



RSA 2011

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Transforming Renal Health
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The Renal Society of Australasia Conference

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Abstracts
Renal Society of Australasia 39th Annual Conference





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The Renal Society of Australasia Journal: Journal of the Renal Society of Australasia is the peak scholarly journal for nephrology nurses and associated professionals to share their ideas and their research to promote evidence-based, high quality care for persons living with renal disease. The Journal provides a national and international forum for the exchange of ideas, practice and research. It is a vehicle for on-going education.

Articles are peer-reviewed by experts in the field of the submitted work. The Renal Society of Australasia Journal is a refereed journal and subject to blind review.

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Abstracts from the Renal Society of Australasia 2011 Conference

INVITED SPEAKER

The Renal Disaster Relief Task Force of the International Society of Nephrology

Dr Raymond Vanholder
Renal Disaster Relief Taskforce,
University Hospital Ghent, Belgium

In this presentation we will review the activities of the Renal Disaster Relief Task Force (RDRTF) of the International Society of Nephrology (ISN). The RDRTF has been created to offer support to nephrologic patients in the context of disasters, essentially earthquakes, within a framework that has been planned in advance. Although the large majority of patients helped suffer from acute kidney injury within the context of crush syndrome, sometimes also support is offered to chronic patients. All actions are undertaken under the umbrella of Médecins sans Frontières (MSF). Activities are developed according to a well conceived stepwise plan, composed of the warning of RDRTF coordinators, the contact with local nephrologists, the sending of an assessment team composed of nephrologists, nurses and technicians, and if needed, the deployment of several consecutive rescue teams. Main points of attention are an estimation of the number of expected crush and AKI patients, the assessment of the quality of the local hospital capacity and transport possibilities, the needs for material and personnel support, and the administration of primary preventive therapeutic measures such as early isotonic fluid, even before the victim is extricated. Examples will be given of major interventions by the RDRTF in this context, such as the Marmara earthquake in Turkey (1999), the Bam earthquake in Iran (2003), the Kashmir earthquake in Pakistan (2005) and the Port-au-Prince earthquake in Haiti (2010), next to many other disasters. The role of the South-East Asian cell of RDRTF will be emphasized.

INVITED SPEAKER

What Inspires You?

Mr Shad Ireland
Minnesota, USA

"What Inspires You? A question that would forever alter the direction of Shad Ireland's life. Being diagnosed at age 10 with MPGN Type 1 kidney disease and requiring kidney dialysis every other day in order to survive Shad's outlook on life was grim. Inspiration was no where to be found. Dreams of becoming a professional athlete, of getting a college education, and even having a family seemed out of reach. Shad Ireland's presentation, "What Inspires You?" will describe his 28 year journey from the dialysis chair to the finish line at Ironman! Shad Ireland is the only dialysis patient in the world to have successfully competed in and completed the Ironman triathlon. Shad has done over 20 triathlons including multiple Ironman's. In 2009, He successfully rode his bicycle 4639 miles in 3 months across America, and will take on the sport of cycling in 2011 by completing several stages of the Tour of California and the Tour De France.

"An individual inspired can accomplish anything, and we have the ability to inspire others by doing what inspires us! What Inspires You?"

Into the future for paediatric renal patients

Ms Roxanne Perry
Renal Unit, Womens and Childrens
Hospital, Adelaide, South Australia

There have been many advances in the care of paediatric renal patients over the past 20 years. ANZDATA shows that the incidence of 0-2 yr olds having renal replacement therapy (RRT) reached a steady level in the mid 1990's, prior to that time few children of that age group were offered RRT because technically it was not successful. The incidence of end stage renal disease in children is fairly stable but the prevalence of children in RRT programs has continued to increase. This suggests that advances in medical care have led to improvements in patient survival. We are able to treat children more effectively from birth throughout their childhood with better long term outcomes due to the advances in dialysis technology, transplant management/medications and improved CKD management with diet and medications. This has changed the face of paediatric renal nursing. We are now able to offer treatment to an increased group of newborn babies and we provide management of their RRT throughout their childhood. I will compare and contrast children's life spans with RRT born in the 1980's 1990's and into 2011 and discuss the differences and challenges they face to give an insight into paediatric renal nursing into the future.

Combined Heart-Kidney Transplantation: An Overview

Ms Christine Ellis
The Alfred Hospital, Melbourne

Since the first kidney transplant in 1954, there has been a growing success in individual solid organ transplantation. Simultaneous transplantation of two organs for combined end-stage organ failure has been a reality since 1967 when Kelly et al described the first simultaneous pancreas-kidney transplant. This was then followed by Norman et al reporting the first combined simultaneous heart-kidney transplant in 1978. Since then there has been a steady increase in other multi-organ transplantation with heart/lung, liver/kidney, liver/heart, liver/intestine and even triple organ transplantation. The reasons are multi-factorial: "This trend has been in part due to a better understanding of immunobiology, advances in surgical techniques and postoperative care, and an often common pathologic association between dual-organ failure" (Trachiotis et al.2003).

This presentation will outline the world wide experience of combined organ transplantation focusing on simultaneous heart-kidney transplants. The Australian experience and current practice guidelines will also be reviewed, along with discussion on organ allocation.

The role of the nurse practitioner in transforming renal health service

Prof Glenn Gardner
Queensland University of
Technology and the Royal
Brisbane and Women's Hospital

Health service in Australia, and internationally, is under pressure and the health workforce in most clinical specialties in most disciplines is not adequate to meet service demands, this is especially relevant for patients seeking health care for chronic disease. The field of renal health is one of many specialty services under pressure and service planners are looking to advanced nursing roles to improve access and timeliness of health care for renal patients. Research has shown that the renal nurse practitioner is one of the fastest growing models in Australia. In this paper I will discuss the research on the development of the nurse practitioner role in Australia and its contribution to service improvement. I will present findings from current innovative research into the role of the renal nurse practitioner, the impact of this service innovation on the clinical team and the therapeutic approach of nurse practitioner service in providing health care for patients with chronic kidney disease

Keeping all our families well; Sharing the Western Desert Dialysis story

Ms Sarah Brown
Western Desert Nganampa Walytja
Palyantjaku Tjutaku Aboriginal
Corporation

In 2000, people from Kintore and Kiwirrkurra raised over one million dollars from an auction of their paintings. Their aim was to improve life for their mob who were suffering kidney disease and return them home to the most remote part of Australia. A decade on, we will look at the Western Desert story, successes and difficulties and draw on the lessons we have learned about remote service provision, client directed care, good governance and the impact on individuals and communities. Our story is one of hope and community led action to improve indigenous health and maintain culture.

Recent evolution in diagnosis and treatment of acute kidney injury

Dr Raymond Vanholder
Renal Disaster Relief Taskforce,
University Hospital Ghent, Belgium

In this presentation we will review the current advances in classification, diagnosis, prevention and treatment of acute kidney injury (AKI). With regards to classification, the usefulness of the recent systems such as RIFLE and AKIN will be summarized, but also the shortcomings and the discrepancies among these two, and the compromise between these two, as offered by the classification by the upcoming Kidney Diseases: Improving Global Outcomes (KDIGO) guidelines. The area of diagnostics has been overwhelmed recently with the advent of new biomarkers which have emanated out of proteomic studies, the most relevant among these being Neutrophil Gelatinase Associated Lipocalin (NGAL). This factor has been studied extensively over the last few years, but its sensitivity remains a matter of debate except in specific populations, such as children, specific conditions such as cardiac surgery, or a combination of both. Several confounders are at play, among which inflammation seems to be substantial. Other markers such as interleukin-18 (IL-18) or Kidney Injury Marker-1 (KIM-1) seemingly suffer from the same shortcomings. Probably panels of markers will be needed. As far as preventive measures are concerned, classical interventions such as isotonic saline and vasopressor administration remain the only ones which are solidly evidenced, with glycaemic control as an interesting additional option if patient follow-up can be precise enough. With regards to dialysis therapy, several randomized controlled trials and systematic reviews could not unravel any difference between intermittent and continuous strategies; slow extended daily dialysis (SLEDD) is an interesting compromise between both.

Prof John Agar
Services, Geelong Hospital, Barwon
Health, Geelong, Faculty of Medicine,
University of Melbourne, Deakin
University School of Medicine

Although one of the most water and power hungry of all health-care therapies, conventional haemodialysis (HD) still broadly ignores the environmental impact it creates.

While HD sessional duration, frequency and equipment varies, our local mean water usage for conventional 4 - 5 hr x 3/week HD is ~450L/treatment when using similar standard low-efficiency reverse osmosis (R/O) systems to those used by many other dialysis services (~66% reject rate: dialysate flow rate 500ml/min).

Home HD power usage, while clearly also equipment-dependent, is a mean 1.3kWh/hr for our standard HD machine and R/O system pair (Fresenius 4008B and Aquauno R/O). If these water and power consumption data were applied uniformly to all 3 x weekly HD for the estimate of ~2.0 million HD patients world wide, the extrapolated annualized worldwide water use for HD would be ~33.7 trillion litres and the annual HD power draw ~1.62 trillion kWh.

We have established two parallel environmental programs to address some of these problems.

(1) In 2004/5, we installed a range of simple, inexpensive 'tank, store, pump and pipe' R/O reject water recycling processes for our hospital in-centre, multiple satellite and home patient programs. This 'grey water', both biochemically and biologically WHO and EPA 'potable', now recycles to a range of practical uses including: facility-based surgical instrument sterilization, janitor services and toilet flushing: off-site school ground, sporting facility and garden maintenance: and a range of garden, domestic laundry and agricultural options at home.

(2) In June 2010, we also installed an 18 solar panels solar array – supported by Fresenius Medical (Aust) – with a total area = 23.409m² and a predicted power output from historical means = 4.58 kWh/m²/day/year. The total equipment and installation cost was A\$16,219. We now (pilot) solar power our 4 chair home HD training/support facility (HTU), the first known planned and operating solar-assisted HD project in the world.

Our water-recycling project reclaims and reuses ~100,000L reject water/week. This has led to a positive community response from our drought-prone region and to major savings in water costs, the return on investment (RoI) for the capital outlay having been recovered within 36 months.

Meanwhile, in the first 35 weeks of operation (July 2010 – April 2011), our dialysis process-related power draw has totalled 2689 kWh while the solar array has created 3409kWh. The array has generated 13.91 kWh/day/week compared to a mean service power draw of 10.91kWh/day/week. Despite a higher-than-average training and respite activity, and despite the project introduction spanning one of the worst periods of summer solar exposure on record, the system is still generating 26% more power than the HTU dialysis-related processes require. Early modelling suggested the repayment of capital (\$ grid reimbursement – \$ power use) would take 5-8 years and, as panel life is estimated at 30 years, free service power and a future income stream should be possible in the later decades of operation. To see your own local monthly solar exposure and to make a simple calculation of the solar capabilities at any site, simply visit <http://www.wunderground.com/calculators/solar.html>, add your locale, check the 'tick box', then 'submit' to see your areas solar data.

More is possible – indeed desirable. Current building practices encourage a flat rather than a steeped roof design. When planning future dialysis services, we should consider using the rooftop 'flat-space' for solar installation and eco-sensitive development. Consider using R/O reject water to maintain a rooftop vegetable garden, providing patients and staff with year round healthy produce at minimal cost. This is not only feasible, but is practical. Rooftop agriculture has also provided European eco-architects with an insulate alternative and, if linked with food creation, would provide services with a viable win-win outcome and patients with the triple benefits of cheap food, practical activity and self-worth.

We should all be more critical of the environmental impact(s) of HD. Wiser resource utilization is possible, practical, cost effective and planet-friendly. We commend similar conservation practices to all dialysis services.

My Body – My Decision: Palliative Care for Sick Kidneys

Ms Suzanne Stewart
Dept. Health and Families,
Northern Territory Government

“In 2008 Suzanne undertook management of an inaugural project, ‘Palliative Care for Renal Clients Living in a Remote Setting’, funded by the Australian Government Department of Health & Ageing. Through research, consultation and open discussion, options and pathways in palliative care were established as an alternative for end stage renal disease clients. Many Indigenous clients wish to remain in their own community and for those clients already on dialysis “in town” some wish to return home to “finish up”. Through this project, Suzanne was able to implement changes to practice and provide this palliative option for those that chose it, enabling clients’ greater control in determining their own path.

Suzanne will discuss how together we can break down the silos between Renal, Primary and Palliative Care services. Through this change the perception of the holistic palliative approach to care can be better understood. This includes acknowledging the importance of the bereavement processes for patients, families and renal health care providers.

Suzanne is very passionate about sharing the holistic approach in the development of renal palliative care pathways. This steps away from the clinical focus and encourages pathways that allow staff to openly discuss end of life issues within their service with both their colleagues and their clients.

Suzanne’s background in health spans almost two decades in the Northern Territory including 11 years with the Royal Australian Airforce as a dental hygienist and supervisor, four years with Oral Health Services NT as Quality Manager and the past three years with Territory Palliative Care as a Project Manager. Whilst with Oral Health she was instrumental in improving delivery of dental service to chronic disease clients in remote communities throughout the vast Northern Territory.”

Dr Stephen McDonald
The Central Northern Renal
and Transplantation Service,
Adelaide

Total incidence of ESKD: KRT-treated and other cases 2003-2007: 1

Mrs Frances Green
Australian Institute of
Health and Welfare
Ms Lynelle Moon, AIHW
Ms Claire Ryan, AIHW

Background: To date, incidence data for end-stage kidney disease (ESKD) in Australia has been available only for those who commence kidney replacement therapy (KRT). The corresponding incidence rates do not include people who do not commence KRT. As survival is likely to be short for these people, mortality data can be used to estimate the incidence of non-KRT treated ESKD.

Aim: To estimate the incidence of ESKD in Australia including KRT-treated and non-KRT-treated cases.

Methods: The Australian and New Zealand Dialysis and Transplant Registry (ANZDATA) records were linked to the National Death Index and mortality data to identify individuals who died with ESKD but were not on ANZDATA. ESKD incidence was defined as a person registered on ANZDATA or a person who died from Renal failure as an underlying cause of death or Renal failure, end-stage as an associated cause of death in the reference period.

Results: Between 2003 and 2007 there were over 21,300 incident cases of ESKD, with approximately equal numbers of KRT-treated and non-KRT-treated cases. The majority of non-KRT-treated cases were among the older age groups, with more than 80% aged over 75 years.

The incidence of ESKD was higher for males than females (24.4 per 100,000 population compared to 16.3). Females, however, had a higher proportion of non-KRT-treated incident cases.

Conclusion: The method used here provides a first estimate of the total incidence of ESKD in the Australian population, providing valuable data that will be further analysed in the future.

Are ferritin and CRP levels being overlooked in the CKD ATSI population?: 2

Mr Jamin Claes
Queensland Health
Mrs Joy Ellis
Royal Darwin Hospital
Ms Fiona Rettie
Royal Darwin Hospital

Background: Chronic Kidney Disease (CKD) is increasing in the Aboriginal and Torres Strait Islander (ATSI) population. A different approach to ferritin management is becoming common practice, although there is very little literature on ferritin levels in the ATSI population. The aim of this study was to determine whether CRP and ferritin levels are being overlooked in CKD ATSI patients.

Methods: Anaemia and laboratory parameters were extracted from the Renal Anaemia Management database for the period November 1999 to September 2010. Haemoglobin, ferritin and transferrin saturation levels were categorised according to CARI targets. Comparisons between ATSI and non-ATSI patients were made using t-tests or Wilcoxon-Rank Sum tests.

Results: We extracted data for 23,077 patients, of whom 2,678 (12%) were of ATSI origin. ATSI patients were significantly younger (55 ± 12 vs. 65 ± 16 years, $p < 0.001$), had a greater proportion of females (57% vs. 40%, $p < 0.001$), and were more likely to have type 2 diabetes (48% vs. 19%). There were 41% vs. 48%; 22% vs. 36% ATSI vs. Non-ATSI meeting CARI targets for haemoglobin ($p < 0.001$), ferritin ($p < 0.001$) and transferrin saturation ($p = 0.02$), respectively. Mean haemoglobin was lower in ATSI patients (112 ± 18 vs. 115 ± 16 , $p < 0.0001$; ATSI vs. Non-ATSI, respectively). Mean ferritin was higher (839 ± 674 vs. 466 ± 486 , $p < 0.0001$; ATSI vs. Non-ATSI). Median CRP was higher in ATSI patients (11mg/ml vs. 14mg/ml, $p < 0.001$). Median Kt/V was lower in ATSI patients. There was no difference in URR.

Conclusion: ATSI patients have higher CRP levels and higher ferritin. It is possible that we are overlooking inflammation in ATSI patients.

Are Haemoglobin levels adequate in CKD stage 2 - 4 patients: 3

Ms Ann Kruger
Flinders Medical Centre
Ms Anne Arnold
Flinders Medical Centre

Background: Anaemia is one of the complications of chronic kidney disease (CKD). Long-term, untreated anaemia may contribute to the development of left ventricular hypertrophy and cardiac failure. The aim of this analysis was to determine whether haemoglobin levels are adequate in our CKD Stages 2 to 4 populations.

Method: Demographic, anaemia and erythropoietin stimulating agent data were extracted from the RAM database for the period November 1999 until October 2010. Anaemia parameters were categorised according to the CARI guidelines.

Results: There were 9,492 pre-dialysis patients with data available. Their mean age was 67 ± 15 years, 11% were of ATSI origin, 56% were male. There were 0.3%, 1.5%, 25.4%, 46.4% and 26.4% of patients in Stage 1, 2, 3, 4 and 5, respectively. The proportion of patients within target for haemoglobin was 66.7%, 23.1%, 41.0%, 46.3% and 40.3%, respectively. The mean haemoglobin for each stage was 130 ± 9 , 131 ± 16 , 123 ± 18 , 116 ± 16 and 109 ± 15 g/L, respectively ($p < 0.0001$). The proportion of patients within target for ferritin was 50%, 12.5%, 35.3%, 32.3% and 39.0%, respectively. The proportion of patients within target for transferrin saturation was 0%, 28.6%, 15.2%, 13.7% and 14.8%, respectively. The proportions of patients within each CARI target category were significantly different by CKD stage for haemoglobin only (haemoglobin $p < 0.001$; ferritin $p = 0.830$; transferrin saturation $p = 0.247$). Only 40% of pre-dialysis patients were receiving an ESA.

Conclusion: Less than 50% of our CKD Stage 2 to 4 populations are achieving haemoglobin levels within the CARI targets.

Transforming clients lives with a multi-disciplinary approach: 4

Ms Fiona Rettie
Northern Territory Renal
Services

Up until 5 years ago one Nephrologist and one chronic kidney disease (CKD) nurse attended monthly rural hospital renal clinics. The CKD nurse provided education about renal disease and treatment options. They were also expected to provide a pseudo dietetic, social work and Aboriginal Liaison service.

85% of clients were Aboriginal and 75% of those would need to relocate to an urban setting for Renal Replacement Therapy (RRT). Clients were presenting unwell, unprepared and without the appropriate knowledge or resources to successfully relocate from a remote community to the urban setting.

Funding was obtained for the Social Worker, Dietitian and Aboriginal Liaison Officer (ALO) to attend and enhance CKD clinics providing comprehensive education and specialist knowledge. Each team member's role is clearly defined with each having an understanding of each others key messages to provide back up, support and reassurance to the clients. Culturally appropriate resources were developed to assist the clients understanding of the complex CKD story. This enabled them to be fully informed of the treatment options available to ease the transition to commencement of RRT or initiation of palliative care.

To further increase efficiency at CKD clinics a presentation was developed for other health professionals to understand each of the MDT member's roles.

Ethics approval will be sought to do a retrospective study on the outcomes of the MDT at CKD clinics.

Innovative treatment for Myeloma of the Kidney: Our unit's experience: 5

Ms Debbie Pugh
Prince of Wales Hospital
Ms Kathleen McNamara
Prince of Wales Hospital,
Randwick, NSW

Multiple Myeloma is a malignancy derived from bone marrow plasma cells. This disease can affect the kidney, causing acute or chronic kidney failure, the most common cause being myeloma cast nephropathy. Myeloma can produce high levels of potentially toxic free light chain (FLC) proteins. The life expectancy of a Myeloma patient with dialysis dependent renal failure is less than a year. Until now, there has been little success with blood purification techniques, however an innovative new technology- high cut off dialysis, used in combination with chemotherapy, could lead to patients avoiding long term dialysis and improve survival.

At our unit we have recently cared for a patient with myeloma cast nephropathy. Our presentation will include a case history, explanation of Multiple Myeloma focusing on the effects on the kidney and the prognosis, discussing the standard treatment options, before expanding on the details of the new treatment of- high cut off dialysis and the aims of this treatment.

No room at the Inn: Satellite Dialysis centre expansion and the change management process: 6

Ms Anne Maguire
Canberra Hospital

Background: Due to a steady increase in prospective client numbers, the unit needed to increase its capacity to provide haemodialysis in the satellite setting. This required the nursing staff and Director to explore ways in which this could be achieved.

Aims:

1. To accommodate the need to provide dialysis for an increasing number of clients
2. To rationalise the role of the nurse and support staff
3. To provide safe and excellent care to an increasing number of chronic dialysis clients

Method: Meetings were held to discuss the expansion attended by the nursing executive, union representative and nursing staff to establish:

1. The changing of nursing shift patterns
2. Redefining the role of nurses
3. Introduction of a Technical Officer position to set up machines
4. Employing extra clerical and support staff

Results: After many meetings and several working party reports the unit elected to extend opening hours and operate from 0630 till 2300 on Monday through Saturday. The team chose to include a third shift to accommodate another 20 clients per week. The introduction of a new role (Technical Officer) required creating a job description and training package. The expansion created considerable change and required expert change management skills from the management team.

Conclusion: Although change is a challenge for all concerned it provided us with the great opportunity to improve our service and ensure that all non nursing tasks were re- assigned and the nurses are free to provide expert care for our dialysis clients.

