curriculum matrix for all rural GP training posts

Presenter: Dr Konrad Kangru

Authors: Stewart R, Higgins N, Kangru K, Coombes J

Aims & Objectives

Prior to the establishment of ACRRM delivery of General Practice training in rural areas remained the realm of fellows of one GP college, who continue teaching to the same Domains and in many of the same methods they were themselves exposed to during training. Anecdotal evidence suggests that modern rural GP Supervisors would prefer more specific preparation to deliver teaching reflecting the ACRRM curricula.

In addition, it is proposed that GP Supervisors in ACRRM hospital-based and remote training posts are less likely to engage in usual GP Supervisor professional development offered by Regional Training Organisations due to their specific learning needs. In response to the wide variety of training posts utilised by our RTO across both College pathways, we have developed a hybrid Supervisor Curriculum to ensure that all domains for each College are fully addressed.

Methods/Design

The Primary Curriculum statements of both GP training colleges were blueprinted across the Training outcomes of both pathways, and assessed against the training needs and activities of our RTO. From these, a hybrid matrix of unique Supervisor Fields were developed, incorporating all of the listed Training Outcomes in a format which can be easily used to assess the relevance of Rural GP Supervisor teaching activities to both College pathways.

Results

Six TMT Supervisor Fields were developed:

- Applied Professional Knowledge
- Clinical Reasoning
- Culturally Appropriate Population and Community Health
- Professionalism and Ethics
- Settings of Generalist Practice
- Communication and Professional Relationships

These domains were then applied to the 2015 Supervisor Education program of our rurally based RTO, to determine which Domains were represented strongly, and which required further attention.

Conclusions

This Supervisor Curriculum framework provides a concise overview of the teaching requirements of both Colleges, ensuring efficient delivery of relevant Supervisor professional development in our rural RTO setting.

Animal bites in remote Australia, a clinical decision flowchart

Presenter: Dr John Van Bockxmeer

Author: van Bockxmeer J

Aims and objectives

There is a lack of evidence for many bites sustained by Australian fauna. Appropriate antibiotic selection and specific wound management techniques are difficult to ascertain due to a lack of knowledge surrounding the microbiological flora of most Australian animals.

This literature review aims to present a clinical management flowchart for remote practitioners for the management of common Australian fauna bites.
Method/Design

A literature review was conducted using a Medline search with the keywords ‘animal bite Australia’ and ‘animal bite expedition’. Of the 582 articles, relevant literature was selected by reviewing abstracts for key words, phrases and topic relevance. Best practice guidelines including ‘Therapeutic Guidelines’, ‘Australian Prescriber’, state government health departments, the ‘Oxford Handbook’ series and the Wilderness Medicine Society were reviewed and included in this article.

Results

Fifty percent of Australians will have an animal bite in their lifetime.

Large open wounds should be splinted, elevated and covered with a moist, clean dressing before evacuation. Debride devascularised necrotic tissue from bite and crush injuries. Punctures, deep joint or hand bites and immunocompromise are contra-indicators to closure.

Wound infection will present within 12-48 hours and cellulitis requires cover be extended to ten days. If osteomyelitis is suspected a six week course is required and surgical irrigation is essential.

Post-traumatic and psychological effects should be mentioned.

Conclusion

Animal bites in remote Australia are common but carry a low mortality rate. There are poorly understood microbiological complications from Australian bites and major traumatic mortality caused by crocodile. Management of the majority of bites involves principles of wound control and bite assessment. Summary guidelines have been produced as part of this research and can be adopted by remote health practitioners. When in doubt, irrigate, do not close wounds, evacuate and start antibiotics and tetanus/rabies prophylaxis.

Barcoo Fever: a forgotten but still present disorder

Author: Hayman J

Aims and objectives

To describe a now forgotten disorder, Barcoo Fever, to propose a cause, the reasons for its demise and to alert clinicians to a diminished but continuing presence.

Method/Design

Review of historical literature, including indigenous folklore, illnesses affecting explorers, compilation of symptomatology from past and present case histories and consideration of possible epidemiology.

Results

The illness, with its varying symptoms and severity, is consistent with cyanobacterial (blue-green algal) toxin poisoning, in particular the toxin derived from the tropical cyanobacterium Cylindrospermopsis raciborskii, cylindrospermopsin. This cyanobacterium and others are widespread throughout inland Australian waterways and their toxins are generally heat stable, not denatured by boiling. Tea made from boiled contaminated water may still contain active toxin, its taste masked by the beverage.

The provision of covered (tank and well) drinking water supplies in stations and settlements and the carrying of safe water supplies by travellers in the outback may be responsible for the apparent reduction in the incidence of the disorder. There is evidence that the disease is still present, producing illness in stock as well as humans.

Methods are available to examine water for cyanobacteria and to carry out testing for the actual genes responsible for toxin production from water or mud samples.

Conclusion

Patients with unexplained symptoms such as anorexia, nausea, vomiting, abdominal pain, headache, low-grade fever, diarrhoea, sometimes constipation should be asked about the consumption of unsafe water. Liver tenderness may be present and liver enzymes elevated. If the water source can be identified sampling may provide conclusive evidence of cyanobacterial poisoning.
Method/Design
Over 9,000 members of the National Rural Health Student Network (NRHSN) at universities across Australia were invited to participate in an anonymous online survey.

Results
920 responses were received:
- 307 bonded medical students
- 316 non-bonded medical students
- 267 non-medicine (nursing and allied health) students

66% of respondents supported the schemes as a means of addressing rural health workforce shortages, with a further 21% having neutral views. There was no significant difference in support between bonded and non-bonded medical students. BMP students were significantly more likely to oppose the schemes than MRBS students. Opposition to the schemes amongst bonded students increased with increasing year of study. Of bonded students, 81% indicated that they were likely to complete their return of service obligations, with a further 10% being undecided. 99.5% of non-medical health students were in favour or undecided about similar schemes for non-medical health disciplines.

Conclusion
Amongst NRHSN members, there is broad support for bonded schemes as a means of addressing workforce shortages. The majority of bonded medical students intend to complete their return of service obligations.

Case report – non-cardiac causes of acute pulmonary oedema
Presenter: Dr John Carson
Authors: Carson J, Tidball R

Aims and objectives
Acute Pulmonary Oedema is a not infrequent presentation in Emergency Departments, most commonly secondary to heart disease, becoming more frequent with an ageing population. However, it is not invariably cardiac in origin, and the purpose of this report is to highlight for the rural medical community, the non-cardiac causes and potentially fatal causes of Acute Pulmonary Oedema.

Design
The index case in this report on non-cardiac causes of Acute Pulmonary Oedema, introduces a rare entity, Capillary Leak Syndrome (Clarkson Disease), described in only 5 instances in Australia, and about 150 cases world-wide. It illustrates red flags for suspecting a non-cardiac cause, pitfalls in diagnosis and acute management.

Results
The index case demonstrates an acute, approximate 38% loss of circulating volume into the pulmonary interstitium, with hypovolaemic shock, profound haemoconcentration, and acute hypoxia ( arterial saO2 = 68%) due to pulmonary oedema. Four episodes were recorded prior to introduction of effective prophylaxis.

Research summary
Magnesium is an important mineral with many physiological roles.1,2 Deficiencies are linked to a number of health conditions including impaired insulin metabolism2,13, with low serum levels linked to a higher prevalence of metabolic syndrome.8 Magnesium also plays an important role in the cardiovascular system, with some disorders being associated with magnesium deficiency. Supplementation has been demonstrated to benefit some patients but not all.6

Magnesium aspartate is a water soluble form of magnesium and has been demonstrated to have better bio-availability and oral absorbability compared to some other forms.3

Groups at risk of magnesium deficiency include:
- Indigenous communities4–6
- aged over 65 years7
- Athletes and those subjected to extraneous exercise8
- Those on high phytate, fibre or protein diets
- Not for public distribution.

References:
Conclusion
While acute pulmonary oedema is almost totally cardiac in origin, and cardiac causes should always be excluded, there are other, non-cardiac causes which, if missed, may be fatal.

Computed tomography coronary angiography in regional Victoria: an insight from Mildura
Presenter: Miss Michelle Seckington
Authors: Seckington M, Chong J, Soward A, Petrucco M, Shepherd M, Wong D

Background
Computed tomography coronary angiography (CTCA) is an accurate non-invasive imaging technique for the detection of coronary-artery-stenosis. However this technology is unavailable in most regional hospitals. In 2014, CTCA service in Mildura was started through a collaboration between Mildura radiologists and cardiologists with CTCA expertise.

Method/Design
Between July 2014 and June 2015, consecutive patients with suspected coronary-artery-disease underwent CTCA in Mildura. The mean Framingham risk scores was 8.4 ± 8.5. The mean metoprolol dose used prior to scan was 67 ± 54 mg achieving a mean scan heart rate of 58 ± 9.9 bpm and 87% high quality scans. The mean radiation exposure for combined Ca score and CTCA scans was 6.0 ± 3.4 mSv. 46% of patients had calcium score of zero while 16% had score >400. On CTCA, 82 patients had no coronary stenosis, 42 had mild stenosis, 27 had moderate stenosis while 38 had severe stenosis. Framingham risk scores correlated with coronary calcium scores (r =0.38, p=0.001) and were predictive of stenosis severity (p=0.017). All patients with no or mild stenosis on CTCA did not require invasive-coronary-angiography with no major-adverse-cardiovascular-outcomes on follow up. 33 patients underwent invasive-coronary-angiography and 11 patients were diagnosed with severe stenosis. All 9 patients who underwent coronary revascularisation had severe stenosis on CTCA.

Conclusion
CTCA is a feasible and useful service in regional Australia for evaluation of patients with suspected coronary-artery-disease.

Demystifying clinical governance to improve clinical practice in the remote context
Presenter: Gerri Malone
Authors: Hakendorf M, Malone G

Introduction
Over the past 2 or more decades clinical governance has generated copious amounts of research and literature describing key components of clinical governance. Demystifying clinical governance, into the practical realities of remote context for clinicians, is seen as very much a bonus for improved clinical practice.