Vancomycin Dosing during High Flux Dialysis: 7

Mr Peter Dunstan
Western Health
Dr Craig Nelson
Western Health Victoria
Ms Wendy Purcell
Western Health Victoria

Background: Despite continual advancements in antibiotic therapy, infections cause approximately 15-20% of all deaths in people receiving dialysis for end stage kidney disease (ESKD). Sepsis as a result of Staphylococcus infection is well documented in HD patients, and adequate antibiotic therapy is vital to successful treatment. Vancomycin remains the antibiotic of choice for MRSA, but must be at adequate initial peak levels and maintained at therapeutic serum concentrations to remain effective. The type of dialysis determines the specific regime. Drug dose, dosing frequency and target serum concentrations can all be varied. In particular patients receiving HD on high-flux dialysers as compared to those on low-flux dialysers require increased dosing to achieve target concentrations.

Objectives:

- What does current literature suggest as being optimal treatment options for Vancomycin?
- What do CARI and other international guidelines recommend?

Key Messages: Removal of Vancomycin during high-flux HD is considerably greater than during low-flux dialysis. As a result higher doses and higher pre-dialysis target serum concentrations must be prescribed. However, the correct dosing of Vancomycin in high-flux dialysis remains controversial.

Conclusion: The proportion of HD patients treated with high-flux dialysis continues to increase. This paper will explore how Vancomycin concentrations are affected during treatment, and how best to achieve safe and effective Vancomycin treatment during high-flux HD.

Vancomycin Resistant Enterococci in Haemodialysis, Isolation and Screening: 8

A/Prof Josephine Chow
Mr John Harkness
Prof Michael Suranyi
South West Sydney Local
Health Network

Background: An isolation haemodialysis unit for Vancomycin Resistant Enterococci (VRE) colonised patients was established in 2003. The VRE outbreak was initially controlled using established guidelines including screening, cohorting and isolating colonised haemodialysis patients and inpatients. Additional strategies included staff and patient education, minimizing patient transfers and rationalising antibiotic prescribing.

Aim: The purpose of this project was to identify patients colonised with VRE to allow them to be isolated and cohorted, until they had a low infective risk. Once recovered, they could be identified and returned to normal clinical care.

Methodology: A clearance program designed and implemented to allow recovered patients to return to normal clinical care. Patients were deemed cleared with colonised VRE once they were off antibiotics, had no dialysis catheter and demonstrated three negative swabs.

Results: 26/34 (76%) VRE colonised patients were screened between July 2009 till March 2010. 25/26 (96%) patients screened were cleared. An estimated \$ 676,000 was saved as a result of the VRE clearance program in the first 10 months. Over 75% of low risk renal patients were successfully decolonised and the 7 pillars of Multi-resistance Organism (MRO) control were successfully implemented.

Conclusion: The management of VRE includes surveillance and isolation. Isolation allows potential savings in the long term by reduction of cross contamination of VRE for the sicker group of patients such as those in ICU and Haematology. Low risk patients have the possibility to be cleared and return to their local community dialysis units.

Building an Education Framework for the Future: A State Based Approach: 9

Mrs Karen Bennett
South Australian Renal
Nursing Group
Mrs Cheryl Wilden
Renal Educator, TQEH,
Adelaide Health Service
Mr David Ind
Renal Educator, TQEH,
Adelaide Health Service

Context: In August 2008 a working party was formed to direct the future of renal education. Representatives from all renal units, both public and private as well as staff involved in renal education gathered to discuss the current and future needs of renal nursing education. Many inconsistencies regarding access to and support of participants to existing educational opportunities were identified. As a result of these discussions a framework was developed to underpin all future plans for the development of Renal Education across the state.

Objective: The framework is designed to be used as an overarching document that shapes the future development of renal education in a way that ensures that all nurses working in renal units are resourced to have consistent access to equitable, standardised learning opportunities, state wide.

Key Messages: As we move forward into a new era of health reforms, it is important to protect those attributes that we believe to be important to the clinical practice of nephrology nursing and the standard of care provide to people with renal disease.

The development of the framework will provide an innovative opportunity for key stake holders to agree upon and resource education programmes suitable for all levels and areas of clinical practice in renal health provision.

Conclusion: This presentation will outline the process taken and the data collected regarding workforce and current need so that we can share the lessons we have learnt and possibly provide a template for others to use.

Transforming Renal Education: A Virtual Haemodialysis Application: 10

Mr Peter Sinclair
University of Newcastle
Dr Ric Herbert
University of Newcastle
Mr Duncan Cooke
University of Newcastle
Mr Christopher Wall
University of Newcastle
Mr Ben Barclay
University of Newcastle

Introduction: Nurses new to the area of haemodialysis are required to achieve haemodialysis learning objectives in the clinical setting. This is not without risk to patients. Few units have access to simulation laboratories to assist beginning practitioners to develop their skills and confidence. An alternate and cost effective way to offer 'no-risk' learning opportunities is to incorporate a virtual haemodialysis machine into an internet based e-learning program.

Aim: To develop and assess a prototype application that can be used to teach and assess haemodialysis learning objectives in an immersive online learning environment.

Method: A team of student software programmers and university academics was mobilised with a brief to develop a prototype application based on an existing haemodialysis machine.

Discussion: A prototype application was developed using a 'story board' type scenario editor and a simulator interface. Currently the application is limited in functionality and requires further developing and testing. This will only occur with appropriate funding. This paper will discuss the pathway taken to develop the prototype virtual dialysis application and its application to the future of specialty education delivery. Furthermore it will demonstrate the main features of the application and discuss the challenges associated with the project.

Conclusion: This project validates the plausibility of developing rich multimedia applications into immersive e-learning environments that will provide a safe learning environment and minimise patient risk. It explores new territory in renal education delivery and demonstrates significant advances in educational approaches that can additionally be transferred to the patient training context.

User involvement: Development of a kidney research and education initiative: 11

Mrs Melissa Chamney
City University, London
Dr Nicola Thomas
City University
Dr Julia Jones
City University
Mr Nicholas Drey
City University
Mrs Fiona Loud
City University
Mr Alan Simpson
City University

This presentation discusses how user (patient) and carer involvement has been central to the development of an innovative Kidney Research and Education Initiative. The Initiative, at a University in the United Kingdom, has been set up by seven health-care professionals with a special interest in kidney disease.

The overall aim of the Initiative is to establish a centre of excellence for kidney research and education, with a particular focus on user involvement in research and teaching. The Initiative has an Advisory Group with members who are users or carers. To our knowledge this is the first specialist Initiative of its kind in the UK to involve users and carers in this way.

This presentation will describe how the Initiative was set up and the membership and remit of the Advisory Group defined. Users and carers have the opportunity to become honorary lecturers at the University. Our presentation will illustrate how the Advisory Group is involved in shaping research proposals, grant applications and educational activities in kidney care. Ways in which we are evaluating user involvement in the research process in particular will be explored. Finally we will present the lessons learnt to date and the ways in which we can improve collaborative working between users/carers and researchers in the future. It is hoped that conference delegates will gain understanding of how to best learn from and engage with users/carers when setting up a research and education Advisory Group for kidney care in a university setting.

Developing Synergy between Renal Health with Social Work Services: 12

Mr David Bullivant
Wollongong Hospital

Context: Social work services has been sporadic in renal health in the past and based on crisis management due to limited resources. In February 2010 a dedicated, full-time (1FTE) senior social work position was created.

Objectives: To understand the unique role for social work in Renal Health.

Key Messages: Social work offers and deals with –

- Adjustment to treatment counselling
- Advanced care issues
- Under recognition of depression
- Challenging Personalities
- Compliance/adherence to treatment
- Carer needs and supports
- Community services
- Vocational issues
- Advocacy for Carers and Patients

How has Social work addressed the needs of Patients and Carers?

- Renal Support group
- New Social Work pamphlet
- New Renal service directory with the assistance and collaboration of Carers NSW
- Advanced Care Forums for staff and patients
- Where to Now?
- Renal education programme
- Focus on outreach services

Conclusion: Social Work has a lot to offer a renal unit specifically targeting patients and supports when discussing dialysis, starting dialysis or considering end of life care. Social Work encourages continuity between the medical model & the patient thus supporting holistic and collaborative care. Outcomes include greater patient satisfaction and continuity.

Improving Peritonitis Rates in Peritoneal Dialysis Patients: 13

Ms Chunmei Wang
Statewide Renal Services,
Royal Prince Alfred Hospital
Miss Youn Park
Home Therapy, State-wide
Renal Services, Sydney

Introduction: Peritonitis is the main cause of technique failure in Peritoneal Dialysis (PD). Each episode of peritonitis (EOP) causes damage to the peritoneal membrane, contributes to hospitalization in most cases, permanent transfer to haemodialysis, increased mortality rates and has a negative social impact on the patient. The PD technique survival rate associated with EOP in our PD program had been lower than the national average. Since June 2009, the retraining of patients following EOP together with closer follow up has resulted in improved EOP rate.

Aim: To improve the rate on the EOP and reduce technique failure.

Method: This is a retrospective, project, analysing data, and clinical outcomes on

1. The rate of peritonitis and technique failure, pre and post retraining
2. The impact of staff to patients' ratio on peritonitis rate.

Results: Patients' data were analysed over 48 month's period from 2007 to 2010, the peritonitis rate improved from 1:17.6 to 1:31.6 per patient months. Following the implementation of initiatives, technique failure rate due to peritonitis has now improved to 23.5 % (8/35) from 38 % (19/51).

Conclusion: The technique assessment, continuous support, retraining of patients post peritonitis episodes and successful management has contributed to reduction in the EOP rate. Adequate staffing levels and dedicated staff are crucial for the improvement of PD outcome.

A call for action in Peritonitis Management, a key success in improving patient outcome: 14

Mrs Melinda Tomlins
South West Sydney Local
Health Network
Ms Susana San Miguel
South West Sydney Local
Health Network
Ms Dawn Purdue
South West Sydney Local
Health Network
A/Prof Josephine Chow
South West Sydney Local
Health Network

Background: Peritoneal dialysis technique survival in Australia and New Zealand is lower than in other parts of the world. More than two-thirds of technique failures are related to infective complications (predominantly peritonitis) and 'social reasons'. Poor peritonitis outcomes reflect significant deviations from international guidelines.

Objectives: This paper will discuss a series of practical recommendations to improve the outcomes in PD through appropriate patient selection, prevention and treatment of infectious complications, examining the causes of 'social' technique failure and addressing the need for a greater focus on patient education and clinical governance.

Methodology: A monthly peritonitis review provides an avenue for discussion on peritonitis episodes, the management of each case, and the outcome to the patient. Regular review of current policy and protocol to confirm adherence to latest published evidences. Patient review meeting focus on peritonitis incidents and cases forms part of the multidisciplinary approach. Education to clinicians both in the Renal Unit and other specialties has proven a great success in improving management of peritonitis. Finally, an analysis of 5 years local data on the peritonitis events provides valuable information for future direction.

Conclusion: Peritoneal Dialysis technique survival rates in many units are unacceptably low. Reducing peritonitis rates and overcoming social causes of technique failure requires strategies in evidence based practice, education, strong leadership and clinical governance.

Constipation: A Major Problem for People on Peritoneal Dialysis: 15

Ms Anna Lee
Royal Prince Alfred Hospital

In the non dialysis population, constipation is a common medical condition which can lead to a loss of quality of life and increase healthcare costs. In people with chronic kidney disease (CKD) on peritoneal dialysis (PD), constipation is associated with peritoneal catheter malfunction and peritonitis which can result in dialysis modality failure.

The aims of this paper will outline a clinical audit, present a case study and relate to relevant research to provide clinical recommendations.

A retrospective review of new patients in our unit commencing PD in 2009 from the Sydney metropolitan area (n=42) showed that 21% of patients experienced slowness to drain and poor ultrafiltration due to constipation which resulted in extended PD training time and delayed patient discharge to self care.

Mr F on PD for 6 weeks required hospital admission and failed to dialyse for several days, highlighting the problem of constipation in a PD patient. There are compounding factors that contribute to constipation in the dialysis population such as diet and fluid restriction and the use of medications such as phosphate binders. Constipation is usually dealt with in an ad hoc fashion by the caring health professional when it becomes a problem rather than in a proactive preventive manner.

Despite being recognised by international guidelines as a problem for PD patients, there is little research on constipation specifically in this patient population. Information on chronic constipation management in the general population is helpful however more research is required in the PD patient group.

Hardships related to Renal Replacement Therapy for patients over seventy years of age: 16

Ms Denise Fracchia
Western Health
Ms Amanda McOrmond
Renal Care Coordinator,
Western Health

Age is no longer the single most determining factor in deciding whether renal replacement therapy (RRT) should be offered or initiated in our ageing patient population. Previously discounted patients are now being given the opportunity for treatment despite complex medical and social histories. Are we, as health professionals, aiding our patients to make the correct decisions in treatment options? Are we influencing their decisions, directly or indirectly?

Pre-dialysis patient education does not always aid the patient in their decision in choosing a treatment option, especially if their first personal choice was for conservative care. A recent study investigating options for long term dialysis in the elderly looking at differences in quality of life on peritoneal dialysis compared to haemodialysis for older patients strongly supported offering peritoneal dialysis to all suitable older patients. Contrary to this study, our health service aims to provide what is personally requested by either the patient or their family and what is medically suitable for our patients, be it either haemodialysis or peritoneal dialysis.

There are a number of questions that we posed to our patients over the age of seventy years, most importantly, what was the biggest influence on their choice of treatment modality and what do they wish they had known when making their decision.

This presentation will demonstrate the results from a survey on our patients aged over seventy years, on what hardships they have encountered or what influences have been instrumental in their decisions on RRT or conservative care.

Exploring New Territory - Optimizing Rural/Regional Health using the Hub and Spoke Model of Care: 17

Mrs Annette Rose
Melbourne Health
Mrs Elaine Sanders
Melbourne Health

Our dialysis service operates under a hub (parent hospital) and spoke (regional/rural satellite) model over a wide geographical area, coordinating care for approximately 200 regional satellite patients. Not surprisingly, effective communication and sharing of up to date information can be challenging.

Feedback received from our regional staff through a satisfaction survey highlighted some communication difficulties and duplication of information across spoke sites. Semi-structured interviews were then conducted with staff from the various spokes.

Our dialysis service has a well maintained data base where we record and store patient information. To improve communication and data access, a process was undertaken to connect the regional units to the database through remote internet connections. This involved input from the Data Systems Coordinator who set up these connections using Virtual Protected Networks. Education was then provided to each of the spokes on how to use the database; this included the development of training modules and one to one education sessions with the database users.

After 3 months, regional staff were re-surveyed to determine if this had assisted them with the management of their patients. Regional centres indicated several improvements, including: (1) Less time spent on paperwork, hence more time with the patient, (2) No duplication of work (3) Current information is presented to the Nephrologist at audit.

In conclusion, the introduction of the database to the spokes has been well received by staff, enabling improved communication, data management and workloads, thus enhancing the continuity of care and management of the patients.

No more them & us: Effective collaboration and planning between primary and tertiary health care sectors: 18

Mrs Elaine Bowen
Royal Darwin Hospital
Ms Beth Amega
Danila Dilba Aboriginal
Medical Service

Context: Darwin renal centres undertake haemodialysis treatment for over 140 people each week. 85% are Indigenous people. Many dislocated to Darwin from rural and remote areas where all health care needs have been provided by a sole health clinic in the community.

The majority of dialysis dependent clients fail to engage with a general practitioner accessing all their medical needs via by the dialysis nurses, Nephrologist or the Emergency Department.

Primary care needs were being attended to in a "spot fire" fashion, dealing with issues as they arose without formal planning for review of non-renal related health concerns.

Objectives: The local Aboriginal Medical Service (AMS) was approached to address these issues. Having networked well in developing a chronic kidney disease case management program, the two services have built on that to manage primary health needs for dialysis dependent people in Greater Darwin.

Key Messages: Months of planning and negotiation followed, and numerous barriers overcome. A team consisting of a General Practitioner, renal nurse and senior Aboriginal Health Worker were designated by the AMS to gain consent and complete GP Care plans (funded under Medicare). Funding advice and support was provided through the local division of General Practice.

Conclusion: The outcome of this project has seen a 200% overall increase in consultations with the AMS by renal clients, and adoption of an appropriate approach to managed care of the whole person beyond just dialysis needs. The body, mind and soul now get regular care to ensure the optimal quality of life.

“Fasten Your Seatbelts” The Maiden Voyage of the Mobile Dialysis Bus: 19

Mr Tarquin Robinson
Top End Renal Services

A few years ago there were some visionary people within a health service in the northern part of Australia who thought it would be a good idea to have a mobile haemodialysis unit to enable patients to travel to their home country for significant events. This vision slowly started to take shape and at a previous presentation an update was given on the progress of this unit. In this paper I will present the inaugural trip of this mobile dialysis unit.

There were many hurdles faced and the schedule was tight to have the unit ready for our first trip out bush, we managed to get there with a few hours to spare and headed off for the 2000km return journey, 1400km of which was dirt roads.

The trip was not all smooth sailing we had to watch out for crocodiles on a river crossing; however we did finally manage to make it to our destination after two days of driving and a few mechanical problems. After over coming some technical glitches and plenty of dust the unit was up and running in time for the official opening, we were also able to provide dialysis to our patients who were attending the event.

Once our dialysis duties were completed we had to over come one more obstacle before we were able to hit the road for the long journey home. We arrived home safely and in one piece, the trip was a success; the unit is now being used regularly.

There’s No Place Like Home...a Dialysis Journey to Better Health: 20

Ms Angelina Villarba
Fresenius Medical Care
Ms Gerrie Vandeppeer
Fresenius Medical Care-WA
Home Therapies

Background: A unique initiative is proving very successful to a cohort of haemodialysis dependant patients. In 2007 the home haemodialysis population was 23; today 55 patients are responsible for their own dialysis in their communities whether they be metro, rural or remote. Growing a new program to double its original size in 3 years takes extensive planning and requires significant change for all key stakeholders. The success can be attributed to the dedication of a passionate team who believe that ESRD is a disease not an illness and individuals should be able to stay in their own homes and communities.

Aims: To train patients or significant others to carry out haemodialysis in the home setting. To routinely monitor these patients, some living great distances from the training centres. To identify and address the many challenges posed by training and support of these patients, including medical, technical, and nursing support. To supply 24hr on call clinical and technical assistance.

Methods: Establishment of 2 training centres. Development of a comprehensive orientation and training program for staff. Development of training materials for the patient. Technical support with the provision of attending remote areas to install haemodialysis equipment and service machines.

Results: Improved quality of life due to increased frequency of dialysis sessions. Ongoing growth of patient numbers. Retention of patients on the program

Conclusion: This unique Home Haemodialysis program is dynamic and exciting. There are enormous benefits to all patients, especially the aboriginal communities as patients are able to return to their homes and communities.

Breaking down the barriers: Indigenous transplantation in the Northern Territory: 21

Mrs Kerry Dole
Northern Territory Renal
Services

Worldwide transplantation is regarded as the optimal form of renal replacement therapy for people with End Stage Renal Disease (ESRD). In Northern Australia Indigenous Australians are experiencing epidemic levels of ESRD, with rates more than 30 times higher than the non-Indigenous population. However the number of Indigenous Australians receiving a transplant is one third of the rate for non – Indigenous people across Australia.

Transplantation presents numerous barriers, challenges and poor survival outcomes for this patient group. A study in 2004 identified the following barriers to Indigenous transplantation:

1. Indigenous patients are unsure of the transplant process
2. Patient education is not sufficiently targeted to cultural language and literacy needs of Indigenous people
3. Clinical uncertainties amongst Nephrologists as to whether transplant offers a survival advantage for Indigenous Australians

Additional to these barriers are geographical location, access to health care services, relocation to urban centres, longer waiting times on dialysis and medical unsuitability of live donors.

For the health care professionals involved in the provision of Indigenous health such barriers provide an enormous challenge to health care delivery. Overcoming these barriers requires innovation and the exploration of new ideas and practices. This presentation will review how the health care professionals of Northern Australia are responding to these challenges in order to breakdown these barriers. Areas of focus are through educational resources, raising the profile of transplantation, revision of all aspects of care and the designation of a Nephrologist to oversee service delivery.

Does HIV preclude a patient from being listed for transplantation?: 22

Miss Debra Gregory
Austin Health
Miss Marie Topouzaksis
St Vincent't Hosptial
Melbourne
Miss Kim Mullins
St Vincent's Hospital
Melbourne

Until recently HIV has been regarded as an absolute contraindication for transplantation. However in stable individuals this may no longer apply and each case is examined individually and taken upon merit, with individuals listed if they meet all medical criteria.

Previously HIV positive patients with ESRD have been confined to either HD or PD – especially before the advent of highly active anti-retroviral therapy (HARRT), introduced in late 1990's.

The advent of this therapy – HAART for primary treatment of HIV – significantly impacted the life expectancy of individuals with HIV. This increased life expectancy has meant individuals were surviving longer & some developing chronic illness and disease such as diabetic nephropathy.

While these restrictions are no longer applied universally there is relatively limited documented experience in the management of individuals who are HIV positive and who undergo transplantation. This has been reflected in a recent literature search which yielded little national and international experience in this patient group.

This review will discuss a recent case of an HIV positive patient receiving a renal transplant and the challenges of managing his immunosuppressant medication in conjunction with the HAART therapy, and also the management of subsequent rejection episodes. Finally we will discuss what we have learnt from this experience to guide us in the management of future patients with HIV who undergo renal transplantation.

Pregnancy and Transplantation: Another gift of life: 23

Ms Jane van der Jeugd
Flinders Medical Centre

Context: Chronic renal failure brings loss of libido, (often) amenorrhagia and low chances of conception for the female patient. For those who are fortunate enough to receive a kidney transplant, the opportunities to conceive and carry a near full-term baby are a reality. However not without associated risks. Transplantation and pregnancy as a reality are explored.

Objectives: This paper explores the recommendations for the management of pregnancy post transplant and foetal outcomes. Following presentation of data, a case study will be presented of a patient who conceived 3 months post transplant despite advice to wait for a minimum period of 12 months post transplant.

Key Messages: Education is a pivotal in pre and post transplant care to ensure patients are well educated about the risks of pregnancy to the graft and potential foetus.

Early diagnosis of pregnancy enables optimal antenatal care for mother and child, and close management of graft function and blood pressure control by the Renal team. It is recommended that pregnancy should not occur within a 12 month period of transplantation

Conclusion: Good education, support and monitoring of mother and child will enable best practice and optimal outcomes for mother, child and graft function.