Aims and objectives
The demystifying and grounding of clinical governance was a key objective for CRANAPlus when undertaking the Remote National Standards Project (2012–2013) supported by Australian Government, Department of Health, which resulted in the development of A Clinical Governance Guide for remote and isolated health services in Australia (Sept 2013).

Method
The Project embraced an action learning methodology inclusive of an extensive consultation captured, by means of a ‘snap shot’ survey, forums, and interviews, from a broad range of professional expertise across the remote sector. This evidence formalised the design of the Guide based on National Safety and Quality Health Services (NSQHS) Standards 1 and 2.

Results
The crafting of the Clinical Governance Guide was specifically for clinical service managers and clinicians in remote and isolated areas to provide a level of understanding of ‘what it is’, ‘why we need it’; and ‘how we do’, clinical governance in the context of remote clinical practice.

Conclusion
An accessible, common sense approach Clinical Governance Guide, grounded in the realities of a remote and isolated primary health care context, is a recommended resource for all health professionals.

The four pillars of remote clinical governance are highly relevant for all rural health professionals, and the delivery of safe, quality health services.

• Workforce effectiveness
• Clinical performance and evaluation
• Clinical risk management, and
• Consumer participation.

This provides all remote clinicians and managers across the disciplines, with guidance and direction to ensure their health service has a robust clinical governance process focusing on the four pillars of clinical governance.
Poster abstracts

Do rural medical students return to work in their regions of origin as graduates?

Presenter: Mr Andrew Kirke
Authors: Wall B, Butner R, Blakely N, Curtin S, Pougnault S and Playford D

Background
Rural medical students are known to enter rural work as graduates at higher rates than urban students. However, it is not known whether rural students return to their towns and regions of origin when they chose rural work, or whether they move to work elsewhere. It seems reasonable to suppose that students return to their own home region as graduates. This project evaluated rural students’ rural return.

Method/Design
The work location of all University of WA medical students who were recruited through the quarantined rural pathway between 1993 and 2006 were traced in the Australian Health Professional Registration Agency (AHPRA). Graduates’ rural locations were geolocated and mapped using ArcGIS. Graduates’ rural return was the same, no matter how remote the original town of origin. All regions contributed similar proportions, by population density, of rurally returning graduates. Rurally returning graduates were not restricted to WA, but covered the whole of Australia.

Discussion and conclusion
Rural students returned rural at the expected high rates. However, they did not return to their towns or regions of origin. Instead, rural communities contributed medical graduates to the rural workforce at large in Australia.

Epidemiological transition of Yudjá Indians in Brazil

Authors: Cavagal E, Rodrigues D

Background
The Indigenous Peoples in Brazil are probably a complex epidemiological transition process, that combines high levels of infectious diseases with the emergence of non-communicable chronic diseases. In 1988, the INTERSALT, a multicenter study investigating the relationship between sodium intake and hypertension, showed the absence of obesity, dyslipidemia, hypertension and type 2 diabetes among indigenous people of the Xingu Indigenous Park (PIX), in Mato Grosso State, Brazil. The aim of the study is to determine the factors that influence Australian medical graduates to become general practitioners (with a focus on rural generalists).

Method/Design
A literature review was conducted. Medline, PubMed and Cochrane Library were searched using the terms; “Australia”, “medical”, “graduates”, “interns”, “students”, “specialty”, “general”, “practice”, “rural”, “factors” and “influencing”.

Factors which influence Australian medical graduates to become general practitioners (with a focus on rural generalists)

Author: Singh K

Objective
In the field of medicine, a specialty is simply a specific study of medical science. Students endure many years of medical school, only to begin a journey as junior doctors, faced with the challenge of selecting a specialty. The aim of the study is to determine the factors that influence Australian medical graduates to become general practitioners (with a focus on rural generalists) and present medical colleges and workforce planners with a platform upon which they can correct the imbalances in the medical workforce.

Method/Design
A literature review was conducted. Medline, PubMed and Cochrane Library were searched using the terms; “Australia”, “medical”, “graduates”, “interns”, “students”, “specialty”, “general”, “practice”, “rural”, “factors” and “influencing”.

In this study, chronic conditions have high prevalence, mainly overweight and dyslipidemia. That’s suggest a peculiar and fast epidemiological transition. It’s leads to situation where high risk of future cardiovascular events or diabetes coexists with the infectious diseases. That’s particularly worrying in a indian group, where the access to health services is difficult.

Results
The total Yudja population was 387 individuals. A population-based survey was carried out among 115 (29.9%) Yudja Indians aged >= 20 years, living in four villages in PIX. Anthropometric and metabolic data were obtained. Fasting and 2-hour after 75 g glucose capillary glyceremia were measured by a portable glucometer (HemoCueH glucose201+). Diabetes was defined according to WHO criteria. Anthropometric data and medical characteristics were measured, and classified using the body mass index WHO criteria. Blood pressure was measured by an automated device (OMRON 742INTCH), and hypertension was defined according to WHO criteria.