The New Live Kidney Donor Pathway: 24

Ms Colleen Etherton
Central Northern Adelaide
Renal and Transplantation
Service (CNARTS)

Background: South Australia pioneered the first Live Kidney Donation in Australia in 1965, performing the first Laparoscopic nephrectomy in Australia in 1997. Since 1965, South Australia has performed over 500 Live Donor Transplants.

The integration of the Renal Transplantation services was the opportunity to review and improve the experience for Live Kidney Donors.

Aims: Live donation nephrectomies are unique, as there is no medical benefit for the patient who is in excellent health prior the removal of a crucial organ.

Our plan was to closely assess and analyse patient outcomes and feedback to enable improvement of the Live Donor experience.

Methods:

- A survey of 23 Live Donors pre integration in 2010, and 24 Live Donors post integration was conducted. The study focused on the changes in practice to the post-operative care and satisfaction with the new Renal and Transplantation Service.
- Analysis of the post-operative complications was performed based on data of the live donor nephrectomies from 2009-2011. These results were then cross-referenced with data collected by the ANZDATA registry.

Results:

- The post integration Live Kidney Donors have reported having the recipient on the same ward of high importance and psychologically comforting.
- The most prevalent and common complication was the incidence of nausea and constipation.
- Only a small percentage of patient recorded having no complications.

Conclusion: The integration of the Renal Transplant unit has been a positive improvement for the Live Donor Patient Pathway. It has provided the opportunity and resources for a closer analysis of the donor outcomes and areas which require more attention.

Redefining patient education: Who is the educator?: 25

Miss Anne Patrick
Northern Territory Renal
Services

In an urban dialysis unit where 85% of patients are Indigenous and 75% of these have relocated for treatment, incorporating traditional foods into Christmas festivities goes a long way to boost community spirit. A cook up including 'roo tail, fish, damper, goose and salads in conjunction with traditional Indigenous dancers and the local radio station has been a well received event for the past three years at the dialysis unit.

A bush tucker Christmas party has the potential to provide an appropriate medium for nutrition education for patients and staff, an arena for patients to educate staff on their culture and traditions, to decrease social isolation and cultural dislocation, and to increase rapport between and within staff and patients.

The two-way sharing of information is a large part of the Christmas party, and it includes role modelling nutrition messages such as appropriate serving sizes of damper, potassium leaching potatoes, and no salt or salty condiments. Patients proudly teach staff and other patients the best way to prepare the bush food. An opportunity is provided for patients and staff to pay their respect to those they have lost throughout the year.

The evaluation of the party is through reflective discussion, and documentation is through photographs taken on the day. Events like this are a powerful method to generate interest and stimulate discussion about culture, food and health. Having smaller scale events such as bush tucker trips or clinic day cook ups would assist in keeping the momentum produced throughout the year.

Chronic Kidney Disease (CKD) in Primary Care: Innovation, Collaboration and Education: 26

Ms Barbara Harvie
The Canberra Hospital

Context: Chronic kidney disease (CKD) is a major health problem in Australia, with approximately 1.4 million Australian adults having some degree of kidney disease. CKD is often asymptomatic with individuals typically losing up to 90% of their kidney function before experiencing any symptoms. Risk factors for CKD commonly seen in general practice include diabetes, high blood pressure, and obesity.

Objectives: The practice nurse role in the early detection and management of CKD is essential. This presentation discusses how education to practice nurses is delivered through a national program and how this ultimately delivers the knowledge that nurses need to take back to their practice to implement change.

The objective of the program is to educate practice nurses on the early detection and management of CKD. Flexible education includes small and large group workshops presented by senior nephrology nurses. The sessions promote CKD awareness and management, empowering nurses to make a difference to patients in their practice.

Key Messages:

1. Systematic identification by the practice nurse of individuals with risk factors for kidney disease is important for patient outcomes.
2. CKD education provides the opportunity for practice nurses to develop skills to effectively detect and manage CKD in their practice

Conclusion: CKD is a condition that is best managed in general practice. Through education, practice nurses can gain an understanding of the detection and management of kidney diseases that will allow them to actively participate in the improvement of outcomes for the many patients touched by CKD.

Transforming social work and Aboriginal liaison Renal Services in the top end, Northern Territory: 27

Ms Karen Brown
Northern Territory Renal
Services

Providing Social Work (SW) and Aboriginal Liaison (AL) support in a renal service dominated by medical staff can be tricky and challenging. It is also undeniably rewarding, always interesting and continually providing the most wonderful opportunities to engage with people at an extremely difficult and worrying time in their lives.

This Northern Australian renal service covers a vast geographical area, over 90% of the clients are Indigenous and most of those will relocate from a very remote area to the urban centre for renal replacement therapy (RRT). The impact of this on social, psychological and cultural health can be dire.

The role of SW within our team is to identify and address psychological and social factors impacting on a person's health and well-being, while Aboriginal Liaison focuses on strengthening Aboriginal cultural health and identity within the health system.

This presentation outlines the transformation of a service responding to crisis ALL the time, to one which provides early intervention, education and preparation for the commencement of RRT and has improved client outcomes and staff satisfaction and retention through the use of Strengths Approach practice. The SW and AL team are actively involved in strategic planning, policy and resource development, in- and out-service education and client support while promoting values such as equity, participation, access and social justice; and ensuring ethical issues are hotly debated.

The future lies in the development of National Standards of Practice for SW/ALOs working in renal services in Australia.

Double D: Dialysis and Dementia: 28

Dr Deirdre Fetherstonhaugh
Australian Centre for
Evidence Based Aged
Care (ACEBAC), La Trobe
University

Context: The chronic kidney disease population is ageing and patients are likely to have multiple co-morbidities. In 1970 0.5% of new dialysis patients were 65 years or older. By 2009 this number had increased to 46%. The incidence of dementia is also increasing with estimates as high as 1.13 million Australians living with dementia by 2050.

Objectives: The prevalence of dementia increases as people age and considering the ageing dialysis population the 'epidemic' of this disease cannot be ignored. A diagnosis of dementia for someone who is currently undergoing dialysis or for whom a decision about renal replacement therapy needs to be made, presents many clinical and ethical challenges. This paper will discuss these challenges.

Key Messages: Symptoms of dementia include: progressive and frequent memory loss; decline in ability to perform routine tasks; disorientation to time and space; impaired judgement; learning and concentration difficulties; changes in personality/behaviour/mood; and withdrawal. These symptoms present challenges to the dialysis team on a day to day basis with the practical physical undertaking of dialysis and medication, fluid and dietary compliance, and also raise ethical issues about quality of life, ongoing consent and the role of advance care decisions.

Conclusion: Renal clinicians need to be knowledgeable about dementia and person-centred evidence-based ways in which to provide care for dialysis patients with dementia while also being cognisant of the ethical issues a diagnosis of dementia raises. Education about dementia should be provided in formal post-graduate renal courses and within renal health services.

What are the Information Practices of People with End Stage Kidney Disease?: 29

Prof Ann Bonner
Queensland University of
Technology
Dr Annemaree Lloyd
Charles Sturt University

Background: One goal for people with end-stage kidney disease (ESKD) is to establish the foundations of positive self-care attitudes and practices. By gaining knowledge of their disease and how it is treated, people become an active participant in their health care management. Little, however, is known about the information sources and practices of people with ESKD.

Aims: This project sought to understand how people with ESKD experience the information environment and what information practices they employ in order to inform the decisions they make in relation to treatment and care.

Methods: Using a constructivist methodology five people with ESKD from two regional renal units were recruited. Data was collected using in-depth interviews and thematically analysed.

Results: The analysis revealed two types of patients. The first type appears to adopt a 'received' view of information, and will not question their condition; they passively accepted the information provided predominantly provided by the nephrologist. In the other type, patients were found to be 'engaged'; they actively identified their information needs and quickly learned what that they needed to ask and who to ask. Their information sources were wider and included a number of renal health practitioners, written educational material, and other patients. Engaged patients viewed the nurse as an experienced practitioner and deliberately sought advice from them.

Application to Practice: Knowing the information practices of renal patients, particularly the variety of information sources used is particularly useful for renal nurses when planning, implementing and evaluating patient educational strategies.

Here today, gone tomorrow: What cyclone Yasi taught us about evacuating a regional dialysis service: 30

Ms Bronwyn Hayes
Cairns Base Hospital
Mrs Janet Hole
Cairns Base Hospital

On February 1, 2011, Far North Queensland was put on alert for the impending arrival of a category 5 cyclone (Yasi). Established cyclone contingency plans were put into action to dialyse as many patients as possible prior to the arrival of the cyclone. By mid morning the disaster management team decided to evacuate all patients from the hospital and at 3pm the order was given that all outpatient haemodialysis patients were to be evacuated to Brisbane. Patients from two city units, one satellite unit and all home haemodialysis patients were advised of the decision to evacuate to Brisbane.

In total 75 patients with the support of 1 renal nurse were evacuated to Brisbane. Of these 5 inpatients were transported by RAAF Hercules and 70 outpatients travelled to Brisbane on a chartered flight and stayed in a hotel in central Brisbane. 31 patients chose to stay in Far North Queensland to be with family and protect property. In collaboration with all Brisbane dialysis units 75 evacuated dialysis patients received timely treatments with the last patients returning home four days after evacuation.

The following presentation will outline the experiences of the nursing staff who ensured the safe evacuation, treatment and relocation of dialysis patients. Despite having disaster management plans, the physical, social and emotional impact on patients and staff cannot be underestimated. Of importance for all renal clinicians are the valuable lessons which can be learnt from our experiences that can be translated to other disaster situations.

Satellite Dialysis Nurse-Performed Nutritional Screening Tool: A Randomised Control Trial: 31

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Prof Jonathon Gleadle
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Background: Nutritional screening can facilitate timely identification and referral of those most likely in need of nutrition support. It is not clear how effective a routine nutritional screening regimen might be in a satellite dialysis setting.

Aims: To determine whether a nurse-performed nutritional screening regimen improves referral rate for nutritional support, and relevant clinical and patient-centred outcomes including nutritional status, biochemical parameters, quality of life, morbidity and mortality.

Methods: Multi-centre randomised controlled trial (n=81: intervention = 38; control = 43). Intervention was a monthly nurse-performed nutritional risk screening for 6 months using a 4-item screening tool consisting of % weight change, serum phosphate, serum potassium and appetite. At risk participants were referred to dietetic services for nutrition support. Outcomes were measured at 0, 6 and 9 months.

Results: After adjustment for baseline demographic differences there were three times the dietetic referrals in the intervention group. A significant improvement in dialysis specific quality of life was achieved in those allocated to the intervention group (p=0.009), however there were no statistically or clinically significant improvements in nutritional status, biochemical parameters, morbidity or mortality.

Conclusions: Nurse-performed nutritional screening can increase dietetic referrals and may improve health related quality of life. Findings from this study, including effect size and variability, will be used to inform a larger national multi-centre trial.

Transforming the Dialysis Environment! : 32

Ms Bronwyn Allan
Robina Dialysis Unit

A person with chronic kidney disease not only has to accommodate dietary and fluid restrictions but also change their daily activities to accommodate dialysis. Dialysis is complex, long term and can have negative effects on the person's lifestyle. The time consuming treatment of dialysis can lead to feelings of resentment, boredom, anger and in some cases depression. How can we as nurses make dialysis a more positive experience and fun? We realize that you cannot change the treatment of dialysis but we can change the environment! Every month the unit is transformed by having a theme, whether it is for a day or a week. It started off small with one driver and over the years more people have become motivated and involved from staff, patients and relatives. The theme days have included Australia day which not only involved the visual decorations, the staff and patients in their green and gold, lamingtons but also damper and sausages being cooked on the barbeque! Another example is Queen's birthday, with everyone coming to dialysis in their tiaras, pearls, jewels and a fancy dress from the op shop. Other themes include Christmas, Halloween, Falls prevention Week, Easter, Hawaiian, Melbourne cup and St Patricks day. The theme days have improved moral in both patients and staff with positive feedback and encouraging comments. The patients enthusiastic involvement proves that the theme days are having a motivating and energizing effect on their psychosocial well being. Coming to dialysis can be fun with the right environment!

Sugar or salt? The use of 5% Dextrose in adult non-diabetic Haemodialysis population: 33

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Background: There is lack of evidence in assisting renal clinicians in determining the optimal strategy for preventing the need for rapid ultrafiltration during haemodialysis therapy.

Aim: This study aims to compare the effectiveness of using 5% Dextrose for priming, reinfusion and treatment of intravascular volume depletion symptoms against 0.9% normal saline amongst adult, non-diabetic patients receiving haemodialysis.

Methodology: This is a multicentre, prospective, cross-over interventional study conducted over a 9 month period. Participants used 0.9% Normal Saline for priming, reinfusion and treatment of intravascular volume depletion symptoms during haemodialysis therapy for the first 3 months. Participants then crossed-over using 5% Dextrose for the following 6 months.

Results: A total of 38 participants were recruited with 30 participants completing the study. Analysis of the data showed no difference in the interdialytic weight gain from the baseline to subsequent visits. Comparison of interdialytic weight gain from week 12 to week 13, 14, 15, 16 and 20 was found to be significantly reduced. Chi squared test showed a significant difference from baseline and week 12 visit compared to subsequent study visits with the incidence of cramping during dialysis ($p=0.000$). However, pre-dialysis blood pressure and blood sugar levels were found to be elevated in subjects following conversion.

Conclusion: This study showed that the use of 5% Dextrose reduced interdialytic weight gain and the incidence of cramping during haemodialysis following conversion from 0.9% normal saline. A limitation of the study is the small sample size and the non-randomisation of the intervention.

Case Study: Effective communication between Haemodialysis and Peritoneal Dialysis facilitated the succesful delivery of a healthy baby girl: 34

Ms Helen Roach
Princess Alexandra Hospital
Ms Helen Roach
Princess Alexandra Hospital,
Brisbane, Australia
Mrs Pauline Dennis
Princess Alexandra Hospital,
Brisbane, Austalia

Treating pregnant women who are undergoing renal replacement therapies is uncommon, even in a major metropolitan hospital. It is vital for both mother and baby to maintain optimal health in order to prevent pre-term labour and a low birth weight which is a risk for these patients.

The modality of choice for "Margaret" was peritoneal dialysis. However, it was foreseen that during the later stages of gestation the growing baby would present physical difficulties using this modality, and planning ahead to create a fistula for haemodialysis as an adjunct to peritoneal dialysis would ensure the safety of both mother and baby.

This case study highlights the coordination of care required to facilitate the patient's choice of modality with the aid of haemodialysis when it was deemed necessary.

The staff treating Margaret had to explore new territory being unfamiliar with pregnancy and dialysis. The challenges included: adjusting ideal weight, treating anaemia, avoiding hypotension and treating hypertension.

Margaret had an emergency caesarean at 37 weeks abruptly stopping peritoneal dialysis temporarily. Margaret continued with haemodialysis until her return to peritoneal dialysis.

Having Margaret as a patient was a rewarding, yet challenging experience. The joy of seeing a newborn in the units whilst her mother was dialysing was truly inspiring. As nurses competed for the privilege of cuddling the baby, it was interesting to observe the sense of hope and happiness in a chronic disease environment. Margaret's care highlights the importance of effective communication and coordination between multidisciplinary teams.

Overcoming the taboo topic: Palliative Care: 35

Ms Vicky Smith
Ballarat Hospice Care Incorporated

Background

In 2009, awareness was raised around poor outcomes for patients with end stage renal disease (ESRD) requiring end of life care in regional Victoria.

Objectives:

- To improve outcomes for patients with ESRD at end of life and their families/carers.
- To improve collaboration with renal and palliative care providers
- To integrate palliative care early in the disease trajectory on a needs basis, including advanced care planning.

Methods:

- A palliative care provider applied and secured initial funding for a project
- A preliminary literature search was undertaken on the link between quality of life and patients with ESRD.
- Palliative care and dialysis began collaborating and formed a working group.
- Networked with key players locally, state wide, nationally and internationally.

Outcomes:

- Developed an implementation plan to integrate the palliative care approach across, pre-dialysis, dialysis, post dialysis and end of life care.
- A pilot referral pathway was developed on a needs basis at any stage of the ESRD trajectory.
- Cross speciality training and improved relationships between renal and palliative care providers
- Implemented a pilot study on quality of life tools for identifying patients needs for palliative care.
- Implemented a shared care model resulting in regular multidisciplinary meetings
- High satisfaction for patients and families.

Future Recommendations:

- To imbed a collaborative approach to clinical care through the implementation of a clinical pathway - *Integrating Renal and Palliative Care*.
- Ensuring a sustainable system supported by research focusing on quality of life tools for people undergoing haemodialysis.
- Continue cross training and education for renal/palliative care.

Establishment and outcomes of a Renal Quality Improvement Coordinator: 36

Ms Mikki Smyth
Canberra Hospital

Background: During 2007 and 2008 the renal executive of a metropolitan hospital identified the need to improve quality coordination within the service. Funding was secured for two years to employ a 0.5FTE position which commenced in November 2008.

Aims: Coordination was essential to implement the following:

- Development of service-wide auditing and Clinical Performance Indicators (CPI) to monitor practice and outcomes
- Undertake, participate and support quality improvement activities and projects
- Develop and deliver a quality improvement education program.

Methods: The Coordinator worked with governance groups within the service to establish:

- Acceptable CPI
- Audit
- Target levels
- Education needs
- Data requirements

Results:

- Development of 30 CPI across the Renal Service in alignment with Health Department requirements
- Provision of quality improvement in-service and workshops
- Routine transparent reporting and presentation of all clinical performance indicators to renal executive, renal advisory group and renal governance areas
- Submission of Quality Improvement Reports of all projects and activities undertaken to the Hospital Executive
- Submission of 7 projects to the annual State Quality Health Awards, winning one category in 2009 and winning two categories in 2010
- Identified two major projects for implementation in 2011 from CPI measurements

Conclusion: The development of the role has demonstrated a significant improvement in the renal service's ability to measure its performance and to encourage a quality improvement focus to the services. The executive is working to secure permanent funding for the position.

A Probiotic Solution to VRE Management: 37

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Ms Jenifer Lawrence
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Sydney

Background: The increasing prevalence of Vancomycin Resistant Enterococcus (VRE) in hospitals is a problem facing dialysis units with limited isolation facilities. With only one isolation room, this issue was particularly challenging for our dialysis unit in a busy metropolitan hospital. To investigate possible solutions, a literature search was conducted. This revealed a study by another metropolitan hospital that had used *Lactobacillus rhamnosus* (LGG), in the form of commercially available yoghurt to treat VRE.

Objectives: Based on the information obtained from the 2005 study, our objective was to replicate this trial in order to treat patients who tested positive to VRE, thereby reducing the pressure on our isolation facilities.

Method: Beginning in 2007, all dialysis patients in our Renal Unit, pending certain criteria, who tested positive for VRE were commenced on 100g of Vaalia™ yoghurt per day for 8 weeks. The patients were then re tested after the 8 week period and monthly for 3 months. If the VRE swab was negative after these 3 months, the patient was then considered VRE negative and integrated back into the main unit.

Conclusion: The successful implementation of this study has enabled us to have a treatment option for patients who test positive for VRE whilst also relieving the pressure on our isolation facilities. The use of Vaalia™ yoghurt to treat VRE has now been implemented hospital wide.

Renal Access: The Territory Way: 38

Mrs Karolynn Maurice
Northern Territory Renal Services

Renal access is often referred as the Achilles heel for patients receiving renal replacement therapy. Responsibilities for access creation and clinical pathways can be more confusing and complex than the processes that deliver renal replacement therapy. This presentation demonstrates how renal services in a Northern Territory hospital took control of renal access by funding a weekly theatre list so that renal access trained surgeons can facilitate the creation of renal access in a timely and planned manner. This process is co-ordinated by a dedicated renal access nurse (RAN).

The establishment of a renal access clinic that is run and organised by the RAN has provided a pathway for patients experiencing access problems (haemodialysis/peritoneal), for monitoring new patients and mapping veins for CKD patients. The RAN works with dialysis staff and the CKD nurse to identify patients requiring access intervention or creation. The RAN arranges patients to be reviewed at the renal access clinic where surgeons are available to assess and map veins using Doppler ultrasound. The patients can be educated and consented for any procedure while at the clinic. The RAN is a key player in organising theatre lists after determining patient priorities in consultation with Nephrologists and surgeons.

Since the introduction of the access clinic and the dedicated RAN position the renal service has a consistently low CVC rate (7%) and prevalent AVF rate of 93%. The renal service through the RAN has ownership and control of renal access for patients.

The Experience of Initiating Haemodialysis for Patients and their Carers: 39

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Concord Repatriation General Hospital
Ms Sue Monaro
Vascular CNC, CRGH
Ms Karina So
Continence Adviser, CRGH
Ms Mary Dunleavy
CNS, CRGH
Ms Janice Gullick
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Background: Embarking on dialysis can be both stressful and confusing for the renal patient. It is a time of transition, where there is the expectation that patients and their families will adjust to new and challenging therapies. Acquiring a clearer picture of this process has the potential to significantly enhance and enrich both patient care and outcomes.

Aim: The aim is to gain an understanding of the experience of commencing haemodialysis for patients and their close family members.

Method: Semi-structured interviews were conducted face-to-face or via telephone. Interviews were audio-taped and transcribed verbatim. The data were analysed using both the Picker Dimensions of Experience and Hermeneutic Phenomenology. Combining these qualitative methods facilitates an exploration of clinical care and services, and an understanding of the meanings of illness and therapies that have a significant impact on family life.

Results: Preliminary findings suggest that the commencement of haemodialysis causes enormous disruption to the lives of both patients and close family members and challenges family dynamics. The frequency of complications associated with vascular access featured strongly in these findings. The transition from hospital to home therapy creates anxiety and requires careful planning, support and education for patients and family members alike.

Conclusion: This approach to interpretation acknowledges the broader context of illness experience and goes beyond the physical, hospital environment. The findings inform a collaborative understanding of the haemodialysis experience and provide renal and vascular clinicians opportunities to identify situations that have the greatest meaning for people initiating renal replacement therapy.

Challenges faced by young renal patient to cease treatment: 40

Ms Patrice Latcham
Queensland Health
Mrs Deborah Harper
Toowoomba Hospital

A case study of a 38yr old male with bi-polar and ESRD who had been on dialysis for eight years, whom chose to cease treatment to enable him to have a dignified death surrounded by family.

Objectives:

- to highlight the difficulties faced by this patient in making his decision known to medical staff, nursing staff, family and friends
- the process by which he had to follow before being able to have a successful outcome
- how to liaise with relevant facilities eg Palliative care services/ hospice

Key messages:

- patient autonomy, the right to make informed choices
- mental health and the renal patient
- palliative care in the renal setting

The conclusion will be to show that a dignified death for this patient was the outcome and that supported by his family and the renal staff the patient was given the right to be autonomous and to die in peace surrounded by his loved ones in a setting of his choice.

Being a parent on dialysis: A qualitative study: 41

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A/Prof Paul Bennett
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Flinders University, South Australia

Background: The demands of parenting can exhaust those who are healthy. Illness and fatigue may decrease the parent's capacity to physically and emotionally care for their children. Parents on haemodialysis suffer many symptoms and are time poor which may affect their parenting role.

Aim: To describe the experience of parents who are receiving haemodialysis.

Methods: Thematic analysis using semi-structured interviews with four people on haemodialysis who are also parents. These themes represented patterned responses of the four participants who were interviewed.

Results: The major themes discovered were 'fitting everything in', 'not socialising', 'no breaks', 'caring for family', 'caring for self', 'maintaining relationships' and 'being normal'.

Conclusions: Clinical practice implications include the need for nurses to acknowledge the challenge parents face on dialysis, asking parents how their children are, involving schools where appropriate and the need for extra support services, particularly for those parents on home dialysis. Education recommendations include developing education packages for children of parents on dialysis. Understanding and acknowledgement by nurses, nephrologists and managers of the extra burdens and challenges parents on dialysis face can assist with treatment allocation, support service referral and improved patient care.

The benefits and opportunities of after hours support for home dialysis patients: 42

Mrs Jo-Anne Moodie
North West Dialysis Service

In 2009, in consultation with staff and patients, an after hours telephone support service was initiated for our home dialysis population which includes both nocturnal haemodialysis and peritoneal dialysis. This discussion will focus on some of the benefits and opportunities that have arisen with its implementation.

The telephone support service operates between 4pm and midnight weekdays and 9am to midnight weekends and public holidays.

Of the 79 calls received in the first 3 months 28 calls were about haemodialysis (HD) machine problems. This identification enabled focussed criteria for home visits and further training opportunities for patients. 58 calls were received in the following quarter. 14 of these were HD machine related. As staff troubleshoot machine issues over the phone, technical support referrals number 7 since the introduction of the service, and only 3 patients have needed in centre dialysis treatment due to machine malfunction. Given the design of the service, staff burnout is minimised and no absenteeism due to timing or volume of calls has been observed.

The after hours support service has been well utilised by the home dialysis population. Through it greater concentration during training and home visits on troubleshooting has been included, and this can reduce the workload of machine technicians and the requirement of dialysis in centre. Staff well being is catered for with the design of the service, while increasing the level of support for patients dialysing in the home.

The HOME Network: Overcoming barriers to home haemodialysis and peritoneal dialysis: 43

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Context: Longer, more frequent dialysis at home can improve life expectancy for chronic kidney disease patients. Increased use of home dialysis therapies also benefits the hospital system, allowing for more efficient allocation of clinic resources. However, ANZDATA statistics highlight the low uptake of home haemodialysis and peritoneal dialysis across Australia.

Objective: In August 2009, a group of nurses convened the HOME Network, a national initiative for Australian home dialysis nurses to consider ways to overcome poor perception and low uptake of home dialysis therapies in Australia.

Key messages: The HOME Network identified five barriers impacting on use of home dialysis therapies.

1. Nursing staff expertise, education and training
2. Early patient education about home dialysis therapies, and access to assessment, support and counselling
3. Lack of medical advocacy for home dialysis therapies
4. Financial burden experienced by patients training for and/or commencing a home dialysis therapy
5. Set-up and ongoing costs for patients using home dialysis therapies.

Achievements to date include: a survey of HOME Network members to assess the current state of patient and healthcare professional-targeted education resources; development of two patient case studies; and activities addressing how to overcome the financial burden experienced by home dialysis patients. Future projects aim to improve patient and healthcare professional education, and advocacy for home dialysis therapies.

Conclusion: The HOME Network is supporting home dialysis nurses to develop solutions and tools that will help to facilitate greater utilisation of home dialysis therapies.

Quality of life and symptom management in end stage renal disease: 44

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Calvary Hospital Kogarah
Dr Shelley Tranter
St George Hospital
Prof Mark Brown
St George Hospital

Context: Over the last decade there has been a steady increase in the age of patients starting dialysis. Many patients who start dialysis have two or more co-morbidities which ultimately impact on mortality and morbidity. As these patients remain on dialysis and continue to age these problems may progress to the point where the patient is deteriorating despite dialysis.

Objectives: To report the quality of life and symptom burden of end stage renal disease patients both with and without dialysis. To implement a strategy to manage patients who choose a conservative pathway and those on dialysis with a significant symptom burden.

Key Messages: Quality of life results for our dialysis patients reveal that scores are well below those for aged matched Australian norms. Quality of life is resistant to change despite improvements in dialysis technology and quality assurance programs to improve patient care. End stage renal failure patients often contend with many and varied symptoms which may contribute to their overall quality of life such as osteoarthritis pain, peripheral neuropathy, sleep disturbance and decreasing mobility

Conclusion: There is a growing need in renal medicine to provide care above and beyond the general scope of renal practice. Renal dialysis patients often have more than one co-morbid condition which contributes significantly to their overall health and wellbeing. It is anticipated that the introduction of a renal supportive care clinic will address a previously unmet need for expert symptom management and to improve the care of conservatively managed patients.

High dose Heparin locking of Haemodialysis Catheters: An evidence based approach to practice change in a Metropolitan Renal Department: 45

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High dose heparin (5000 units/ml) is commonly used to lock Haemodialysis Catheters (HDC). In Oct 2010, clinical incident reporting flagged an increase in accidental administration of high dose heparin in our renal unit. A review of our practice, guidelines and education resulted in a recommendation by the Renal Clinical Practice Improvement (CPI) Committee to review current HDC locking practice.

Aims: To minimise complications associated with accidental IV instillation of high dose heparin.

Methods:

- A literature review explored HDC locking solutions
- Australian and NZ units were surveyed on current practice and locking solutions
- Causes of catheter loss reviewed

Results:

- Evidence available noted a lower concentration heparin lock was not associated with an increased risk of catheter malfunction but may be associated with greater alteplase use.
- 18 of 19 units surveyed reported using heparin 5000u/ml
- Thrombosis found to be uncommon cause for catheter loss

Following review of results by CPI Committee:

- January 2010, based on available evidence and in the interests of patient safety, strength of heparin lock changed from 5000u/ml to 1000u/ml
- Workplace guideline updated
- Communication to all relevant stakeholders on the practice change and warning notice displayed in key areas
- High dose heparin removed from all renal units
- HDC dysfunction monitoring process commenced post change

Conclusion: No catheters lost to thrombosis since practice change.

It is important to question even the most ingrained of practices to ensure that there is not a safer alternative.

Vascular Access Surveillance Audit: 46

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Our large free standing satellite Dialysis Centre performs 3 monthly recirculation studies on 96 patients. These recirculation studies have been performed for 11 years. Accesses with a recirculation of 100% or more are reported to the access nurse for follow up. 100% of accesses reported had a stenosis.

At a staff meeting, it was noted that certain patients had accesses that were difficult to cannulate, and that these accesses did not have high recirculation studies. It was difficult to calculate the number of recannulations performed in the centre without reviewing all the dialysis records. The recannulations were recorded in patient notes by different nurse at different times. Two questions were raised: "How many recannulations were being performed each month and on which patients? And Secondly, were there vascular problems with these accesses?" A survey tool was developed to record individual patients requiring recannulation, the number of recannulations performed, and the reason for recannulation.

This data was collected, collated and analysed monthly from March 2007- December 2010. 86% of recannulations were from the same 12 patients, all of these patients on follow-up were found to have a stenosis. 10% of recannulations were from patients with newly created vascular access.

In conclusion, recording recannulations monthly identifies difficult accesses and ensures rapid referral to the vascular access team. This tool is valuable in identifying vascular access problems not identified by recirculation audits.

Heed the Herald Bleed: An ominous warning for potential Vascular Access Rupture: 47

Ms Pauline Byrne
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Context: According to the Encarta Dictionary, one definition assigned to the word 'herald', is: '...an indication of something that is going to happen'. In relation to both arteriovenous fistulae (AVF) and grafts utilised as vascular access for haemodialysis, a herald bleed refers to either a small or large spontaneous haemorrhage from a patient's access. Tragically, patients have lost their lives when a herald bleed has been the presage to vascular access rupture.

Objectives: The objectives of this paper are to: describe one units experience and outline the current procedure and policy guidelines in identifying and management of patients at risk of rupture, or who have experienced a 'herald bleed'.

Key messages: Whilst there is a myriad of education published revolving around vascular access care guidelines and treatment of complications, it is often only viewed by the professional renal community. The situation of a patient presenting to Accident and Emergency with a fairly innocuous dribbling of blood from their fistulae, may not present the attending resident with the same alarm bells as it may the renal physician or vascular surgeon. Education is therefore required for any stakeholders caring for a patient with vascular access insitu.

Conclusion: The 'herald bleed' may be the presage to vascular access rupture, and loss of life. Minimising this possibility requires education in identifying vascular access at risk of rupture, along with dissemination of guidelines in management for all stakeholders caring for and including the patient.

Reducing post operative Peritoneal Dialysis Catheter exit site infections by implementing a standardised post operative dressing protocol: 48

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Introduction: Early post-operative exit site infection, (infection within 3 weeks of placement) of peritoneal dialysis catheters may lead to peritonitis or catheter loss. A retrospective review of exit site infections (ESI) in our unit for 2009 revealed a high level (29%) of ESI in the first 3 weeks post catheter insertion. Our unit had no standard protocol for catheter exit site dressings in the post insertion period.

Aim: We aimed to introduce a standardised dressing protocol which would follow recommendations of Best Practice Guidelines.

Method: A multidisciplinary team of PD nurses, nephrologists and surgeons reviewed current unit practices, literature and practices from other units. A standardised dressing protocol was developed using available products and implemented in February 2010.

Results: In the 12 months following the introduction of the dressing protocol there were 4 (11%) exit site infections in the post-operative period. These infections occurred in the first 6 months of 2010 and 2 resulted after dressing protocol deviation.

Conclusion: Implementation of a standardised perioperative dressing protocol reduces rates of post-operative ESI.

Exploring New Territory: A Peritoneal Dialysis Service striving to make innovative changes: 49

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and Transplantation Service

Context: Renal health care services within South Australia have been exploring new territory, making way for the establishment of a newly reformed renal health care service. The Peritoneal Dialysis service is one area that has embraced this reformed with the establishment of a new Peritoneal Dialysis service, striving to make innovative changes.

Objectives: As part of this reform the Peritoneal Dialysis service explored and developed a model of care to correspond with our unique / specialised service. One aspects of our model of care was the establishment of a specialised / advanced nursing role within our Peritoneal Dialysis service focusing on:

- inpatient management
- reducing average length of admission
- multi-disciplinary discharge planning
- early discharge with specialised follow up and outpatient management
- management of high acuity patients with multiple co-morbid medical conditions
- hospital avoidance
- reduce patient waiting times within the emergency department
- peritonitis management / treatment
- increasing patient numbers on peritoneal dialysis.

Key messages: With reform and change there are challenges to overcome and address. We developed strategies and tools to address the challenges we where faced with along the way, for example the establishment a training programme to train key nursing staff members as peritoneal dialysis champions.

Conclusion: We know we are still in the early stages of change but are focused and driven to move our Peritoneal Dialysis service and patient care delivery forward and explore new territories.

Is there a relationship between Peritoneal Dialysis, urine output, clearance and haematological targets?: 50

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Background: Compared to haemodialysis, peritoneal dialysis preserves urine output, and improves clearance. We hypothesise that this improved clearance would result in achieving adequate haemoglobin levels. The aim of this analysis was to find out whether there is a relationship between residual urine output and meeting CARI haematological targets in peritoneal dialysis patients.

Method: Data from peritoneal dialysis patients were extracted from the Renal Anaemia Management database from 1 October 2009 to 30 September 2010. The Renal Anaemia Management database is a database that collects information on the outcomes of patients with chronic kidney disease at 20 centres in Australia. Data on haemoglobin, ferritin and transferrin saturation were categorised as below, within or above CARI guideline targets.

Results: There were 1,389 peritoneal dialysis patients, of which 192 had data available. Their average age was 61±16 years, 8% were of ATSI heritage, and 57% were male. The most frequent primary diagnosis was diabetes type 2 (24%). The majority of patients were receiving ESA (79%). Dialysis was considered adequate (i.e. Kt/V >1.6) in 89%. The mean±SD urine output (mL/24 hours) was 614±432, 890±821 and 1281±1297 for those below, within and above CARI haemoglobin targets (p=0.24); 1329±1008, 791±913 and 710±449 for those below, within and above CARI ferritin targets (p=0.28); and 903±917 and 798±451 for those below and within CARI transferrin saturation targets respectively (p=0.15).

Conclusion: We found no relationship between urine output and meeting CARI haematological targets in peritoneal dialysis patients.

Health Infrastructure: Planning and Commissioning of Dialysis Units in the 21st Century: 51

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Context: Renovations, alterations and upgrades usually result in potentially disruptive construction work. Such work requires capital funding that is often not easily obtained in a public health system.

Objectives: This paper describes the journey towards commissioning purposely built dialysis units as part of a new hospital redevelopment project including the following stages: developing the solution design and architecture; validating the technology; develop the project plans and schedules; setting up the development and test environments; key milestones; decanting and commissioning.

Key Messages:

- Clinicians are unlikely to be involved in such a large scale process more than once in their career so there is a steep learning curve involved.
- The importance of communication cannot be overstated and all involved need to be open-minded and flexible.
- Maintaining a focus on patient care objectives and how to maintain and improve upon our current level of service often helps identify potential issues.
- Constructing a building requires certainty and decision making locked in as early as possible to minimise increased costs and budget blowouts.
- There has to be strong and unwavering organisational commitment to flexibility initiatives especially when faced with other competing project needs.

Conclusions: Having state-of-art dialysis units is a positive outcome to a long, sometimes arduous journey. Combining clinical requirements and organisational demands with the non-clinical staff who are experts in Capital Work provides a planning situation that often, historically, has been fraught with difficulty. An advanced level of communication and consultation skills is tantamount to a successful outcome.

Are haemoglobin, TSats and ferritin levels adequate at start of dialysis: 52

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Background: Improvement of anaemia prior to dialysis may be associated with improved survival in the first year after start of dialysis. The aim of this study was to determine whether patients are achieving haemoglobin, ferritin and transferrin saturation targets at dialysis commencement.

Method: Data from peritoneal dialysis and haemodialysis patients were extracted from the RAM database between November 1999 and September 2010. The RAM database is a database that collects information on the outcomes of patients with chronic kidney disease at 20 centres in Australia. Demographic, erythropoietin stimulating agent treatment, and iron treatment data were extracted. We used CARI haematological targets to categorise haemoglobin, ferritin and transferrin saturation levels into below, within or above CARI target.

Results: Data were extracted for 16,676 patients. Their mean age was 60±16 years, 11% were ATSI and 60% were male. The most common primary diagnosis was type 2 diabetes (23%). At the commencement of dialysis, 43% of patients were within target for haemoglobin, 38% were in targets for ferritin, but only 18% were within target for transferrin saturation. The proportion of patients below, within or above CARI targets differed according to ATSI status for haemoglobin ($p<0.01$) and ferritin ($p<0.001$). A greater proportion of ATSI patients fell below haemoglobin targets, and above ferritin targets. There was not difference in the proportions in each transferrin saturation category.

Conclusion: At the commencement of dialysis, about two-fifths of patients are achieving CARI targets for haemoglobin and ferritin, but only one-fifth are achieving transferrin saturation targets.

Improving vascular access surgery processes: 53

Mrs Maree Ross-Smith
Austin Health
Ms Dianne Pierce
Austin Health

In 2006, the newly created role of the renal vascular access co-ordinator was appointed and implemented. This role was created to improve quality of patient care related to the management of vascular access for renal patients and improve long-term outcomes for patients with end-stage renal disease.

In relation to the renal access elective surgery process, it was an acknowledged circumstance for non-attendance at pre-surgical clinic appointments along with cancellation of elective access surgery due to lack of bed availability. This, along with other factors, meant that the waiting list was long, and that some renal patients did not have a functioning permanent access when they were required to commence haemodialysis.

The project aims were:

- To ensure timely vascular access surgery
- To reduce surgical waiting time for high priority patients
- To reduce number of patients commencing haemodialysis with a temporary vascular access device
- To identify alternative opportunities for bed access

Methodology:

- Review processes
- Establishment of priority guidelines
- Establishment of open communication channels
- Identification of alternative post-op admission opportunities
- Formalised monthly patient review meeting to discuss priority
- Prioritised outpatients appointments

Results:

- Establishment of open communication channels
- Overall reduction in Category 1 patients on the waiting list
- Increased use of Category 2 patients
- Reduction in cancellations due to improved bed availability

Improved outcomes achieved through review of processes, establishment of new open communication channels, and ongoing re-evaluation.

Peritoneal Dialysis: One unit's response to improving outcome and technique survival: 54

Mrs Leanne Evans
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Home therapies, including peritoneal dialysis, empower self-management and enhance improved outcomes. Renal clinicians need to be promoting and encouraging home therapies, while providing the best possible education and support to ensure compliance and maintenance of modality of choice. Patients should be set up to succeed, with proactive management and ongoing individualised education from clinicians.

A small peritoneal dialysis unit in Tasmania recognized the need for a positive response to recent research which highlights poor technique survival time in Australia and New Zealand. The unit aims to enhance peritoneal dialysis outcomes through implementation of strategic changes as recommended by the authors.

These changes included: revision of peritoneal dialysis protocols, discussions with microbiologists to reduce incidence of culture negative peritonitis, improved communication between peritoneal dialysis nurses and "on-call" nurses, networking with other Tasmanian Renal Units, and the development of "Management of Care" pathways. The adoption of improved data collection methods and tracking of peritonitis rates further enhances outcomes by aiding the establishment of the root cause of infection, which in turn improves outcomes, by reducing the risk of repeat episodes, through focused education and prevention methods.

Proactive management and ongoing individualised education, together with implemented changes as described, will result in better individual compliance, with increased support and therefore improved peritoneal dialysis outcomes and technique survival time.

The tsunami of dialysis: Our experience: 55

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Background: Complex renal services were moved from one of SA's metropolitan hospitals to another to form an integrated service creating Australia's second largest renal service, as part of the SA Health Care Plan

Model of Care

The 'hub' of the service

- Acute Dialysis – inpatients and outpatients
- 25 bed Renal Transplant Ward
- A 6 bed Renal Day Centre
- An inpatient Peritoneal Dialysis Service
- Renal support services such as transplant coordinators

'Spoke' service

- A Chronic Dialysis service
- 6 Renal beds
- The Home Dialysis Training Unit
- Peritoneal Dialysis Training Service

Three public Satellite Dialysis Units complete the service with close links with three private dialysis units and ten country units, all of which are medically supported.

Methods: All admissions and new dialysis starts commenced at the 'hub'. New treatments were introduced such as plasmfiltration.

On average 30 dialysis patients are inpatients every week with flow of patient movement coordinated from the 'hub'.

Results: The most unexpected increases in workload were in dialysis at the 'hub'. In the first year treatment numbers increased 25% from 6995 treatments to 9394 treatments, with the biggest increase in inpatient treatments of 2320 treatments compared to 1000 treatments the previous year. This increase also impacted on all the satellite units with a number of protocols introduced to manage the workload.

Benefits: We have greater expertise and flexibility of staff with resources managed efficiently.

Future plans include nocturnal dialysis and development of a Nurse practitioner role.

Falls Risk Assessment in Satellite Dialysis Population: 56

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 Falls Prevention Team
 Mr Leo Breugelmans
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 A/Prof Paul Bennett
 Deakin University-Southern Health
 (Melbourne) Nursing Research
 Centre
 Mr Danwin Chan
 Centre of Physical Aging and Activity
 Ms Desiree Parkhurst
 Wayville Dialysis Unit

Background: People receiving haemodialysis have a greater risk of falling than the age equivalent general population.

Aim: To determine the prevalence of falls risk in two South Australian satellite dialysis units.

The secondary aim was to determine the difference between pre and post dialysis falls risk scores.

Methods: 91 satellite dialysis patients in two satellite metropolitan dialysis units in South Australia, were assessed immediately pre and post dialysis on the same day using the Physiological Profile Assessment (PPA). The PPA involves the testing of vision, peripheral sensation, muscle force, reaction time, and postural sway. The tests are administered over 15 minutes using portable equipment. Falls risk is calculated using a validated computer program assisted scoring system.

Results : Preliminary data confirms the high prevalence of falls risk in people receiving haemodialysis in satellite dialysis units. This group perform below average in PPA test components compared to the age and gender equivalent general population. Same day pre and post dialysis falls risk scores did not significantly change.

Conclusions : PPA is a practical method of differentiating dialysis patients at risk for falls from those who are not at risk for falls. Identifying at risk patients can assist exercise physiologists, physiotherapists, occupational therapists, dialysis nursing staff and other health professionals to provide falls prevention interventions to prevent falls in the high risk groups.

Chronic kidney disease in Queensland: Evolution of a research platform: 57

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 The University of Queensland, Royal
 Brisbane & Women's Hospital,
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 T Lewis
 The University of Queensland

Introduction and Aim: Chronic Kidney Disease (CKD) is a leading cause of morbidity and mortality in Australia, however definitions, staging and predictions of disease progression are imperfect. Varying models of CKD service delivery are evolving but are not as yet rigorously evaluated.

A practice network, registry and research platform for CKD was established in September 2009. The aim of this first phase study was to profile CKD practice structure and activity in Queensland Health public CKD clinics.