Conclusion
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Poster abstracts

Results
The factors were grouped into intrinsic (age, gender, personality and skill set,) and extrinsic influences (lifestyle, income, stress, location and role models), with extrinsic influences regarded as the most influential. Most importantly, 72% of the Australian medical graduates viewed work culture as important, while 56% prioritised flexibility of working arrangements and hours of work. Key influences on choosing a rural pathway specialty was having a rural background, excellent mentors and undergraduate rural exposure.

Conclusion
There are a variety of both intrinsic and extrinsic factors influencing medical graduates to choose General Practice (in particular rural general practice) over others. This can be seen as an opportunity for Australian rural general practitioners to engage medical graduates who are likely to choose General Practice.

Identifying key determinants of health in the rural and remote health workforce planning context

Presenters: Ms Sarah Venn
Authors: Gullo D, Mitchell C, Venn S

Aims and objectives
The World Health Organisation (WHO) defines the social determinants of health as the conditions in which people are born, grow, live, work and age. Identifying community risk profiles is vital for workforce planning agencies. Lower levels of income, education and employment, and poorer access to health services are among the social determinants impacting health in rural and remote communities. The aim of this project was to develop a risk profile methodology including key social and other determinants to more accurately identify communities with the greatest health needs in rural and remote Queensland.

Method/Design
A literature search was undertaken to develop an evidence base to underpin methodology design. The search highlighted social, economic, and environmental factors, and health service access and utilisation rates. Also identified were race, ethnicity and gender. Location has been researched to a lesser degree, however the lower availability of services in rural and remote communities can be seen as a health risk factor. In response to this information, a methodology was developed incorporating a number of key inclusions such as population and number of health workforce with weights applied to adjust for age, sex, SEIFA, ATSI, and remoteness.

Results
Using the weightings for age, sex, SEIFA, ATSI, and remoteness, it was possible to disaggregate the level of health risk of communities in rural and remote Queensland. This additional layer on top of traditional workforce ratios may lend a more accurate and comparable picture of the overall health needs of a communities.

Conclusion
Developing this methodology has led to identifying a top ten priority communities in terms of health need in rural and remote Queensland. This information will provide the opportunity to develop strategies to engage with these communities and key organisations in the region with the aim of improving health and reducing inequalities in rural and remote Queensland.

Identifying success factors for home-based self-care systems

Authors: Lippiatt R, Maeder A, Morgan G

Aims and objectives
Increasing interest in ICT-supported monitoring of patients in home-based living environments has led to many pilot projects making use of new hardware and software technologies. Design, deployment and operation of such self-care telehealth solutions needs to be undertaken with knowledge of the influential factors which enhance or inhibit effective adoption and compliance. This paper reports on a study conducted to identify and characterise these factors, which is crucial for understanding how these solutions should be introduced in rural and remote settings.

Method/Design
A detailed literature review was performed based on a search (using the PubMed, Scopus and Google Scholar engines) for peer reviewed publications reporting on projects using home-based self-care patient monitoring systems, where substantial evaluation was made of the compliance aspects. Seventy-two papers appearing in the last 10 years were selected on the basis of relevance of the project scope and significance of the project findings, and these were subjected to expert reading for abstraction and analysis, allowing us to synthesise an aggregated summary of the key learnings.

Results
The publications reviewed covered a wide range of clinical areas, many of them of high prevalence in rural and remote healthcare, where self-care would provide a potentially beneficial approach to managing the various patient situations. These areas include Blood Pressure, Heart Failure/Stroke, Diabetes, Asthma, Chronic Obstructive Pulmonary Disease and other Lung Function /Respiratory Diseases. The analysis provided a list of factors affecting patient compliance identified by projects, which can be grouped into five categories: Participant Education, Targeting to Age Group/Demographic, Participant Understanding/Competence, Healthcare Provider Support, and Participant Motivation. These will be described in more detail in the presentation.
Conclusion
This work offers a systematic determination of influential factors for patient compliance of home-based self-care systems, to inform current and future interventions. It does not address clinical benefits, which are dependent on longer term trial-based studies. However, the ability to carry out such trials with high participation rates and good patient engagement would depend strongly on addressing the factors identified here.

Institute of Trauma and Injury Management ‘NSW Trauma App’ – a clinical support tool for rural and remote clinicians

Authors: Hall B, Darton A, Lassen C, Rigby O

Aim and objectives
The NSW Institute of Trauma and Injury Management (ITIM), a network within the NSW Agency for Clinical Innovation, has developed a clinical support tool known as the ITIM Trauma App.

The aim of the app is to reduce unwarranted clinical variation through the provision of point of care access to up-to-date, evidence based information, enabling the delivery of optimal care to the injured patient.

Method/Design
Through an extensive issue diagnostics process, it has been identified that there is an important need to streamline, integrate and present clinical information to all trauma clinicians in NSW, irrespective of location and profession that will aid in care of the injured patient.

It provides a ‘one stop’ resource to assist clinicians in caring for the traumatically injured patients, from the initial resuscitation to stabilisation and transfer to a regional or major trauma service. It is designed to be compatible with smart phone and tablet computer technology across iOS and Android platforms. The app has been designed to work in environments such as poor cellular or WiFi access locations.