Methods: We performed a cross-sectional profile of CKD activity in all public renal practice settings in Queensland, conducted between December 2009 and January 2010. A survey was completed by researchers along with renal clinicians during site visits at all Queensland Health community CKD clinics and hospital renal clinics.

Results: Sixteen separate public renal practices were surveyed, with 10,469 CKD patients identified. Models of CKD care varied from nurse-practitioner led multidisciplinary community clinics to hospital based renal clinics.

Conclusion: CKD is a common disease and many patients are managed within Queensland Renal Clinics within a broad range of CKD stages and Models of Care. Our research platform is evolving, incorporating detailed review of services, establishment of a database and registry, and sampling of CKD patients in other practice settings.

Chronic Kidney Disease Management Study: 58

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Background: CKD is a common clinical syndrome characterised by hypertension, proteinuria and progressive loss of renal function. This population is increasing in numbers, morbidity and mortality and impacts upon already stretched hospital based resources and nephrologists.

Aims: To determine whether General Practitioners (GP), with the support from an experienced chronic kidney disease (CKD) nurse can effectively manage patients with stage 3 and 4 chronic renal failure.

Methods: This 2 year non-inferiority 1 sided pilot study of CKD subjects. Eligible subjects were selected from existing nephrology clinics and randomised into either a group that continued to see a consultant nephrologist or a group that were then followed by the GP and CKD coordinator.

Key performance indicators included targets for haemoglobin, blood pressure (BP) and modifiable lifestyle risk factors of obesity and smoking. Measurable outcomes included renal function, cardiovascular events, recognised usage of reno-protective medication and hospitalisations.

Results: Statistically, there was no difference in cardiovascular events or in renal disease progression between the two groups. Progression of renal disease however, outweighed both deaths and cardiovascular events.

The GP group showed greater uptake of aspirin use together with Angiotensin Converting Enzyme (ACE) or Angiotensin 2 Receptor Blocker (ARB) use. The GP group achieved better BP control.

80% of GP's agreed support of the CKD Coordinator contributed to effective management of CKD patients. 81% of patients in GP group felt the CKD coordinator contributed to an increased understanding of CKD.

Conclusion: GP's with the support of an experienced renal nurse can just as effectively manage uncomplicated stage 3 and 4 CKD patients as nephrologists, with referral for late stage disease or complications.

Chronic kidney disease in Aboriginal and Torres Strait Islander people: 59

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Australian Institute of
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Mrs Frances Green

Background: Chronic kidney disease (CKD) is a serious and increasingly common health problem in Australia. As with some other chronic diseases, Indigenous Australians are at a greater risk of developing CKD than other Australians.

Aim: To provide a detailed analysis of CKD in the Indigenous Australian community.

Methods: National data sources were analysed to assess the extent and impact of CKD among Indigenous Australians including prevalence, risk factors, health service use, contribution to mortality and expenditure. Age-standardisation and linear regression were used to assess differences between population groups and over time.

Results: Over the period 2007–2008, the incidence of treated end-stage kidney disease (ESKD) among Indigenous Australians was 8 times as high as for non-Indigenous Australians. At the end of 2008, Indigenous Australians made up 7.4% of the 17,603 people receiving treatment for ESKD in Australia, despite making up only 2.5% of the Australian population.

Hospitalisation rates for CKD were also higher for Indigenous than other Australians— 11 times as high for regular dialysis, and 5 times as high where CKD was a principal or additional diagnosis in 2008–09.

Over the period 2003–2007, Indigenous Australians were nearly 4 times as likely to have CKD recorded on their death certificate as non-Indigenous Australians.

Compared to Indigenous Australians living in other areas, those in remote and very remote areas were more likely to have treated ESKD or be hospitalised with CKD.

Conclusions: CKD, and particularly ESKD, contributes significantly to the morbidity and mortality of Indigenous Australians.

Using e-learning to increase the preparedness and confidence of nurses to perform buttonhole cannulation: 60

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Mrs Monica Schoch
Deakin University
Mr Ian Blackman
Flinders University
Ms Kirsten Black
Royal Hobart Hospital

Introduction: Mounting evidence supports the efficacy of the buttonhole technique. However there is also evidence demonstrating an association with increased access-related infection and hospitalisation rates for septic events. Knowledge, expertise and skills are key factors in reducing access related morbidity and mortality.

Aim: To evaluate the impact of an interactive peer reviewed e-learning programme to increase the self-efficacy (estimates) in specialist nurses undertaking buttonhole cannulation.

Methods: A 15 item pre-test post-test design was utilised. 101 participants completed the study from ten units throughout Australia and New Zealand. Paired t-tests were used to determine if participants' self-ratings improved as a result of completing the learning programme.

Results: A significant improvement ($p < 0.05$) was noted across all 15 survey items. These included participants' self-rating of knowledge domains including ultrasound site selection and identification of fistulae abnormalities.

Discussion: These results demonstrate that the program and its interactive content assisted learners to approach patient assessment and management with more confidence. The e-learning programme enabled the development of staff assessment skills particularly in the areas of site selection; ultrasound imaging; establishment and maintenance of buttonhole tracks and initiating action in the event of complications.

Conclusion: Pre-exposure to buttonhole cannulation via an interactive e-learning programme increases the self efficacy estimates of staff to meet required knowledge and assessment related competencies. In addition, it improves the understanding and confidence of staff in the use of ultrasound technology. Future research should investigate whether increased confidence and knowledge contributes to improved patient outcomes.

Exploring New Territory: Education in Transformation: 61

Ms Yvonne White
Charles Darwin University

Context: The education of health care professionals has entered the 'cyberspace information' revolution, and post-graduate nursing is part of this revolution. The development of good pedagogical structure is vital for the E-Learning environment. It may not be appropriate to add the 'conventional' learning materials onto an E-Learning site because of the different interaction expectations of the E-learning student.

Experience gained from a post graduate renal program, delivered totally via E-learning, has provided insight into strategies which work well and those that do not work well to provide high quality learning experiences for the students.

Objectives:

- To discuss the learning issues for the different generations
- To critically review E-learning in the post-graduate nursing environment
- To provide some insights from an E-Learning post-graduate renal nursing program

Key messages:

- Educators need to develop new skills (i.e. become designers) to create real intellectual challenges to E-Learning students.
- Incorporate new technology appropriate to post-graduate nurse education
- Become comfortable communicating in a 'virtual' environment.

Conclusion: E-learning is now an accepted method for post-graduate nurse education. However it is very important to make the E-learning design interface end user friendly and appropriate for a diverse student body.

Exploring New Territory: Transforming renal education through e-learning, an evaluation study: 62

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University of Newcastle
Mr Peter Sinclair
University of Newcastle
Mrs Monica Schoch
Deakin University
Ms Kirsten Black
Royal Hobart Hospital

Introduction: The increasing number of people with CKD and the demand for renal replacement therapy means that all nurses regardless of practice context must achieve and maintain a minimum set of skills and knowledge in the renal field. e-learning offers a solution to the 'tyranny of distance' through access to education for individual nurses, regardless of shift pattern, role or geographical location. To date, there is little evidence measuring the utility of e-learning in the renal context.

Aim: To evaluate the utility of a peer reviewed e-learning program, determining its efficacy in the design and delivery of specialist nephrology nurse education. This will inform the instructional design of future e-learning programs and establish the value/credibility of this educational delivery mode within the renal context.

Method: 102 participants from ten units throughout Australia and New Zealand undertook the program and completed a post course 15 item likert style survey. Data were analysed using descriptive statistics to measure participants' experience of various aspects of the e-learning program.

Results: Content delivery by e-learning, was highly regarded by participants in terms of flexibility, interactivity and the ability to apply new knowledge to clinical practice. However, notable difficulties were experienced in regard to finding time to complete the program and access external links and readings from within.

Conclusion: The findings of this study provide insight into the utility of e-learning to improve knowledge and skills relating to specialist practice. This will inform the content and instructional design of future programs.

Finding flesh within the fluid: 63

Ms Kirsty Musgrave
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In 2008 the World Health Organisation (WHO) projected that globally 1.5 billion adults were overweight and of this group more than 200 million men and 300 million women were obese. In Australia in 2005 3.2 million Australian's were identified as obese and it is estimated that by 2025 the number of obese Australian will have doubled to approximately 7.2 million.

While ANZDATA does not report on the number of obese people commencing dialysis, it can be postulated that as diabetes is a recognised complication of obesity and the main cause of end stage renal failure requiring dialysis. The obesity epidemic is having a significant impact upon haemodialysis units.

The management of the obese patient provides a multitude of challenges for the haemodialysis staff, in particular the assessment of fluid status and the establishment of an ideal body weight. With an obese patient, establishing an ideal body weight is often a case of hit and miss. Take too little off and there is an increase risk of pulmonary odema and other complications associated with fluid overload, take too much off and dialysis becomes increasingly uncomfortable for the patient.

The use of BVM in the management of these patients has allowed the dialysis unit to establish obese patients IBW without associated complications. We aim to detail the pathway taken in the management of these patients through case studies and to demonstrate that the combination of BVM and clinical skills allows nursing staff to find the flesh within the fluid.

VRE - Inconsistencies in workplace practice: 64

Ms Rikki Thomas
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Aim: The care and management of Vancomycin Resistant Enterococci patients within a dialysis setting has an enormous impact on workforce and service demands. Interpretation of standards and guidelines has proven to vary greatly across many facilities when managing isolation cases. It was evident that a review of work practices across the state was necessary to enhance safe practices when dealing with this group.

Method: An electronic survey was distributed to all Renal Services across the state. The data collected included patient demographic, screening procedures, isolation facilities, cleaning protocols, workforce and compliance to state wide guidelines.

Results: Responses were received from twenty public hospitals. Results indicated that only 55% of facilities had isolation facilities that meet the recommended infection control requirements. At the time of survey there was a total of 73 positive VRE patients. All facilities indicated routine screening but there was a lack of consistency with the frequency and method of screening. Almost one third of facilities reported receiving positive patients on transfer without the notification of status. 65% of facilities treated positive patients for life while the remaining 35% relied on 3 x negative swabs six months after detection prior to clearing patients.

Conclusion: Results indicated that there was a lack of consistency in the guideline interpretation for the clinical management of this cohort of patient.

A working party has been formed to formalise and implement sustainable guidelines within a dialysis setting.

HDF in the home: An alternative dialysis therapy for long term dialysis patients: 65

Mr Rodney Brickle
Princess Alexandra Hospital

Haemodialysis in the home offers greater flexibility for the patient in relation to when dialysis occurs and the duration of dialysis. One of the advantages of home dialysis is the ability to do extended hours dialysis over night. If home patients are unable to tolerate dialysis overnight they were previously left with the option of doing long hours during the day, standard high flux dialysis or short daily dialysis. HDF dialysis can be considered as an alternative therapy for those unable to tolerate extended hours dialysis, but are faced with an extended period on dialysis without the prospect of transplantation. Before embarking on this mode of therapy in the home, it was important to first have in place measures to ensure patients would be as safe as those having HDF in dialysis centres. Water quality had to meet the ultrapure standard. Patients considered for the program had to demonstrate a history of meticulous personal and equipment hygiene standards. Dialysis equipment had to perform HDF with as much automation as possible, relieving the patient from calculating infusion volumes. Post dilution infusion was the preferred method providing greater small solute clearance than pre-dilution HDF.

To date six patients have been installed safely at home on HDF, utilising two different brands of dialysis machine, while being able to demonstrate adherence to the ultrapure water standard. This paper explores the experience of one home dialysis unit in achieving a HDF dialysis program in the home.

Extending nursing scope of practice to remove Tunnelled Cuffed Haemodialysis Catheters: One Renal Department's journey: 66

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Gold Coast Health Service District
Mr Matthew Lunn

Background: Tunnelled Cuffed Haemodialysis Catheter (TCHC) removal was historically performed by trained doctors at our Health Service District. In Feb 2010, it was identified that timely routine removal was delayed by a lack of availability of trained staff.

Aims: To reduce delays in TCHC removal and minimise risk of Catheter Related Blood Stream Infection by extending the scope of nursing practice of the Renal Access Nurse (RAN) to include TCHC removal. Furthermore it would release time to care for medical staff.

Methods:

- Survey of 44 Australian and New Zealand RAN's. Three RAN's were currently practicing TCHC removal.
- Queensland Nursing Council contacted to ensure TCHC removal would be within the nursing scope of practice and the process required for the RAN to extend their scope of practice.
- Renal department Clinical Practice Improvement (CPI) group approached for approval for RAN to apply to extend scope of practice.

Results:

- Application to extend scope of practice, workplace guideline and Clinical Skills Assessment Tool (CSAT) developed by CPI group.
- Renal Medical Director and Director of Nursing approached and approved application.
- November 2010 -RAC commenced training to remove TCHC's.
- January 2011 - Training and CSAT completed and approval given to independently remove TCHC.
- Routine TCHC removal wait time reduced to an average of 2 days.

Conclusion: Extending the scope of practice of an Advanced Practice RAN complemented the renal service and provided an innovative solution to a lack of availability of trained staff.

Transforming Infection Control Practices to improve VRE Patient Management: 67

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Mrs Carolyn Chenoweth
Fresenius Medical Care

Background: Review of personal protective equipment in relation to VRE patients. Changing from long sleeve gowns to sleeveless aprons. Introduction of Bare below Elbow policy.

Aim:

1. Maintain effective infection control management and no spread of VRE
2. Reduce stigma to patients
3. Improved compliance of staff use of Personal Protective Equipment by improving staff comfort and ease of use
4. Improved compliance with Hand Hygiene

Methods:

1. Research other methods, infection control conference presentations
2. Research current infection control guidelines
3. Staff survey
4. General patient feedback
5. Introduce Bare below Elbow policy
6. Audits of Hand Hygiene and use of Personal Protective Equipment
7. Staff education

Results:

1. Maintained zero spread of VRE
2. Improved patient psychosocial wellbeing
3. Improved staff compliance in use of Personal Protective Equipment – easier to be compliant, more comfortable.
4. General uniform review – short sleeves, fob watches
5. Improved infection control management for all patients in the haemodialysis centre not just VRE patients.

Conclusion: Transforming infection control practices from a large tertiary centre to meet the developing needs of a private satellite haemodialysis centre, has resulted in improved infection control compliance and patients psychosocial wellbeing.

Establishing a consent timeframe for dialysis and associated routine medical and data collection procedures: 68

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Austin Health
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Austin Health

Context: Patients receiving dialysis are unique in that they receive regular medical interventions in acute hospital settings for undefined periods of time. This differs from other acute hospital admissions, interventions and clinical trials, which are all time limited.

Integral to dialysis treatment is a schedule of monthly blood testing, and annual data collection for ANZDATA.

Patients provide initial consent for treatment, associated blood testing and data collection procedures when they commence dialysis. There is no timeframe to review consent.

Aim: To develop timeframes and systems for gaining written consent for Dialysis Treatment, Routine Blood Testing and ANZDATA Collection

Methods: A literature search was conducted to determine best practice guidelines on how often written consent should be updated.

Results: Consent is not enshrined in Australian Law and there is no guidance on how long consent once given remains valid.

Literature does not define the lifespan of informed consent documenting vague statements like, "for as long as the patient is able to recall information" or referring to time limited medical procedures such as surgery.

Literature citing clinical studies documents that participants have poor memory for information disclosed during initial consent processes, supporting the need for regular review of consent.

Conclusion: A system of gaining written consent to receive treatment for End Stage Kidney Disease is being implemented concurrently with a system of annually updating written consent for routine blood testing and ANZDATA collection for dialysis and transplant patients.

Changing dialysate sampling and culturing method to improve patient long term outcomes: P01

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Barwon Health
Ms Rosemary Simmonds
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Ms Janeanne Boddington
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Background: Patients on haemodialysis are exposed to vast amounts of water. In order to decrease the risk of microbiological contamination the European Pharmacopeia (EP) recommends maintaining water quality of dialysate at <100 cfu/ml (colony forming units). In 2009 to achieve best practice our unit sought to review its water quality protocol.

Method: The European Pharmacopeia recommends samples are cultured using a low nutrient medium incubated at 22°C for 7 days. In our unit prior to July 2009 dialysate was cultured and incubated at 36°C for 48hrs using nutrient rich blood agar medium. 1527 heterotrophic plate counts were taken, between May 2003 - January 2011, and were reviewed as to whether they met guidelines.

Results: Under the old testing method, 1124 tests were reported between May 2003 - June 2009, 10 (0.9%) were >100 cfu/ml. The 10 retests returned negative results, indicating that human contamination may have influenced the original result. From July 2009 - January 2011, 403 tests have been performed and cultured using EP recommended guidelines and reformed sampling process, 12 (2.97%) were >100 cfu/ml.

Conclusion: A review of our practice reflected that we were not meeting best practice guidelines for water quality in haemodialysis. The nutrient-rich environment provided by blood agar is not appropriate for recovering organisms adapted to a purified water environment. This provided us with a false sense of security in results. The review prompted us to change our practice to meet best practice, giving more confidence in results and most importantly improved long term patient outcomes.

Phosphate Binders: The impact of education material on phosphate levels: P02

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Background: Confusion exists for most patients with end stage renal disease, who have been prescribed phosphate-binding medications. A recent project conducted in a metropolitan dialysis service found that only 31% of patients could correctly identify their phosphate binders. Patient education has been one of the key components in helping patients understand their medications and thereby improve compliance.

Aims: To determine the effectiveness of patient information leaflet on phosphate binders on the phosphate levels of patients receiving haemodialysis.

To further identify any gaps in patient education in regards to phosphate binding medications

Methods: A retrospective audit on serum phosphate level for patients who received the patient information leaflet on phosphate binders.

Results: Forty-four out of 77 haemodialysis patients (70%) surveyed had a reduction in serum phosphate level 6 months post education with the information leaflet.

Conclusion: It is unclear whether simply raising awareness of the role of phosphate binders has had any impact or if a deeper understanding of the patients' own medications has been the catalyst for change. Other factors may include dietary compliance and better dialysis adequacies, which could have led to improved biochemical markers in these cases. Nonetheless, patients and staff have commented on the usefulness of the education pamphlet and continuing education can only enhanced the patients understanding of their medications and compliance. In keeping with good clinical practice, the pamphlet will be refined to reflect the current literature regarding high phosphate levels and the increased risk of cardiovascular complications and mortality.

Severe Idiopathic Dilated Cardiomyopathy, resolved with Daily HDF: A case study: P03

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Ms Suleen Rautembach
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Ms Deborah Flett
NephroCare QLD

Daily Haemodialysis has been shown in numerous articles to take a positive role in the management of patients with ESRD as more frequent dialysis is suggested to be more physiologic.

Patients receiving short daily Haemodialysis report greater tolerance and acceptance of the procedure resulting in increased compliance and less post dialysis fatigue enabling them to continue a more acceptable quality of life.

The addition of Haemodiafiltration to the short daily dialysis regime is providing excellent clinical results. Authors have observed increased urea reduction, significant decreases in predialysis plasma levels of urea, creatinine, Beta 2 microglobulin and homocysteine, a reduction in the use of phosphate binders, erythropoietin doses and antihypertensives, significant reduction of cardiovascular risk factors and up to 30 % regression of left ventricular mass. Published studies have also observed catch up growth in dialysis dependent children due to improved nutrition.

This poster is a case study of a 21 year old female with ESRF secondary to FSGS with associated Idiopathic Dilated Cardiomyopathy. The aim is to provide positive data on improved cardiac function after changing from 3 times weekly haemodialysis to short daily Haemodiafiltration. The significant cardiovascular improvement after 6 months of change of modality and increased sessions has omitted the need for a heart transplant, has greatly improved her quality of life and has now allowed her to become a suitable candidate for kidney transplant.

Nurse Practitioner expanded practice and patient safety with removal of central venous dialysis catheters: P04

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Context: Patients in a metropolitan satellite dialysis unit have their central venous dialysis catheter (CVDC) removed onsite by the Nurse Practitioner (NP). Over a period of 18 months seven (n=7) CVDC's have been removed. There have been no episodes of haemorrhage or infection. One patient had minor bruising and another had CVDC cuff retention.

CVDC's used are tunnelled, cuffed catheters with a single dacron cuff inserted, into the internal jugular vein, by interventional radiologists at the tertiary facility. Mean catheter survival was 126 days (IQR 88-208 days). Catheters were removed using gentle traction after infiltration of 1-2 mL of local anaesthetic (lignocaine 1%) into the subcutaneous cuff. No dissection was used.

Patients attended the satellite unit on a non-dialysis day for the removal to reduce the risk of bleeding associated with dialysis anti-coagulation. Patients remained for observation for 1hour post procedure before discharge home. Counselling was provided covering complications and management – specifically application of pressure for re-bleeding.

Objectives: The objectives of this practice change were to improve patient access to timely CVDC removal eliminating travel to the tertiary centre, risk of cancellations due to emergent work pressures and increased infection risk with unnecessary CVDC in situ. A formal consent process is followed. The NP was trained, supervised and assessed for competence by the nephrologist.

Key messages: NP practice expansion continues to focus on patient safety and access to services.

Conclusion: Patient safety can be maintained with NP practice expansion in a collaborative environment and relationship.

Barriers and motivators to sustaining an intradialytic strength training program: One unit's experience: P05

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Background: Benefits of intradialytic dialysis strength programs have been well documented, however there is limited information on sustaining intradialytic exercise programs given the many barriers to exercise.

Aims: The aims of this presentation are to:

1. Report on the development and progress of one intradialytic strength training program that has been sustained for 6 years.
2. Report results of a patient survey identifying exercise barriers and motivators.

Methods: Functional assessments of patients were undertaken by accredited exercise physiologists in order to reveal specific areas of weakness and to provide baseline measures for future comparison. An individualised exercise program using cycles and/or a purpose built exercise machine was then prescribed to suit the patient's needs and capabilities. In addition in 2010, all patients were surveyed to explore exercise barriers and motivators.

Results : In 2010 70% of all patients exercised during dialysis at least twice per week with 30% of patients participating in the strength training aspect of the program. The main barriers to exercise were pain, fatigue and motivation, whilst the main motivators for exercise included improved health and feeling of well being, knowing the value of exercise and encouragement from exercise physiologists.

Conclusion: Patient barriers and motivators, health status, exercise physiologist involvement and development of suitable equipment interact to sustain a successful intradialytic exercise program.