Results
To achieve this aim, the Trauma App includes the provision of user friendly trauma resources for both adult and paediatrics, such as a localised guideline repository, specific burn injury resources, interactive checklists, trauma related medical calculators and detailed NSW health facility information. The app will be evaluated by clinician feedback, patient experience and analytics built within the app.

Conclusion
The NSW ITIM Trauma App is anticipated to be launched through open and free access on iTunes and Google Play 22nd of July 2015. Preliminary results are expected in September 2015 with ongoing evaluation and consideration for publication.

Medical education in dermatology within the University of Queensland Bachelor of Medicine/Bachelor of Surgery (MBBS) course and how Tele-Derm National fills the gap: a student’s perspective

Presenter: Mr Frank Po-Chao Chiu

Author: Chiu F

Despite dermatological complaints comprising nearly 15% of GP presentations in Australia [1], education regarding dermatology is disproportionately under-represented in medical degrees such as the Australian Bachelor of Medicine/Bachelor of Surgery (MBBS) curriculum. During the four year course, dermatology is covered in approximately 6 days of formal teaching via one Problem-Based Learning (PBL) case, one Case-Based Learning (CBL) Case and several lectures [2]. PBLs’ and CBLs’ facilitate teaching by providing a hypothetical case that encourages students to collaborate, identify gaps in their knowledge, direct their own learning and develop clinical reasoning abilities to resolve issues raised by the case. Greater exposure to dermatology is required for graduates to obtain sufficient experience to deal with dermatological presentations effectively. The sheer breadth of medicine makes it difficult to dedicate more resources to dermatology without compromising resources for other topics however. This gap may be resolved by utilising a teledermatology platform called Tele-Derm.

Tele-Derm was developed in 2003 by The Australian College of Rural and Remote Medicine (ACRRM). It was designed not only to provide specialist dermatology support for rural and remote medics, but also to educate. Consequently, Tele-Derm offers a multitude of educational resources for users, including case-based learning, educational videos, journal reports, quizzes, and discussion forums [3]. Tele-Derm makes an ideal learning platform for students as the online cases parallel the PBL/CBL format used in medical schools, and encourages development of the same skillset. Photos of dermatological conditions are a core aspect of Tele-Derm, which also assists with learning as dermatology is a very visual specialty. Finally, Tele-Derm is freely accessible for medical students and residents to use at any time. Incorporating Tele-Derm into the Australian medical school curriculum would be a flexible, effective and cost-efficient means for better equipping graduates to provide effective care of dermatological presentations in the community.

Poster abstracts


PeriCoach System: assisted pelvic floor exercises for a 56 year old woman with stress urinary incontinence

Presenter: Dr Michael Monsour
Author: Monsour M

Introduction
A common issue among women is urinary incontinence, the involuntary loss of urine. The prevalence of this issue ranges from 25% to 51%, increasing with age, when using the definition of at least one leakage during the past year. Approximately half of all women with experiencing urinary incontinence will report symptoms of stress urinary incontinence. Definitions for stress urinary incontinence vary, however, it generally refers to urine leakage during activities that increase abdominal pressure, including sneezing, coughing, and exercise. The recommended first-line treatment for stress urinary incontinence is pelvic floor muscles exercises to strengthen the pelvic floor muscles and decrease episodes of leakage. This case describes a woman with stress urinary incontinence who used the PeriCoach® System (Analytica Medical, Brisbane, Australia), a novel home training device with Smartphone app and a web portal, to assist with her pelvic muscle exercises.

History
A parous (G3, P3), postmenopausal, 56-year-old woman has had symptoms of stress urinary incontinence with coughing, exercise, and laughing for the last 2-3 years but much worse over the last 12 months. During the last 12 months she found that if she carried more than 2 bags of groceries she would lose control of her bladder. She had a 10 year history of low back pain which had been worse over the last 12 months. She experienced nocturia every 2 hours and emptied her bladder every 2 hours during the day. She would use 3-4 pads of pants per day besides using 3-4 pads. She had an 8 month history of supra pubic discomfort. She also reported being anorgasmistic since the birth of her last child in 1985.

She had 3 normal vaginal deliveries at age 23, 25 and 27 years of age. The birth weights ranged in size from 3.2 to 3.8 kg. The labours varied from 8 hours down to 2 hours in duration. She had epidotomies with all deliveries but other than this the deliveries were uneventful. There was no tearing. She reported no urine incontinence until the last 3 years.

This woman had gained 10 kg in weight since the birth of her children. She rarely exercises and works as a teacher. She is not on any medication and is otherwise well.

Examination revealed a small rectocele. No formal manual muscle testing was performed nor was a pelvic floor distress inventory score or padded weight test done.

Training and outcomes
The woman was given the PeriCoach device and access to the Smartphone app and the web portal, and she was to use it on her own with the instruction manual and no formal verbal instructions. Over a period of 4 months, the subject used the device to assist with her pelvic floor exercises twice a day, every day.

After one and a half weeks of daily use the woman first noticed that her back pain had disappeared and that she no longer had to empty her bladder every 2 hours. Additionally, her nocturia was no longer an issue. After 2 weeks she noticed that the supra pubic discomfort had subsided. By 3 weeks she did not experience urinary incontinence when she coughed or sneezed, nor did she need pads or to take any spare underwear to work.