Is vitamin B6 deficiency an under recognised risk in the Haemodialysis population? A Systematic Review: P06

Ms Melissa Corken
Eastern Health
Dr Judi Porter
Eastern Health

Background: Vitamin B6 is a water soluble vitamin, important for the normal functioning of multiple organ systems. In patients receiving haemodialysis, vitamin B6 deficiency has been reported. The impact of ongoing advances in renal medicine on vitamin B6 status has not been evaluated.

Aims: 1) To determine the current level of vitamin B6 deficiency in the haemodialysis population; 2) To determine what effect the process of haemodialysis has on vitamin B6 levels; 3) To consider the impact that recent medical advances may have on vitamin B6 levels; 4) To review the recommendations for the optimal vitamin B6 supplementation dose in this patient group.

Methods: Electronic databases were used to locate studies with biochemical measures of vitamin B6 between the years 2000 and 2010. Inclusion exclusion criteria were applied by two independent reviewers. Of 316 articles identified, 53 were selected for detailed review. Appropriate vitamin B6 measures and information was extracted.

Results: Eleven final studies were included. Vitamin B6 deficiency was shown to be between 24-56%. Dialysis reduced plasma levels by 28-48% depending on the dialyser used. Advances in renal medicine including the use of erythropoietin stimulating agents and ion exchange phosphate binding resins were shown to negatively affect vitamin B6 status. Current recommendations for supplementation ranges from 10-50 mg, These figures are based on older studies often with small numbers of patients.

Conclusion: Suboptimal vitamin B6 status is common in the haemodialysis population. Advances in renal medicine and engineering of dialysis membranes may contribute to increased levels of deficiency.

Connecting through Peritoneal Dialysis Patient Newsletter: P07

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Dr Shelley Tranter
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Dr Sharon Ong
St. George Hospital
Ms Tracey Blow
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Context: In a peritoneal dialysis (PD) patient satisfaction survey, patients expressed the need for continuous education on PD. Regular information sessions are ideal, but require resources that are not readily available to our unit. With this in mind, periodic patient newsletters were considered the most convenient and practical way to provide patients and carers with the opportunity to increase their PD knowledge. The PD newsletter was launched in April 2010 and is currently a bi-annual publication.

Objectives: The primary aims of the PD patient newsletters are to:

- Provide a communication medium for up to date information regarding PD care to increase/improve the knowledge of PD patients and carers;
- Keep patients and carers informed on all planned activities and developments in the unit;
- Encourage PD patients to express their opinions, share their experiences and solicit solutions.

Key Messages: Determining the design and content of a patient newsletter requires careful planning. The staff involved in newsletter production must have a good understanding of the principles of patient education, writing techniques, assembly procedures, printing and distribution. It is important for the design and content to complement each other to capture the interests of the patients and their carers. A joint effort between the patients and healthcare team is essential to produce newsletters which will be of benefit to the reader.

Conclusion: Our experience has shown patient newsletters are valuable proactive communication tools and demonstrate the PD unit's commitment to ongoing education and support to patients and carers, despite limited resources.

Language should not be a barrier for home dialysis: P08

Mrs Biljana Veleviski
Western Health

Context: We are a major public healthcare provider for people living in Metropolitan Melbourne, we service a population of 700,000 people. Our catchment is culturally and linguistically diverse with more than 100 different dialects and languages spoken. As a result over two thirds of our clientele do not have English as their primary language. Our Home Therapies Unit offers both Peritoneal Dialysis and Home Haemodialysis.

Key messages: Learning needs for Home dialysis patients are complex. Successful communication between the home dialysis patient and staff is essential for success but becomes a challenge where there are cultural and language barriers. We have implemented several strategies to overcome these challenges:

- Planned increased training times
- Extensive utilisation of interpreter services
- Increased cultural sensitivity, e.g. gender of trainer
- Engagement of patient support network
- Ongoing home support via phone interpreter
- Increased home visits
- Use of pictorial aids and visual cues
- Use of a teaching tool

Home dialysis is the gold standard of renal replacement therapy. Linguistically diverse patients facing communication barriers are offered the same opportunities for home based dialysis as our primary English speaking patients. Sensitivity to patient needs and a flexible approach to training and support can allow these patients to succeed at home.

Conclusion: It is crucial to overcome home dialysis barriers for our cultural and linguistically diverse population. We strive to continue to explore methods of education and support so every patient in our catchment has the opportunity to undertake home dialysis.

Prevalence of malnutrition in the Eastern Health Haemodialysis population: P09

Ms Melissa Corken
Eastern Health

Background: To ensure effective long term service provision, the evolving Eastern Health Integrated Renal Service (EHIRS) established measurable objective Key Performance Indicators (KPI's).

As malnutrition in haemodialysis patients is common and linked to increased morbidity and mortality, the nutrition specific KPI involved establishing and subsequently targeting the malnourished haemodialysis patients within Eastern Health (EH). The validated Subjective Global Assessment (SGA) was used and is a practical, inexpensive method that relies on clinical judgement accrued from grading scales calculated from a brief history and physical examination.

Aim:

- To assess the nutritional status of EH haemodialysis patients using the SGA method.
- To target the nutrition service towards minimising malnutrition rates.

Methods: SGA was undertaken with haemodialysis patients (N=194) across four EH satellite centres, and the inpatient renal ward. Scores assigned to each patient were either A, B or C, representing well nourished, mildly/moderately malnourished or severely malnourished respectively.

Eighteen Dietitians contributed, with training sessions conducted to minimise variability.

Results: A total of 138 patients were categorized as well nourished, concluding that almost a third of the population were malnourished. Higher rates of malnutrition were evident in the acute patient setting.

Conclusions: The rates of malnutrition identified are similar to previous studies undertaken with the haemodialysis population.

Implications for practice: It is intended that the SGA will be repeated every 6 months. The data will also be used in future research.

Foot screening in a Dialysis Unit: A pilot educational project: P10

Ms Lambrina Likouresis
Melbourne Health
Dr Kathy Nichols
Melbourne Health/The Royal
Melbourne Hospital
Miss Joan Leo
Melbourne Health

Background: Patients on dialysis, even without diabetes, are at high risk of foot ulceration. Clinical foot assessment within established dialysis clinics provides an opportunity to identify early problems and screen for risk factors.

Aims:

- To initiate a pilot foot screening program within a satellite dialysis unit
- To identify factors necessary to sustain the program
- To determine the prevalence of risk factors for foot ulceration in patients on haemodialysis without diabetes
- To provide real-life individual professional education to podiatry students

Methods:

1. Placement coordinator engaged clinical managers, prepared and distributed information brochure, reviewed clinical space
2. Patients gave verbal consent to screening
3. A customised assessment and screening tool was designed
4. An appropriate post assessment clinical pathway was determined
5. Two students and one clinical supervisor commenced each session 30 minutes into a routine dialysis run

Results: 25 patients completed screening, mean age 69, + 14.94(SD), (68%) were male.

Ten (40%) had diabetes. No patient had current ulceration.

Of the 15 non-diabetic patients, 3 (20%) were current and 8 (54%) were past smokers. 14 (93%) of patients had one or more risk factors. Ten (66%) had no podiatrist.

Conclusion: A large proportion of patients with CKD without diabetes had risk factors for ulceration. We recommend increased awareness in staff and patients, preferably with regular podiatric input.

Support has been gained from Nephrology department to sustain a foot screening and assessment service. Involving podiatry students has provided a broader professional and educational experience.

The sweetened and AGEing kidney population: A Diabetic Nephropathy case study: P11

Mr Kristoffer Abeleda
Southern Health

Background: Both the progression of Chronic Kidney Disease (CKD) and medical technology increase globally every year. Steps are made over the years to slow down the progression of CKD. The challenge remains in spite of better technology and diagnosis. Diabetes Mellitus still remains to be the leading cause of CKD.

Case Study: This is a case study of a 52 year old male diagnosed with Stage 5 Chronic Kidney Disease (CKD) secondary to Type 2 Diabetes Mellitus (DM). He was diagnosed of DM for 15 years, which was complicated by uncontrolled blood sugar levels. Insulin and dialysis were refused due to social and personal reasons. After an acute on chronic renal failure episode, hemodialysis was initiated. Multiple vascular access failure followed.

Clinical Implication: Through the years, research on Diabetic Nephropathy has been progressing yet it has not been fully understood. Exploring the pathophysiology and possible causes will increase the awareness on how to manage the disease for the betterment of renal health.

Advanced Glycation End-products (AGE) is one of the factors that cause kidney damage in diabetics. Pathology of diabetic nephropathy in relation to AGE will be explained.

Conclusion: In exploring new territory on the disease process of Diabetic Nephropathy, there is a gap that can be filled which may transform renal health. This can also open a new horizon for renal health development for the rest of the world.

Paired kidney exchange: An exciting option for transforming lives of dialysis patients: P12

Mrs Nafeesa Ahmed
Monash Medical Centre
Mrs Gethsy Karpagavallij
Southern Health , Monash Medical
Centre, Clayton, Victoria

Falling numbers of cadaver organ donors and an ever lengthening kidney transplant waiting list have increased the emphasis on live donor transplant to meet the demand for kidney transplantation.

Around 40-50% of potential donors are found to be incompatible with their recipient. By paired kidney exchange, compatible recipient can be found so that two patients can get healthy kidney and lead normal life.

The objective of paired kidney exchange is to make optimal use of willing live donors, in order to help patients get off the transplant waiting list and lead a productive normal life. Paired kidney exchange option increases the overall pool of available organs.

A computer program is used to search the entire database of registered recipient/donor pairs to look for combination, where the donor in an incompatible pair can be matched to recipient in another pair. If the computer finds a compatible match two or more simultaneous transplants can occur by exchanging donors.

What's happening in Australia?

Australian Paired Kidney Exchange Program is a national live kidney donor program aiming to increase opportunities for chronic kidney disease patients.

The program operates under the auspice of the Australian Organ & Tissue Authority with the National Co-ordination Centre based in the Department of nephrology of Freemantle Hospital, Perth, Western Australia. Western Australia led the way with this program being legislated in 2007. The first Australian Paired Kidney Exchange was performed in Perth in Nov, 2008.

At the time of writing there have been 11 successful exchanges.

The national Paired kidney exchange program has the potential to increase the live donor numbers by up to 200 additional transplants per year.

The Great Divide: Exploring and Extending EEN Scope of Practice in Acute Haemodialysis Services: P13

Ms Jaclyn Alford
Royal Prince Alfred Hospital
Ms Kristine Dailey
Royal Prince Alfred Hospital

As the face of nursing changes, the need for the traditional RN based care model in acute haemodialysis services to change has become imperative. With increasing clinical skill demands being placed on a limited pool of specialist nurses, it is important to utilise all available existing and potential skill.

The role of the EEN in acute haemodialysis has traditionally been limited to intermediate level skills with central vascular access being excluded due to an overriding hospital based policy. The restrictions surrounding EEN practice impacted our ability to achieve training initiatives as well as patient care priorities in a timely manner. This was increasingly problematic in the light of other unit priorities such as renal course students and ward based staff requiring skill attainment.

A policy to extend the responsibilities of EEN's in the acute haemodialysis unit and the renal ward, in the area of central vascular access and management, was formulated and presented to hospital management. Introduction of this policy has allowed the EEN's to deliver a higher level of integrated care to their patients. Additional benefits such as a reduction in patient waiting times and RN workloads have also been gained. It has also served to improve teamwork, job satisfaction and individual staff morale.

The introduction of this policy has increased the abilities of our current and future nursing team and widens our scope for recruitment and retention. This poster will outline policy development, performance measures and department impact as well as personal perspectives of the staff involved.

Should renal specialist nurses be working in general practice? : P14

Ms Beth Amega
Danila Dilba Health Service

Background: Placing a specialist nurse within the primary health care sector has been a strategy used widely within the remote health workforce where resources are scarce. This paper is based on the experience and reflections of a renal public health nurse who over a period of the project (2007-2009) worked within the remote and urban general practice to facilitate change and improve management outcomes for clients with chronic kidney disease.

Aim: To implement case management of people with CKD and complex needs.

Method: A reflective practice methodology was used during the project. Journals were kept and a monthly meeting with the project officer and other case managers.

Results: Reflections showing the range of responses, and the difficulties in implementing the new intervention varied across the three primary health care services.

Conclusion: Working in a PHC setting is a team affair. Implementing a new approach to renal services was a strategic change in policy from a departmental level. It needed the teams support. Without that support at ground level the renal case management program could not be implemented. Lessons learnt along the way helped to be prepared and proactive when moving to implement the program into another service however after 3 years there are still some services not yet involved fully in this new system of working.

Analysis of Blood Flow Rates in our Dialysis Centres: A Quality Comparison: P15

Mrs Jayne Amy
North West Dialysis Service
Mrs Jayne Amy
NWDS, Melbourne Health
Ms Jennifer Beavis
NWDS, Melbourne Health

Background: No strict guidelines in relation to optimal blood flow rate (Qb); however there is an implied target of 300mls/hr (EBPG). Our service targets a Qb of 300 – 400 mls/min to optimise dialysis efficiency. We undertook a quality assurance project to audit Qb against our policy.

Method: Forty two patients over an 8 week period from our acute unit (AC; n = 21) and metropolitan satellite units (MS; n = 21) were studied. All patients had a vascular catheter with needleless connectors attached; and all patients dialysed 3 days per week.

Results: 306 treatments (110 in AC and 196 in MS) were audited for mean Qb, venous pressure, Alteplase usage and transposition of bloodlines. Target Qb was reached in 70/306 treatments (23%). Mean Qb was 252 ml/min. Sub-analysis of centres showed that mean (+/- SEM)Qb was higher in MS than AC (271 +/- 5 vs 233 +/- 8 ml/min; p<0.001). Mean VP was 141 mmHg, but likewise venous pressures were higher in MS than AC (151 +/- 5 vs 132 +/- 5 mmHg; p=0.005). Although transposition of blood lines was higher in MC 64/196 (33%) than AC 15/110 (13%) in AC, this was not significant. 10% of patients with catheters in crisis required Alteplase.

Discussion: Our audit revealed only a quarter of our patients met the target Qb. Attainable Qb appears higher in the stable MS population than in the AC which is a crisis management centre. Ongoing efforts will be directed at benchmarking and identifying barriers to reaching targets.

Improving the continuity of documentaion between the acute Haemodialysis Unit and Ward areas to ensure timely detection and action of Deteriorating Patients: P16

Ms Norrie Aviga
Canberra Hospital

Having an objective and thorough assessment tool that is going to improve outcomes by detecting and managing early signs of deterioration is sure to have an impact on improved monitoring of Haemodialysis patients and incidences of potential complications. The Unit has modified their Haemodialysis Observation Record (HOR) which incorporated The Modified Early Warning Score (MEWS) system which

- identifies trends in patient observation
- ensures timely patient review and management
- improves documentation of patient observations

The MEWS system is based on data derived from the patients physiological readings of Blood pressure, Heart rate, Respirations, Temperature, Urine Output, Sedation score and Oxygen saturations. Each reading gives a resulting score that determines a management response.

The unit recognises they are confronted with challenges of early identification and management of the deteriorating Haemodialysis patient and with this record it has resulted in early detection of complications and planning of future care for patients. This tool is used to communicate to medical staff when patients have deteriorated during haemodialysis.

Case studies for the use of cinacalcet in reducing secondary hyperparathyroidism in dialysis-dependant patients: These are their stories... : P17

Ms Fiona Bascur
Deakin University, Southern Health
Melbourne

Cinacalcet (brand name: Sensipar) is now being prescribed regularly to dialysis patients with increasing PTH, Calcium and Phosphate levels to reduce the risk of progressive bone disease and the systemic consequences of mineral metabolism disorders.

This presentation will highlight several case studies, with an emphasis on early intervention, monitoring and evaluation of Cinacalcet therapy. The overall improvement of the well-being of our satellite dialysis patients will be discussed.

New approaches to Self Management in Satellite Dialysis Centres: P18

Ms Megan Agius
Hampstead Dialysis Centre
Mr Leo Breugelmanns
Hampstead Dialysis Centre
Ass/Prof Paul Bennett
Deakin University/Southern Health
Melbourne

Background: People with chronic kidney disease undergoing long term haemodialysis are reliant on health professionals and may lose the capacity to self manage their own health care. Improved self management may improve treatment adherence and quality of life, and decrease morbidity and mortality.

Aim: To describe one health service's approach to encourage health care self management for people living with chronic kidney disease stage 5 (CKD5)

Methods: One satellite dialysis unit in an Australian metropolitan health service implemented self management interventions guided by a quality improvement, action research framework. Interventions included the Flinders Chronic Condition Self Management (FCCSM) and the Chronic Disease Self Management (CDSM) programs.

Results: This paper will report our experience to date which has included improved self-management, incorporating consumers (dialysis patients) into the research process, engaging staff, cross-unit collaboration and incorporating allied health professionals.

Conclusions: This study is significant because there has been little research exploring the effects of self management in people with CKD5. Sharing our experiences may assist other clinicians to encourage improved health care self management for people on dialysis.

An alert to all PD (peritoneal dialysis) patients: The more you move (your bowels)... the better you feel: P19

Ms Christine Bond
Princess Alexandra Hospital

All PD patients, carers and patients planning to commence PD need to know the effectiveness of Peritoneal Dialysis is reduced by many causes but a full bowel, irregular bowel patterns and constipation will be focused on. These factors reduce filtration and ultrafiltration and lead to the build up of toxins and oedema. Over time this leads to increased shortness of breath, fatigue and general malaise.

To keep your energy levels up you must move your bowels daily and keep your bowel motion consistency more on the softer side than the firmer. To ensure this occurs Movicol 1-2 sachet morning and night and if required Coloxyl & Senna 2 Tablets morning and night maybe recommended.

The moment bowel motions start becoming irregular, firmer and less frequent you will note your renal function starts to deteriorate. The longer this persists the worse your renal function, oedema and energy levels become. Rectify constipation at the first signs.

So keep your energy levels up by healthy eating, regular exercise, regular bowel medications and not restrict fluids to much and become dehydrated should all be built into your daily routine.

What is Peritoneal Dialysis? : P20

Ms Christine Bond
Princess Alexandra Hospital

Due to the increasing number of renal patients and the increasing popularity with peritoneal dialysis our unit has created an educational poster for patients, nurses, doctors and allied health staff directly from the top ten questions asked by new patients and staff.

Peritoneal dialysis occurs when a Tenckhoff catheter is surgically positioned away from old surgical sites, usually 10cm from the umbilicus through the abdominal wall and into the peritoneal cavity. The exit site must be able to be visualized by the patient for hygiene purposes.

The catheter allows dialysate which is fluid of different glucose concentrations to be drained into the peritoneal cavity. The dialysate is normally left to dwell for 4-6hrs which allows the diffusion of toxins from the blood into the dialysate to occur before draining out.

There is 2 forms of peritoneal dialysis either Continuous Ambulatory Peritoneal Dialysis (CAPD) or Automated Peritoneal Dialysis (APD). CAPD is where 4-6 exchanges are performed per day via manual bags. APD is where a cyclor machine is programmed to perform eg. Between 3-10 exchanges overnight while the patient is sleeping. APD appears a more popular life style choice for the working or studying person.

Managing the Septic Dialysis Patient in a rural Satellite Setting: P21

Ms Deborah Borden
East Wimmera Health Service
Mrs Genette Heslop
East Wimmera Health Service

Aim: To improve outcomes for the septic renal patient on dialysis

Review: Involved the analysis of two case studies in which one patient survives and one doesn't and the lessons learnt

The presentation will:-

- highlight the unstable nature of septicemia
- the challenges of managing an unstable renal patient in a rural setting
- the need for early intervention
- the importance of history taking and the significance of symptoms in the absence of a temperature in the elderly
- implication of limited pathology facilities (blood cultures were collected and sent with patient and returned in his clothes bag one week later!)
- need for education of rural GP's & satellite nursing staff in the appropriate antibiotics to treat the renal patient with
- the need for continuity of care on transfer eg. Nursing staff hand over to ambulance & to receiving hospital admitting officer but flight is diverted to a different metropolitan hospital, patient is admitted to the infectious ward and staff on that ward are not aware that patient is in need of dialysis

Conclusions:

- the septic patient should always be transferred to a facility that can offer high dependency monitoring and renal expertise
- satellite staff need to advocate for their patients and follow them through on transfer
- parent hospital needs to follow up rural dialysis patients transferred to metropolitan hospitals to ensure they are receiving the renal care they require
- education of GP's and satellite nursing staff on the most appropriate antibiotic use in the renal patient is indicated

Benefits of a monthly dosing Erythropoietin Stimulating Agent: P22

Mrs Judy Brade
Mildura Base Hospital
Mrs Tanya Green
Mildura Base Hospital

Haemoglobin concentration in haemodialysis patients is associated with mortality and morbidity. Anaemia management for Chronic Kidney Disease patients poses a clinical challenge to maintain haemoglobin levels within the acceptable range between 110-120. Since January 2010 our dialysis unit has been using an Erythropoietin Synthetic Agent (ESA) specifically designed for monthly administration.

The poster presentation aims to outline the benefits of using an ESA agent specifically for monthly dosing.

The following advantages were identified:-

- Less dose changes
- Less time consuming
- Less risk of omitted doses
- Increased shelf life
- Reduced storage space
- Improved stock control

In conclusion, the change to a monthly ESA regime has improved overall outcomes for clients, nursing staff, Nephrologist and pharmacy.

Innovations in Home Dialysis: P23

Mr Adrian Buttimore
Christchurch Hospital

From its inception our chronic dialysis programme has been home based, haemodialysis (HD) since 1969 with peritoneal dialysis (PD) an option since 1978. Chronic in-centre dialysis is not provided.

Since 1973 strictly limited provision has been made for paid helpers/providers to assist with or undertake haemodialysis (HD) in the patient's home when neither the patient nor family are deemed able to do so.

Increasing demands including the difficulties of maintaining elderly patients with significant co-morbidity and those with little or no social support at home led to a full external review of the dialysis service in 2007 to examine options. The review process included multi-disciplinary professional staff groups and patients and considered both in-centre and satellite HD as possible options. The maintenance of home based dialysis was strongly supported by all groups. This became a principal recommendation from the review and was accepted receiving management and budgetary support to allow the expansion and formalisation of the helper/provider service.