After 2 months of daily use the patient reported that she once again could achieve orgasm, the first time in 30 years.

This case study illustrates a real-world woman, whose symptoms of stress urinary incontinence resolved with the PeriCoach System. In 3 weeks, she went from using 3-4 pairs of underwear and liners per day to 1 pair of pants and no liners. She lost her supra pubic discomfort and low back pain. She is now able to sleep the entire night and certainly now enjoys a much enhanced intimate relationship with her partner.

The patient had 3 successful vaginal deliveries. These most likely led to some of the weakening of her pelvic floor. Despite her postmenopausal status, her symptoms, which had remained very minor for years, had recently grown in severity, suggesting progressive weakness in the muscles of her pelvic floor.

It is noteworthy that this subject was able to successfully operate the device and the Smartphone app with no verbal instructions from myself. This is indicative of the ease of use of the device for patients.

Furthermore, it is important to recognise that many doctors are time poor. In rural areas this problem is made worse by a lack of pelvic floor specialist clinicians. The PeriCoach allows the GP to easily monitor patient progress through the clinician portal.
Poster abstracts

References


Psychogeriatric SOS: outcomes, successes and pitfalls in starting up a new clinician-to-clinician e-health psychogeriatric service

Presenter: Dr Jacqueline Huber

Authors: Kelly J, Burke D, Huber J

Aims and objectives

- To investigate the confidence of rural and remote clinicians in their clinical and service-related psychogeriatric practice before and after using a new psychogeriatric clinician-to-clinician e-health service based at St Vincent’s Hospital, Sydney that is aimed at up-skilling rural and remote clinicians in psychogeriatrics
- To discuss the successes in and barriers to setting up such a service so that other service providers might learn from and avoid similar problems

Method/Design

- Multidisciplinary participants from private and public practise the Murrumbidgee, Northern NSW and Mid-North Coast were invited to utilise the service. They filled out an online confidence questionnaire before and after using the service, and variation in confidence in their psychogeriatric practise before and after the intervention was analysed

on the doctors own computer. Once a patient is connected with their doctor, all uploaded data is visible. This allows the GP to quickly view which patients are exercising and which are not. The doctor can view the patient’s progress over time. The portal also shows a diary. The convenience of having all of this information in one place not only saves the doctor time, but also allows the doctor to monitor their patient’s progress between visits.

Stress urinary incontinence often acts as a barrier to women’s participation in social and fitness activities, thereby threatening their health, self-esteem, and well-being. Depression is common in women suffering from stress urinary incontinence12.

Women such as this one with stress urinary incontinence who exhibit improved contractions upon receiving biofeedback information may benefit from the pelvic muscle exercises using a home training device. The information displayed on the Smartphone app of the PerCoach System was very motivational for this patient, leading her to want to work diligently on her pelvic floor exercises, which eventually led to the disappearance of her stress urinary incontinence symptoms.
Poster Abstracts

QRME's Overseas Trained Doctors National Education and Training (OTDNET) program in Western Queensland.

Presenter: Dr Brendan Grabau
Authors: Grabau B, Towne M, Kitchener S

The Overseas Trained Doctors National Education and Training program (OTDNET) is a fellowship preparation program for Overseas Trained Doctors (OTDs). The Program was established with funding from the Australian Government’s Department of Health in 2012. QRME is a rural-based General Practice RTP covering south eastern and south western Queensland with a footprint of >900,000 km2.

OTDs practising in rural Australia are required to attain a fellowship in order to access the MBS. Fellowship is obtained from ACRRM, or the RACGP. Eligibility to sit includes 4 years GP experience (at least 12 months in Australia).

QRME’s Program includes a fortnightly webinar. OTDs practice key features problems and clinical-style cases. Webinars are conducted in groups of 5-6 and are facilitated by a senior medical educator. Each OTD develops and lead a case while the group discusses case and provides feedback to the lead OTD. OTDs are also provided with external clinical teaching visits (ECTVs). One-to-one mentoring is provided as well as access to QRME’s online learning platform. OTDs also participate in one or two practice clinical exam style workshops.

QRME’s initial cohort included 20 OTDs. The first graduates attained fellowship in 2014. Six OTDs sat fellowship examinations in the first half of 2015. The success of this program depends not only on the perceived benefits by those passing the fellowship exam, but also their retention in rural practice. The QRME program has been the most successful OTDNET Program in Queensland. OTDs reported that they chose QRME for its reputation as a quality provider of rural General Practice training. QRME is enrolling a further 5 OTDs in its 2015 cohort before the program was suspended by the Commonwealth Government in May 2015.

Retrospective audit comparing the iStat cardiac troponin I (cTnI) with Laboratory cTnI Assay in a rural emergency setting

Authors: La P, Thompson P, Mossey D

Aim and Objectives
Cardiac troponin I is the diagnostic marker used for myocardial injury. In Regional Queensland Health facilities the iStat point of care cardiac troponin I (cTnI) is the biochemical marker for cardiac injury. There is a difference in the diagnostic capabilities of the iStat-cTnI compared with formal laboratory cTnI assay, which is only performed at Pathology Queensland Laboratory sites. This discrepancy between the iStat-cTnI and the laboratory-cTnI has the potential to cause patient harm through delayed or false diagnosis, especially in rural facilities where iStat-cTnI is the only assay available. We identified the need to evaluate the accuracy of the iStat-cTnI assay with Laboratory-cTnI.