A partnership has been developed with the district nursing service (DN) for the provision of the service, initially HD. A DN Registered Nurse Co-ordinator oversees Enrolled Nurses, Certified Technicians, and Dialysis Helpers who provide the service. Staff training is carried out within the Dialysis Service supervised by the Clinical Nurse Educator. Clinical responsibility for the patients remains with the Nephrology Department and Dialysis Service.

Currently seven patients are receiving assisted community HD. It is intended to extend the programme to include community assisted PD.

The effects of Vitamin B12 supplementation on haemoglobin and ESA requirements: P24

Mr Jamin Claes
Queensland Health

Background: Vitamin B12 plays a key role in DNA synthesis and red cell formation. Vitamin B12 is removed during high flux haemodialysis. This places patients at an increased risk of Vitamin B12 deficiency which is associated with erythropoietin resistance. Supplementation practices vary amongst Australian haemodialysis units. Targets for minimum Vitamin B12 serum levels have not yet been identified in this population.

Aims: The aim of this study was to assess haemoglobin concentrations and Erythropoiesis Stimulating Agent (ESA) usage when supplementing Vitamin B12 at serum levels <300pmol/L.

Methods: In January 2009 all subjects from our district haemodialysis population (n=141) were sampled versus all (n=127) in January 2010. Iron and ESA administration procedures did not alter during the 12 months. Serum B12 levels were examined in January and July 2009. If levels were <300pmol/L, patients were supplemented with intramuscular hydroxocobalamin 1000 micrograms weekly for three weeks. Haemoglobin, Serum B12, Ferritin, TSAT values, and ESA requirements were extracted from the Renal Anaemia Management database in the two sample months.

Results: From January 2009 to January 2010, mean ferritin and TSATS values did not differ significantly (897ug/L and 36% vs. 899ug/L and 35%). Mean Vitamin B12 levels improved from 335pmol/L to 509pmol/L. Mean haemoglobin improved (118g/L vs. 120g/L). Mean ESA usage dropped from 11,137u/week to 8,615u/week.

Conclusion: Intramuscular Vitamin B12 supplementation at serum levels <300pmol/L correlated with higher haemoglobin levels and reduced ESA requirements. This suggests higher targets for Vitamin B12 need to be established to support effective erythropoiesis in the Haemodialysis population.

Improving patient outcomes in PD related peritonitis': P25

Miss Tracey Clark
Royal Hobart Hospital
Mr Colin Banks
Royal Hobart Hospital

Background: Peritonitis remains a leading complication of Peritoneal Dialysis (PD) and can be fatal.

The International Society for Peritoneal Dialysis (ISPD) guidelines recommend antibiotic therapy commence as soon as possible reducing the risk of potential serious complications.

Following review of clinical pathways for PD patients, statistical data demonstrated an increase in both length of stay and time to initial treatment (from 77 minutes to 250 minutes) in the Emergency Department (ED) over a 2 year period. The ED's total activity during this period had increased by around 20%. This dramatic increase prompted the development of a PD Related Peritonitis Admission Protocol.

Aims: To prevent delays in peritonitis treatment for PD patients presenting to the ED.

Methods: Negotiations between stakeholders identified the need for an agreed plan and process, and the development of a protocol and an education programme for staff and patients. This included the introduction of the algorithm onto individual Digital Medical records (DMR) and 'flash cards' for patients to allow immediate identification of this patient group to the ED staff.

Results: Development of an agreed process, protocol and ongoing education activities for staff and patients.

Conclusions: Changes in PD nursing staffing structure appear to have impacted negatively on patient outcomes and a lack of coordination in the approach to patient care was identified as an area for improvement. Biannual audit of protocol compliance is expected to demonstrate that performance measures (length of stay and time to initial treatment) improve or identify further need for modification.

Enrolled nurse extended scope of practice in Renal Nursing: P26

Ms Joanne Colvin
Eastern Health
Ms Catherine Wilson
Eastern Health Integrated Renal
Service (EHIRS)
Professor Bridie Kent
Head of Eastern Health/Deakin
University Research Unit

This education and quality improvement project has been funded by the Department of Health as part of the Enhanced Scope of Practice (ESOP) for Enrolled Nurses (EN). It was undertaken by a major metropolitan Health Service in Melbourne involving four satellite dialysis units and one in-centre renal ward.

The primary aim was to redesign the model of care in maintenance dialysis to include ENs using the information gained from previous ESOP projects. In doing so, it would (a) support the expansion in our renal service which is dependent on successful recruitment of trained nursing staff; (b) address the projected workforce challenges; and (c) provide career development opportunities for the EN.

There are currently six ENs who have been successfully integrated into our Renal Service. Since the majority of the Registered Nurses (RN) had not worked with ENs and consequently had little understanding of their role, a project officer was employed both to support the ENs in a new and unfamiliar role, and to educate the RNs in this role including the scope of practice. This helped the RNs make decisions about nursing practice, particularly in relation to supervision, delegation, responsibility and accountability.

This six month project is nearly completed. Focus groups are planned to obtain qualitative data in relation to the change in the model of care. Evaluation will also include the Work Environmental Scale (validated) survey pre and post implementation. The results will be presented and key learnings highlighted, including areas for further investigation.

The Evolution of Iron: Learning from the past and exploring the future: P27

Mrs Jennifer Connor
Western Health

Context: Over the last two decades the benefit of intravenous iron therapy in patients receiving Erythropoietic agents has been well documented. In Australia a number of iron preparations have been available. The intravenous route has emerged as by far the most effective form of administering these. There are still questions over ideal dosage, frequency of administration, and how much iron is needed in the body's stores. The laboratory tests for iron remain unchanged and are useful but not conclusive.

Objectives: This paper will review iron preparations currently available in Australia and look at physiochemical characteristics; particularly how molecular weight determines maximum dose.

This paper will also discuss the properties of Ferumoxytol.

Key messages: Key messages from this paper include:

Iron Polymaltose is the primary intravenous iron used in Australia even though it is only registered for intramuscular use.

Iron Dextran is still available worldwide but due to the risk of anaphylaxis it is no longer available in Australia.

The intravenous route is the most effective means of administering iron.

Target iron storage parameters have been refined as reflected in CARI guidelines.

Large doses (510mgs) of Ferumoxytol can be administered in 17 seconds.

Conclusion: The benefits of iron therapy have been well documented and despite recent advances there are still several areas that require further research and refinement. With the emergence of Ferumoxytol we can look forward to exploring and transforming iron management.

Exploring New Territory in Dialysis Technology: Wearable Artificial Kidney and Ultra Filtration Devices - An Update on Progress: P28

Ms Kathleen Conway
Monash Medical Centre

Innovative technologies are being developed to improve quality of life and reduce morbidity and mortality rates for people with chronic kidney disease (CKD). Studies of daily intermittent dialysis confirmed positive benefits so the next step was to design an artificial kidney that is wearable, comfortable and functional. As well as improving the quality of life (QOL) of person's with CKD, there are also considerable cost benefits too, such as healthier patients, reduced hospitalizations and medications, conversion of tax consumers to tax generators, reduced need for medical personnel, facilities and equipment.

This poster will compare current intermittent haemodialysis treatment versus continuous peritoneal daily dialysis and update the reader on the latest in what technology has to offer in terms of a wearable artificial kidney and ultra filtration devices, including its advantages and disadvantages.

PD Champions: An Education Tool: P29

Ms Kris Dailey
Royal Prince Alfred Hospital

A specialty PD clinical ladder has been developed for use in an acute renal nursing environment where ward based staff are expected to engage in all areas of PD practice from new patient profiles to emergency and intensive care patient assessment and treatment, PD and APD commencement in an acutely unwell patient as well as phone triage.

The creation of a specialty clinical ladder with clear outcomes is an education challenge which rivals the best of them. Peritoneal dialysis creates a particular challenge with the necessity that staff are competent and in fact confident in this area due to the requirement to utilise these skills in other ward areas of our major tertiary referral centre.

The PD clinical ladder created includes key performance indicators in theory and practical arenas, clinical procedures, learning packages, individual and group activities, and problem based scenarios. It also includes a resource manual of easily accessible, concrete clinical information which can be used for continued education within the staff group. The clinical ladder is presented in different ways to ensure staff needs are met. These include practical experience, theory and problem based sessions.

Positive outcomes have been gained. These include the majority of acute PD decisions being made by nursing staff, a decline in reliance on senior staff to attend to PD outside the ward and improved ability to gain relevant information in a reasonable time frame. Overall staff display a higher level of critical thinking and problem solving in many aspects of their PD practice.

Innovative, proactive approach to continued education for the Peritoneal Dialysis client: P30

Mrs Regina Daly
Queensland Health
Miss Rebecca Barton
Queensland Health

Background: Historically, once the peritoneal dialysis client fulfils the training requirements for self care home dialysis, no formal ongoing education or training exists. Home therapies can be both challenging and geographically isolating, therefore, proactive education had to be innovative. Bi-monthly mail outs were a practical way of delivering a serious message in a fun way.

Aim: To develop a series of educational packages to improve patient knowledge and compliance, thus reducing the incidence of infections and keeping patients motivated in maintaining optimal health on their preferred mode of dialysis.

Method: The peritoneal dialysis nursing staff liaised with the allied health team and patients to identify key areas of clinical significance that could be easily modified by individuals. These areas included:

- Hand Hygiene;
- Bowel Management (Poo & You);
- Healthy Mind, Healthy Body;
- Infection Alert;
- Travel Bug.

Results: The continuous quality improvement cycle is yet to be completed. Evaluation of the packages is incomplete. Informal feedback from individuals has been positive.

Conclusion: In line with government guidelines, our goal is to keep 60% of clients requiring dialysis on home therapies. By offering continued education we hope to maintain these numbers.

HLA and ABOi Desensitisation Prior to Renal Transplantation: A South Australian Experience: P31

Miss Jill Diack
Royal Adelaide Hospital

Background: For the majority of people with end stage renal disease (ESRD) kidney transplantation is the best treatment option for quality and quantity of life. Blood group incompatibility (ABOi) and

Human Leucocyte Antigens (HLA) sensitisation remains the greatest barriers to successful live donor transplantation.

In 2005 a highly sensitised patient underwent desensitisation prior to successful renal transplantation from a live donor.

Aim: This success paved the way for the development of a desensitisation program. The programs aim was to provide a coordinated approach to patient care throughout all aspects of the desensitisation program.

Method: A multidisciplinary team approach was required to manage patient care throughout each phase of the program. A standardised two – four week desensitisation protocol involving rituximab, plasma filtration and intravenous immunoglobulin was implemented. Antibody level monitoring was critical to ensure levels had been significantly reduced prior to transplantation.

Results: The first patient to have desensitisation has celebrated her fifth anniversary post transplantation. 15 highly sensitised and 9 ABOi patients have undergone desensitisation prior to renal transplantation.

The evolution of this program and patient outcomes will be outlined.

Conclusion: ABOi and HLA desensitisation offers hope to people where in normal circumstances renal transplantation would not be possible. This is currently only available to people with a live donor. While still a relatively new program many advances and lessons have been learned. The future plan is to desensitise the numerous highly sensitised people on the deceased donor waiting lists and extend this hope of successful renal transplantation to those people who have waiting so long.

The integration of two services: New Territory: P32

Ms Fiona Donnelly
Royal Adelaide Hospital, Central
Northern Adelaide Renal and
Transplantation Service (CNARTS)

Background: Renal Services in South Australia began in 1960. Three parent hospitals in Adelaide provided a renal service to South Australia with a total of 19 satellite units both Metropolitan and country.

Aim: In 2007 the government announced the SA Health Care plan. Part of this plan was the integration of Renal Services at two of the metropolitan hospital. Initial plans were to transfer the transplantation service from its original site to another hospital. As the project progressed the decision was made to transfer all services making one hospital the 'hub' of the service

Method: Initial stages of the project involved a large multidisciplinary team. As the project progressed an Implementation group was formed. The responsibility of this group was to develop a project plan, set deadlines, identify risks and form working parties for the project. Building work began in late 2008.

Results: On January 18th 2010 the new service began operation with the opening of the Renal and Transplantation Ward. On commencement there was a 20 FTE deficit, only 4 staff opted not to move with the service. Renal course uptake increased by 7 in the first year. The first live donor transplant was performed on the 3rd of February.

Conclusion: The service has been functioning for a year with success. It has not been an easy road to achieve what we have, with many obstacles to overcome. Patient acceptance has increased. The future for staff within the service is exciting with many opportunities.

Transplantation and transformed Renal Health: P33

Ms Lee Douglas
North West Dialysis Service,
Melbourne Health

Since the implementation of kidney transplantation in Australia in the early '60's, there have been many advances in patient management, donor pool and surgical procedures.

From 1963 to 31 Dec 2009, 2,098 transplant operations have been performed on 1,745 patients at our service. More than 39% of these grafts are still functioning. Live donor transplants account for 30.36% of all operations and 19% of functioning grafts (ANZDATA).

Australia wide, one year graft survival has increased from 51.7% (1975-79) to 93% (2008-09) for deceased donor grafts. Over the same period, living donor graft survival has risen from 81.2% to 96.1% (ANZDATA). In 2010, 49% of our grafts were from living donors and 37% of these from spouses (or partners). An Australasian Living Donor Registry was created in 2005 to monitor long term outcomes.

Traditionally, the preferred surgical approach was almost exclusively open nephrectomy. Over the past decade, laparoscopic donor nephrectomy has reduced the donor recuperation and length of stay and is now accepted nationally as 'best practice' for live donation.

Since 2005, the development of suitable protocols has meant that more than 80 ABO incompatible transplants and 23 transplants to highly sensitised people have been performed at our service. Other initiatives include the use of pathological kidneys and the establishment of a paired kidney donation programme.

Three people from our service have recently celebrated over 40 years with functioning kidney transplants. This extraordinary milestone has highlighted both the human and medical commitment to this procedure.

A quality initiative to reduce buttonhole related blood stream infections: P34

Mrs Dianne Du Toit
Gold Coast Health Service District

Background: Buttonhole cannulation was introduced in our Renal Service in 2005. A spike in Blood Stream Infections (BSI) related to buttonhole use in Arteriovenous Fistulas (AVF) in 2009 prompted a review of access related BSI's.

Aims: To audit current practice to determine possible causes for increased infections and develop a plan to minimise buttonhole related BSI's.

Methods:

- AVF related BSI's reviewed.
- Review of our current practice and guidelines
- Literature review on current evidence

Results: Analysis showed an 8 times greater incidence of BSI's associated with buttonholes when compared to rope ladder cannulation. The Renal Clinical Practice Improvement (CPI) group felt that buttonholes may have an inherently higher infection risk and a plan for ensuring diligence in care and minimising buttonhole use should be implemented.

In April 2010, the following recommendations were implemented:

- Ensure best buttonhole cannulation practice based on current evidence.
- Patient and staff education on increased risk and best cannulation practice
- Alert distributed to patients
- In-centre patients swapped to rope ladder
- Home haemodialysis patients swapped to rope ladder wherever possible

Outcomes: Number of Buttonholed patients reduced from 42 to 18 by December 2010.

Reduction in total buttonhole related BSI's from 6 in 2009 to 4 in 2010. Buttonhole related BSI's/100 months did not drop.

Conclusion: Buttonholing was associated with an increased risk of BSI. Reducing the number of patients buttonholing may have resulted in reduced total buttonhole related BSI's however the numbers are too small for statistical analysis.

Kidney Health Group Program: Multidisciplinary Self Management approach to slowing down progression: P35

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Queensland Health
Mrs Rhonda Dorman
Queensland Health
Ms Helen Roberts
Queensland Health
Ms Libby Hoffman
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Mrs Desley Butler
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Group educational program for patients (and family/ support persons) with stage 3 or stable stage 4 CKD delivered by a multidisciplinary team, focusing on enhancing their knowledge, understanding and self management skills to aid in the slowing of progression of their CKD.

The CKD team approach to self management is delivered by Renal Nurses, Social Worker, Dietitian, Indigenous Health Worker, Pharmacist and Exercise Physiologist. Topics covered include: self awareness; self direction through variety strategies i.e. budgeting; managing emotions; relationships and intimacy; physical activity; healthy living principles (SNAPE); healthy eating; and managing their medications.

Group Participants meet all CKD team members, in the semi-social environment of Community Health. If needed individual appointments can then be arranged. Group is limited in size, large enough to be time economical but small enough to maintain the individual as a focus. Evidenced by the segment revolving around biochemical education and review of the individual patient results, as well as the session delivered by the Renal Pharmacist and review of medications.

Materials and resources are provided in oral, visual and written format. The program is endorsed by the Nephrologists and is designed to compliment the medical aspects of CKD care.

The Renal Health Group through provision of educational knowledge and understanding of self management principles promotes autonomy and the ability to comply, early in the CKD continuum. Thereby slowing down progression of CKD.

Targeted Kidney Health Screening in a Rural NSW Setting: P36

Mrs Jo Fairbairn
Kidney Health Australia
Dr Marie Ludlow
Kidney Health Australia

Background: A national kidney-focused NGO has initiated a mobile targeted kidney health screening program for local communities using point of care testing. It is designed to test kidney health risk, cardiovascular risk and diabetes risk with take home results.

Aim: This innovative comprehensive health risk check embraces the National Chronic Disease Strategy to prevent the onset of kidney disease with community awareness, health promotion and early detection.

Method: The program was sponsored and members of the general public were recruited with the knowledge that the program was aimed at only those with increased risk of kidney disease.

Preliminary Results: 181 eligible participants were assigned to mutually exclusive eligibility categories with 60% women and 40% men. Abnormal eGFR results were evident in 20% of participants, abnormal blood glucose results were detected in 44% and abnormal HDL or total cholesterol results were shown in 37% and 19% of participants respectively. Of the 136 participants who completed an AUSDRISK assessment 67% were classified as being at high risk of developing diabetes in the next 5 years. Of the 104 participants who completed the Australian Absolute Cardiovascular Risk Calculator 14% were classified as being at high risk.

Conclusion: This valuable program is a path way for community awareness, health promotion and early detection of kidney disease. Inclusion of cardiovascular risk and diabetes risk enhanced this program which is worthy of replication and sponsorship particularly in rural Australia.

Chronic kidney disease hospitalisations in Australia 2000-01 to 2007-08: P37

Mrs Frances Green
Australian Institute of
Health and Welfare
Ms Simone Littlewood
AIHW
Ms Claire Ryan
AIHW

Background: Chronic kidney disease (CKD) is a long-term health condition which often requires hospitalisation. Analysis of hospital admissions indicates the burden CKD places on the Australian hospital system and the population groups at increased risk of hospitalisation for CKD.

Aim: To examine CKD hospitalisations in Australia including trends over time.

Methods: The Australian Institute of Health and Welfare National Hospital Morbidity Database was analysed using a CKD coding list approved by experts. Two distinct types of diagnoses were recorded, principal and additional. Age-standardisation and linear regression were used to assess differences between population groups and over time.

Results: In 2007-08, CKD was responsible for almost 1.2 million hospitalisations (15% of all hospitalisations in Australia). Regular dialysis was the principal diagnosis for 97% of CKD hospitalisations. Of the non-dialysis hospitalisations, the most common principal CKD diagnoses were kidney tubulo-interstitial diseases (24%) and diabetic nephropathy (20%). CKD was a contributing factor in a further 167,628 hospitalisations; the most common principal diagnosis being diseases of the circulatory system.

Between 2000-01 and 2007-08, hospitalisations for regular dialysis increased by 71%, while those for other CKD principal diagnoses and additional diagnoses increased by 12% and 48% respectively.

Population groups at increased risk of hospitalisation for CKD included males, Indigenous Australians, those living in remote areas and those with lower socioeconomic status.

Conclusions: CKD significantly contributes to the morbidity burden in Australia, with some population groups at increased risk of hospitalisation. CKD hospitalisations are increasing over time.

Reduction in peritonitis rates through changes in Clinical Practice: P38

Mrs Peta Gunson-Turner
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Mrs Maria Bueti
Flinders Medical Centre

Background: In the last 5 years we have seen a steady rise in our peritonitis rates to an unacceptable level. In 2008 our rates were 1:12 per pt months. We decided we needed to make changes to our clinical practice to reduce our peritonitis rates.

Aim: Our aim is to improve our peritonitis rates. This required looking at our clinical practice and making improvements to areas that we could.

Method: In reviewing our clinical practice we implemented the following;

1. Improving patient education by extending our training.
2. Dedicated peritoneal dialysis staff performing the training
3. Increased home visits
4. Weekly phone calls to patients
5. Continuous staff education by our Renal Educator.

Results: Our results in 2008 were 1:12 pt months, in 2010 they were 1: 37.5 pt months. An improvement to our rates of over 50%.

Conclusion: Improving clinical practice can lead to a reduction in peritonitis rates.

Role Models: Who and what are they really? : P39

Mrs Barbara Harvie
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Mrs Lesley Salem
Hunter New England Health

Context: Being a role model – what does it really mean? Merriam-Webster's medical dictionary (2007) defines role model as 'a person whose behaviour in a particular role is imitated by others. Leaders in acting, academia, political circles and athletics at times can all be perceived as 'role models'. As nephrology nurses and leaders, we need to understand the responsibilities incurred in being perceived as role models. It is equally important to realise that a 'role model' is not necessarily wrapped as a single package.

Objectives

- Develop an understanding of what a role model is and is not!
- Explore a brief history of role models
- Identify key attributes of role models
- Explore the links with mentoring and preceptorship
- Discover the identity of one role model who ticks all the boxes

Key messages: Role modelling, mentoring and preceptorship are recognised as successful teaching and learning tools. It is essential for individuals to develop their own personal styles and to adopt desired knowledge, skills and attitudes from a variety of sources. Role modelling also has the potential to impact on behaviour from negative rather than positive perspectives.

Conclusion: Role models are in abundance within society and it is acknowledged that certain attributes demonstrated by some 'role models' are recognised as outstanding behaviours to be emulated. There is however little if any evidence that nephrology nurses have explored or defined the concept of role models. This presentation aims to deconstruct role modelling, mentoring and preceptorship through identifying key attributes.