Methods
We performed a retrospective audit comparing concurrent iStat-cTnI (Abbott iStat cTnI) and laboratory-cTnI (Beckman Coulter AccuTnI) results from a sample of 481 chest pain patients presenting to a rural ED. The 99th percentile cut-off of 0.04µg/L was used for both cTnI assays. 2x2 contingency tables were used to evaluate the iStat-cTnI results using the Laboratory cTnI as the gold standard.

Results
The iStat produced 22 False negatives, 37 false positives, resulting in sensitivity of 74.7% (95% CI: 64.25% to 83.42%), specificity of 90.6% (95% CI: 87.29% to 93.30%), false positive rate of 9.4% and a false negative rate of 25.3%. Of the 22 false negative tests, 7 of these cases were diagnosed as acute coronary syndrome.

<table>
<thead>
<tr>
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<th>Laboratory-cTnI (Gold Standard)</th>
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<tbody>
<tr>
<td>Positive</td>
<td>65</td>
</tr>
<tr>
<td>Negative</td>
<td>37</td>
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</tbody>
</table>

\[\text{Stat-cTnI Positive} = 22\]
\[\text{Stat-cTnI Negative} = 357\]

Table 1
Conclusion
In a rural ED setting, the iStat-cTnI underperforms compared to the laboratory-cTnI assay. The iStat showed poor sensitivity and has significant limitations in evaluating ischaemic heart disease. This is of particular concern in rural facilities where iStat-cTnI is the only assay available. We suggest further evaluation and research of the assay and how we use it in clinical practice.

Rolling in the hay: what urgent care sexual and reproductive health services are available in rural Victoria and are they adequate?

Authors: Morton C, Walker J, Tomnay J, Kauer S

Aims and Objectives
Strong evidence exists that young, rural people face significant barriers to accessing sexual and reproductive health (SRH) services. Regional Victorian hospital urgent care services have the potential to provide after-hours SRH services but little is known about their capacity and policies. This project aims to investigate availability of testing for sexually transmissible infections (STIs) and provision of emergency contraception (EC) in regional hospitals and explore any relationships with chlamydia notifications.

Method/Design
All urgent care and regional trauma services (N = 59) were contacted. Cross-sectional data were collected to determine policies and practices for STI testing and EC provision. Descriptive analysis was conducted by region. An analysis exploring the relationship between service provision and chlamydia notifications was performed also using Australian Bureau of Statistics population data.

Results
56/59 (94.9%) urgent care services were interviewed. 26.8% knew of a policy for STI testing and 26.8% reported that they would refer patients elsewhere. 37.5% of the services stated that tests are free; otherwise cost was unknown or up to GP/pathology discretion. EC provision varied widely between regions (range 33–70%), 16 (28.6%) of the urgent care services did not provide EC. Of those, 14 (25.0%) could only refer to the nearest regional centre, all of which were >30 minutes away by car and not accessible by public transport after-hours. Using population data from 2012, it was found that chlamydia notifications in 2014 per 1000 people aged 15–24 in rural Victoria was significantly greater than in the urban population (19.1 to 12.7).

Conclusion
The data collected demonstrated the heterogeneity of STI testing and EC available after-hours in regional areas. Analysis of chlamydia notifications demonstrates a significant greater burden of disease in young rural Victorians than their urban counterparts. Rural populations continue to face barriers to accessing healthcare and their health service needs differ from urban populations.

Suicide prevention training in the workplace

Presenter: Mr Andrew Mair

Authors: Anish D, Greenland N, Mair A

Abstract
This poster illustrates the process that Lifeline Adelaide has undertaken to begin to address suicide in workplaces. It is well known that workplaces are an important and significant site through which to deliver suicide awareness and prevention training. Lifeline Adelaide has been working towards addressing suicide in workplaces through the provision of broadly available training, advocacy at the state government level, and the implementation of research and evaluation to support our efforts. This paper speaks to the practical challenges of implementing training in workplaces, lobbying state government to support these efforts, and the challenges of establishing a culture of research and evaluation in a large organisation. Lifeline Adelaide’s work in this space provides a roadmap and significant learning for organisations (such as the AMA and ACRRM) wishing to undertake similar endeavours in the workplaces of their members and the communities they serve.

Tele-Derm National: challenging cases from a decade of tele-dermatology

Presenter: Dr Stephen Andrews

Authors: Andrews S, Byrom L, Muir J

Abstract
The Australian College of Rural and Remote Medicine (ACRRM) is responsible for administering Tele-Derm National, an online ‘store-and-forward’ tele-dermatology consultation service open for access by Australian doctors. Although all Australian practitioners can use the service, most are located in rural and remote communities where there is limited access to specialist dermatological advice. ! The majority of cases submitted for advice over the last decade have been for dermatoses. Periodically, more uncommon dermatological conditions present to the primary health care provider, posing a challenge in both diagnosis and subsequent management. Due to the visual nature of skin disease it is often possible to diagnose even uncommon conditions with clinical photos and relevant patient information.

We present a series of case snapshots that illustrate some of the more unusual presentations submitted to the Tele-Derm National service over the past decade. These
cases highlight the fact that even for more unusual conditions tele-dermatology is effective in providing specialist clinical advice, allowing subsequent management by the primary practitioner and alleviating the need for a face-to-face dermatology consultation.

The role of Physician Assistants in addressing health workforce need in rural Australia

**Presenter:** Ankur Verma

**Author:** Verma A

**Background**

Physician Assistants (PA) have the potential to make a significant contribution to the rural and remote health workforce of Australia. PA training is based on the ‘medical model’, and was first created in the USA in the 1960s. PAs practise medicine under the direct supervision of a doctor, also known as a ‘delegated-practice’ framework.

**Aims**

To investigate the impact of PAs in the health workforce.

**Method/Design**

A literature review was conducted with key words including ‘physician assistant’, ‘physician associates’ ‘medical care practitioners’, ‘PAs’, ‘health workforce’, ‘scope of practice’, ‘education’, ‘accreditation and certification’, ‘primary care’, ‘Australia’, and ‘international PA development’ were used.

The literature search resulted in 70 articles and reports. Information was categorised according to countries (Canada, Netherlands, India, and the United States) with PAs currently in practice, existing PA programs or training in development, and medical professionals with scope of practice similar to that of American-trained PAs.

**Results**

Key recommendations from the review included:

- PAs’ scope of practice, employment potential, and their contribution to productivity and quality of health care services contribute to the foundations of a health care system;
- PAs could be implemented as a solution to the maldistribution of GPs in rural and remote areas to stabilise health care services in those areas;
- National registration for Physician Assistants through the Australian Health Practitioner Regulation Agency (AHPRA); and
- PAs’ access to the Pharmaceutical Benefits Scheme and the Medicare Benefits Schedule could facilitate sustainable contribution to primary health care services, and enable ‘collaborative arrangement’ between PAs and medical practitioners.

**Conclusion**

There is evidence that the use of PAs in the health workforce can improve access to healthcare and services, and can produce improved health outcomes for rural and remote Australians. The doctor/PA partnership is a non-competitive, time-efficient and cost-saving model. Pilot programs of PAs in Queensland and South Australia, and the experiences of other OECD nations exemplify the need for PAs in primary health care.

Time to revisit reasons behind adherence and non-adherence: in search of hidden gems

**Presenter:** A/Prof Pascale Dettwiller

**Authors:** Dettwiller P, Nadeem K

**Introduction**

An increase in the demand for an efficient and effective health care system and a dramatic increase of health issues in Indigenous Australians has led to various emerging questions being asked around the current bio-psychosocial model of adherence:

- Has the current bio-psychosocial model of adherence attributed to any significant improvement in the status of non-adherence in Indigenous Australians? Is the gap between Indigenous and Non-Indigenous Australians getting worse? Does the Bio-psychosocial Model of Adherence require adjustments when exploring Indigenous medication taking behaviours?

**Conclusion**

Very limited literature was found on adherence amongst Indigenous Australians as well as addressing non-adherence of chronic diseased Indigenous patients overseas. According to the discovered literature, it can be concluded that there is still room for improvement in the current bio-psychosocial model not just to Indigenous populations but also non-Indigenous patients. This is due to a number of different factors that are discussed in the review. This paper will share some insight in our practice in the Katherine Region.
Trichomoniasis in pregnancy in Far North QLD: a review of current practice

Presenter: Dr Emma Hogan
Author: Hogan E

Background
Trichomoniasis is a sexually transmitted infection that is thought to be associated with adverse pregnancy outcomes including premature rupture of membranes, pre-term delivery and low birth weight. There has been a decrease in incidence of trichomoniasis in urban Australia but infection rates remain high in rural and remote communities, particularly in indigenous communities. Currently no local guideline for diagnosis and management of Trichomoniasis in pregnancy exists 1–3.

Aims and objectives
A review of diagnostic and treatment modalities of Trichomoniasis during pregnancy in Far North Queensland with an aim to optimise and standardise practice.

Method/Design
A questionnaire regarding screening and treatment practices of trichomoniasis during pregnancy was sent to health professionals including Doctors, Midwives and health care workers providing antenatal care to women living in rural and remote areas in Far North Queensland. Regions included Kowanyama, Lockhart River, Napranum, Pompuraaw, Arukun, Weipa, Hopevale, Cooktown and the Torres Straits.

Results
Variable screening and treatment practices were identified between health care providers. Confusion exists as to who should be screened, when is the best time to screen and when is the safest and most beneficial time to treat during pregnancy.

Conclusion
Screening and treatment of Trichomoniasis in the pregnant population living in Far North QLD is inconsistent. An evidence based clinical guideline to standardise practice and minimize potential adverse pregnancy outcomes is required. The end goal of this project is to formulate a guideline to support clinical practice in rural and remote Far North QLD.

References