Relationship between Serum Phosphate and Patient Demographics in a Haemodialysis Population: P40

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Phosphate is a major constituent of bone, a component of cell membranes, and as phosphorylated metabolites, key to intracellular signalling. In health, normal phosphate concentration is well controlled despite wide variation in dietary intake. Conversely, we understand surprisingly little about the failure of phosphate regulation in patients with renal failure.

In this study we compared patient demographics with serum phosphate concentration (Ps) in 236 adult haemodialysis patients over a 12 month period. Data was analysed by correlation coefficient. Average Ps over 12 months was not related to Body Mass Index, Ethnicity or Gender. However, there was a continuous Age associated decline in Ps between the ages of 24 and 89 ($r=-0.51$, $p<0.0001$). This relationship held true for both Males and Females, and for 11/12 individual months. No such association was seen with serum Calcium or PTH. Multivariate analysis confirmed that Age was predictive of Ps, independent of other demographic factors.

Ps is a demonstrated risk factor for morbidity and mortality in patients with chronic kidney disease both before and during maintenance haemodialysis. A better understanding of the factors that determine Ps in these patients may improve our management.

Is ALP an early marker for CPP product? : P41

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John Hunter Hospital
Mrs Pam Fowler
John Hunter Hospital
Mrs Avril Macleod
RPA Sydney
Mrs Belinda Butcher
Write Source Medical
Mrs Jennifer Bradley
Janssen Cilag

Background: Bone disease is a common complication in Chronic Kidney Disease (CKD) patients. The aim of this study was to see if there is any relationship between the bone disease markers alkaline phosphatase, calcium-phosphate product and parathyroid hormone (PTH).

Methods: Data from pre-dialysis, haemodialysis and peritoneal dialysis patients were extracted from the Renal Anaemia Management database for the period November 1999 to October 2010. Bone disease was defined as PTH levels three times the upper limit of normal, or calcium phosphate product > 4 , or alkaline phosphatase above the upper limit of normal (i.e. >100 u/L).

Results: Data were available in 18,649 patients. Their mean age was 63 ± 15 years, 13% were of ATSI origin and 58% were male. The most common primary diagnosis was non-insulin requiring type 2 diabetes (13%). According to our criteria, 65% had bone disease. There was no correlation between alkaline phosphatase and PTH, alkaline phosphatase and calcium-phosphate product or PTH and calcium-phosphate product (correlation coefficients: 0.11, -0.03 and 0.05, respectively). Interestingly, those classified with bone disease had improved survival from time of first dialysis compared to those without (median survival 1,402 vs. 1,215 days, $p=0.02$, log-rank). The reasons for this are unclear.

Conclusion: There is no correlation between bone disease markers in chronic kidney disease patients.

Nutritional Knowledge in Renal Nurses: A Pilot Study: P42

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Background: Research has shown that nutrition is an important aspect of care for the renal dialysis patient and mortality. Poor nutritional intake can have a variety of effects on the patient. It has been noted that nutrition can be a problematic area for many patients, with nursing staff having varying knowledge levels of basic nutrition.

Aims: The aim of the study was to assess what the level and breadth of nutritional knowledge held by the nurses working in four metropolitan dialysis settings in Adelaide.

Methods: Questions were formulated based on nutritional information supplied to renal course students from the senior dietitian. Survey questions were distributed to the dialysis units and staff encouraged to complete.

Results: Although the survey was small (27 participants) some important areas of knowledge deficit were revealed. 48% of respondents answered a question about phosphate binder administration incorrectly. Just over a third of the participants were unable to correctly identify the major preventions of malnourishment, whilst around 25% would not refer a patient to the dietician if concerned about patient nutrition.

Conclusion: From this small study several deficits have been identified in the nutritional knowledge of renal nurses. Some limitations of the study questions need to be addressed. A follow up study would be useful.

The effect of Intrarenal; Inducible Nitric Oxide Synthase Inhibition on Renal blood flow and function in Hyperdynamic Sepsis: P43

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Background and Aim: In experimental hyperdynamic sepsis, renal function deteriorates despite renal vasodilatation and increased renal blood flow (RBF). Since nitric oxide (NO) derived from inducible nitric oxide synthase (iNOS) is increased in sepsis and participates in RBF control, we investigated the effects of intrarenal infusion of three NOS inhibitors with different isoform selectivity in septic acute kidney injury.

Subjects: Twelve merino ewes.

Setting: University-affiliated research institute. **Design:** Prospective cross-over and randomized-control interventional studies.

Intervention: Examination of responses to intrarenal infusion of a selective iNOS inhibitor (1400w), a relatively selective iNOS inhibitor (Aminoguanidine;AG) and non-selective iNOS inhibitor (L-NAME) for 2 h in unilaterally nephrectomised conscious sheep administered E.coli.

Measurements and Main Results: In sheep with non-hypotensive hyperdynamic sepsis, plasma creatinine (p-Cr) increased (33 to 17 mL/min) despite increased RBF (241 to 343). Infusion of 1400w did not change RBF, urine output (UO) or p-Cr, whereas infusion of L-NAME and a high dose of AG normalized RBF, but p-Cr did not improve.

Conclusions: Intrarenal infusion of a highly selective iNOS inhibitor did not reduce the elevated RBF during hyperdynamic sepsis, whereas a non-selective NOS inhibitor and a high dose of a relatively selective iNOS inhibitor restored RBF. None of these inhibitors improved renal function. These data suggest that increased synthesis of NO, probably mainly from endothelial and neural NOS, contributes to the renal vasodilatation in hyperdynamic sepsis, but they do not support a role for increased NO in the AKI that develops.

Appropriate Gentamicin dosing and monitoring for patients on intermittent haemodialysis: P44

Mrs Margaret Jacks
Royal Brisbane and Women's Hospital
Ms Pauline Nicholas
RBWH

The addition to staff of a renal pharmacist provided the opportunity to develop and review a number of work unit and hospital guidelines for medication administration and dosage appropriate for renal patients.

This poster will outline the systematic literature review for Gentamicin dosing and monitoring to examine the current best practices for intermittent haemodialysis patients towards writing a protocol for our service.

The implications for practice from the systematic review revealed that clearance of Gentamicin was dependent upon a number of variables. Primarily that the pre-dialysis dosage recommended was pharmacokinetically ideal, but it is not logistically possible to administer the post sample as suggested.

The systematic review revealed that a more extensive review is required, and that the use of dialysis and pharmacokinetic software programs may be of assistance in developing individualised dosage. In practice, the protocol will consider inpatient and outpatient procedures, and recommend seeking alternative aminoglycoside antibiotics if the treatment is to be longer than 48 – 72 hours.

Cinacalcet HCL a possible solution to the prevention of secondary hyperparathyroidism in children with CKD: P45

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Background: Renal Osteodystrophy (ROD) is a serious complication seen in children with chronic kidney disease (CKD) stage four and five. ROD can be severe in this group of patients and clinical and biochemical management of these patients remain a challenge. Secondary hyperparathyroidism (SHPT) is the most common skeletal lesion seen in children on renal replacement therapy (RRT). It occurs as a result of disturbances in the metabolism of Vitamin D, calcium and phosphate. The combination of the complex interplay with parathyroid hormone (PTH) eventually leads to SHPT.

Aims: Review use of Cinacalcet HCL in children with SHPT. Although Cinacalcet HCL has been used successfully in adults there is limited data on its safety and efficacy in children.

Methods: Seven children on RRT (5 on peritoneal dialysis and 2 on haemodialysis) with poorly controlled ROD and persistently elevated PTH levels, on standard therapy regimen were commenced on Cinacalcet HCL. Client review of clinical progress and biochemical findings was monitored over nine months.

Results: Favourable response to Cinacalcet HCL was observed. There was a reduction in PTH levels with minimal changes to calcium and phosphate levels.

Conclusion: The experience in our unit with our seven patients on renal replacement therapy on Cinacalcet HCL was encouraging. It was evident that there was a response to Cinacalcet HCL in children who took their medication as prescribed and adhered to their dietary recommendations.

Characteristics of Peritoneal Dialysis patients: P46

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Ms Veronica Britos
Liverpool Hospital
Ms Jennifer Bradley
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Ms Belinda E Butcher
WriteSource Medical Pty Ltd

Background: The aim of this analysis was to characterise the peritoneal dialysis (PD) patients population in Australia included in the Renal Anaemia Management (RAM) database.

Method: Data from PD patients were extracted from the RAM database from November 1999 to 30 September 2010. The RAM database is a database that collects information on the outcomes of patients with chronic kidney disease at 20 centres in Australia. Demographic, erythropoietin stimulating agent treatment, and iron treatment data were extracted.

Results: There were 5,758 PD patients who were receiving erythropoietin stimulating agents (ESA) and had data available. Their average age was 67 ± 15 years, 7% were of ATSI heritage, and 53% were male. The most frequent primary diagnoses reported were non-insulin requiring diabetes type 2 (15%), and insulin-requiring type 2 diabetes (12%). Common co-morbidities included hypertension requiring treatment (22%) and diabetes (21%). In terms of CARI haematological targets, 45%, 39%, and 17% were within target for haemoglobin, ferritin and transferrin saturation, respectively.

The proportion of patients below, within and above CARI targets was influenced by whether or not a patient was of ATSI origin ($p < 0.001$ Hb and ferritin, $p = 0.02$ for transferrin saturation). Most patients (63%) were receiving darbepoetin alfa as their ESA. The mean \pm SD weekly ESA dose was $5,956 \pm 4,476$ IU or 32.9 ± 27.5 μ g. If the patient was receiving iron ($n = 1,123$), it was usually intravenous (98%) and iron polymaltose (98%). The median cumulative iron dose for the preceding 12-months was 1,000 mg.

Conclusion: Most PD patients aren't achieving CARI iron targets, but are receiving ESA.

We Will Not Be Abused: One Renal Unit's Experience of Managing Abusive and Violent Patients: P47

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We Will Not Be Abused: One Renal Unit's Experience of Managing Abusive and Violent Patients

Context: Aggression from patients in health services is a common and difficult problem. In the haemodialysis setting, where patients require ongoing life saving treatment, it is especially complex. Patients who display abusive or violent behaviours while in the dialysis unit adversely affect the safety and well being of staff and other patients. Without treatment, the patient's life is compromised. This unit has developed an individual behavioural management plan to provide the life-sustaining treatment of dialysis for patients who display abusive or violent behaviour.

Objectives: To share information on how one inner-city outpatients renal unit manages and treats dialysis patients who display abusive and/or violent behaviour towards staff and patients.

Key Messages: Aggression/abuse from patients in the workplace should not be tolerated. The key measures utilised to manage this common and complex issue in our renal unit includes:

- Hospital's Code Grey and Code Black systems
- Psychiatric Liaison Nurse;
- Develop individual management plans with involvement of the multi-disciplinary team, patient and family
- Staff support networks

Conclusions: Our experience indicates that urgent and prompt action to deal with abusive patients must be a priority in order to maintain a comfortable, safe environment for both staff and patients.

Introduction of Transonic monitoring to a dialysis unit: Benefits and Challenges: P48

Mrs Debbie Knagge
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Dr Catherine McGinn
RNS Hospital

Background: Vascular access is considered to be the Achilles heel of all haemodialysis nurses and nephrologists. Essential to patients achieving adequate dialysis is routine assessment and monitoring to ensure well functioning vascular access. Several methods of surveillance are available including duplex ultrasound screening and ultrasound saline dilution technique (Transonic System).

Aim: The aim of using the Transonic System was to enhance and formalise access assessment and surveillance.

Method: Introduction of monthly access flow measurements into an in-centre and two satellite Sydney Metropolitan units along with training of staff and education of patients.

Results: In the first month of using the Transonic System 38% of patients, out of a population of 29, were found to have flows lower than guideline recommendations, requiring follow-up medical procedures to improve the access, in turn resulting in -

- An increase in workload for the Access Coordinator to schedule the followup procedure.
- Need for complete up-take of monitoring by nursing staff, with education in by the procedure and benefits justifying the additional surveillance activity.
- Increased case load for interventional radiologists and the staff in the radiology department.

Conclusion: Being new territory for our renal service it has been necessary to respond to the resulting demand as best as possible with existing resources including availability of beds. Time will show if a resulting decrease in clotted access is achieved as a result of proactive intervention and also identify the ongoing level of resources appropriate to respond to the ongoing demand.

Measuring response to IV Iron in ESA naive CKD patients: P49

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Ms Fiona Rettie
Royal Darwin Hospital
Ms Anne Arnold
Flinders Medical Centre

Background: Adequate iron stores are required to prevent anaemia in chronic kidney disease patients. We aimed to determine the effect of iron administration on haemoglobin, ferritin and transferrin saturation in pre-dialysis and general nephrology patients.

Methods: Data from pre-dialysis and general nephrology patients These groups were extracted from the Renal Anaemia Management database for the period November 1999 to October 2010. Data was extracted in the period immediately prior to an iron dose and then again 3-months following that dose. Data were excluded if an additional iron dose was given in the intervening period.

Results: Data were available for 1,180 patients. Their average age was 70 ± 14 years, and 50% were male. The most common known primary disease was non-insulin requiring type 2 diabetes (16%). Mean haemoglobin, ferritin and transferrin saturation increased following iron (117 ± 15 g/L vs. 107 ± 13 g/L, $df=310$, $p<0.0001$ paired t-test; 440 ± 301 μ g/L vs. 214 ± 201 μ g/L, $df=158$, $p<0.0001$, paired t-test; and 27 ± 12 % vs. 19 ± 10 %, $df=161$, $p<0.0001$ paired t-test; respectively). There was no change in creatinine clearance or estimated glomerular filtration rate following iron (23 ± 10 mL/min/1.73m² vs. 24 ± 10 mL/min/1.73m², $df=57$, $p=0.597$ paired t-test; 23 ± 11 mL/min vs. 23 ± 10 mL/min, $df 27$, $p=0.690$ paired t-test; respectively). Prior to iron administration, 6 patients had required a total of 6 blood transfusions of between 1 and 10 bags of blood. Following iron administration, 6 patients required blood transfusions of between 1 and 3 units of blood.

Conclusion: Administration of iron to pre-dialysis or general nephrology patients improves haemoglobin, ferritin and transferrin saturation levels.

Does exercise improve haemodialysis patients' quality of life? A review on a new exercise program involves one on one training with the exercise physiologists: P50

Miss Shi Tao Joyce Li
Southern Health

Aim: To prove that this exercise program improves the quality of life of end stage renal failure patients, who are on haemodialysis.

Background: The demands of intermittent haemodialysis on people with Stage 5 Chronic Kidney Disease (CKD) often results in a significant reduction in their quality of life (QOL). The co-morbidities that accompany CKD dramatically decrease these patients' physical health, resulting in low exercise capacity, muscle wasting, bodily pain, and declined self-independence. Given the correlation between physical and psychological health, mental well-being is subsequently affected. Depression is the most predominant mental disturbance among CKD patients. These impacts have made patient care very challenging. Nevertheless, health care providers endeavour to develop better care and improve the QOL of CKD patients.

Method: An exercise program was introduced at a dialysis unit in Victoria. In collaboration with the exercise physiologists, the selected patients receive one on one exercise training for a period of six-months.

The participants were required to undertake surveys before and after the exercise program to assess their QOL. The KDQOL-36 questionnaire was the main measurement tool.

Results: Comparison of the pre and post exercise results will be shown, along with an analysis of the results.

Conclusion: The result of this exercise program has proved that with the commitment from the patients themselves, and support of health professionals, QOL of CKD patients can be achieved. Through this poster, the importance of the exercise should be recognised and the message should be passed onto all the CKD patients and the dialysis units.

Correction of 25-hydroxy vitamin D [25(OH)D] deficient haemodialysis patients and effects on parathyroid hormone (PTH) levels: P51

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Background: 25-hydroxyvitamin D [25(OH)D] deficiency is highly prevalent in haemodialysis patients and a risk factor for hyperparathyroidism. Effect of reduction in serum parathyroid hormone (PTH) with Vitamin D3 supplementation offers new frontier for treatment.

Aim: To assess the prevalence of 25(OH)D deficiency in haemodialysis patients and study the reduction in PTH and effects on serum calcium and phosphorus following Vitamin D3 therapy.

Method: A prospective cross-sectional study was conducted in a satellite haemodialysis unit from September 2009 to August 2010. Serum 25(OH)D and PTH was measured at baseline and then every 3 months. Oral Vitamin D3 was administered in doses of 6,000 IU/week for insufficiency (50-75nmol/l) and 18,000 IU/week for deficiency (< 50 nmol/l).

Results: 94% patients (n=55) had low 25(OH)D levels at baseline. Baseline 25(OH)D and PTH (mean±SD) (n=58) were 35±18 nmol/l and 45.2±38 pmol/l. 44 patients completing at least 6 months of treatment were analysed. Serum 25(OH)D and PTH (mean±SD) levels at baseline, 3, 6, 9 months were 54±24.8, 56±24, 63±22, 81±35 nmol/l; and 41.2±32.3, 32.8±31.1, 23.1±21.4, 41.0±11.0 pmol/l respectively. Three patients with severe hyperparathyroidism (PTH > 90 pmol/l) achieved normalised PTH (<32.0 pmol/l) without calcium sensing receptor agonists or parathyroidectomy. Serum calcium remained below 2.7 mmol/l.

Conclusion: Correction of 25(OH)D deficiency in haemodialysis patient leads to PTH reduction and may avoid parathyroidectomy. Patients with high PTH benefited most with Vitamin D3 supplementation. Current regime was safe and well tolerated without hypercalcaemia. Large systemic studies are needed to evaluate its benefit in larger population.

Relationship between Hyperparathyroidism & Low Vitamin D 25-hydroxy & 1,25 dihydroxy: P52

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Ms Sue Sheehan
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Ms Beverly Hiles
Lismore Hospital
Ms Sue Johnson
Wollongong Hospital

Background: Elevated parathyroid, low 1,25 dihydroxyvitamin D & 25-hydroxyvitamin D, results in rapid bone turnover, osteomalacia & bone loss. This may affect ESA responsiveness.

Aim: to determine the association between Vitamin D, PTH & Hyporesponsiveness to Erythropoietin Stimulating Agent (ESA)

Method: Data from pre-dialysis, peritoneal dialysis and haemodialysis patients was extracted from the Renal Anaemia Management database for the period November 1999 to October 2010. Patients were categorised as being hypo responsive or responsive to ESA. Hyporesponsive was defined as erythropoietin or darbepoetin requirements greater than 300 IU/kg/week or 15µg/kg/week, respectively. 25-hydroxyvitamin D deficiency was defined as a level <50 nmol/L, and insufficiency as a level between 50 and 74 nmol/L.

Results: There were 229 patients who had vitamin D PTH information available. The mean age was 63±14 years, 11% were of ATSI origin and 56% were male. The most common primary diagnosis was insulin-requiring type 2 diabetes (14%). Most patients were on haemodialysis (67%).

There was no difference in mean 1,25-dihydroxy vitamin D levels between those with ESA hyporesponsiveness and those with ESA responsiveness (66±30 vs. 55±29 pmol/L, df=35, p=0.265); nor was there any difference in mean 25-hydroxy vitamin D levels (55±26 vs. 55±26, df=158, p=0.994). Conclusion: We found no differences in vitamin D levels between those with and without ESA hyporesponsiveness. Further research, with larger patient numbers is warranted to confirm this lack of association.

Walking with the dialysis client: Pastoral Care Project: P53

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Canberra Hospital
Mr Clair Hochstetler
The Canberra Hospital
Mrs Gai Marshall
The Canberra Hospital

Background: Our Unit wished to include provision of spiritual care to our clients within our holistic care and approached the Pastoral Care Manager to assist.

Aims: To include a Pastoral Care Practitioner (PCP) role in the team. The PCP will

1. Emotionally and spiritually walk with the clients supporting them through their individual journeys as dialysis clients
2. Provide emotional and spiritual support to staff
3. Pastorally assist with end of life decisions.

Methods: The newly appointed PCP created a new service in the Unit by

1. Meeting with staff to explain her role and establishing a trusting relationship with the team
2. Developing a relationship with clients by visiting regularly and creating a space in which the client develops a sense of trust and safety to discuss their feelings.
3. Undertaking training to assist clients in completing Advanced Care Plan documents.

Results: The role provides invaluable assistance to both clients and staff evidenced by

1. Providing supportive care to many clients by encouraging them to explore their emotions and spirituality.
2. Facilitating remembering and honouring rituals for clients and staff to address the loss and grief felt when clients die
3. Encouraging clients to use self empowering techniques such as relaxation, visualisation and journaling
4. Providing a link with the dialysis community for socially isolated clients
5. Liaising with the multi disciplinary team to provide holistic care

Conclusions: The PCP has become a valued member of the Unit's team which delivers excellent holistic care to our dialysis population.

Survival of patients who commence dialysis at the age of 70 and over: P54

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Belinda Butcher
Biostatistics and Medical Writing
Jennifer Bradley
Manager - Anaemia Coordinator
Programe, Janssen

Background: Previous studies have reported the 5-year survival rate of patients over 60 years of age who are starting dialysis at around 50%. The aim of our analysis was to determine how long our CKD patients who are over 70 survive once they start dialysis.

Methods: Data from haemodialysis and peritoneal dialysis patients aged 70 or over were extracted from the Renal Anaemia Management database for the period November 1999 to October 2010. We estimated the median survival of these patients following dialysis start using the Kaplan-Meier method.

Results: There were 3,184 patients that had data available for analysis. The mean age was 77 ± 5 years, and the majority (60%) were male. The mean estimated GFR calculated using the MDRD formula was 8.4 ± 4.7 mL/min ($n=322$), while the mean estimated creatinine clearance (calculated using Cockcroft-Gault formula) was 11.1 ± 4.7 mL/min/ $1.73m^2$ ($n=48$). During the period, 2,050 (64%) patients died. After a median follow-up of 4.4 years (range 1 day to 27 years), the median survival was 5.5 years [95% CI: 5.3 to 5.7 years].

Conclusion: Following commencement of dialysis, patients aged 70 or over survive an additional 5 years.

Implications of Emotional Intelligence for staff working with Chronic Kidney Disease patients: P55

Miss Afra Masia-Plana
Royal Brisbane and Women's Hospital

According to international studies (O'Connor 2008) (Akerjordet & Severinsson 2010) Emotional Intelligence is directly related to positive human values including life satisfaction (Extremera 2002), health and emotional well being (Slaski & Cartwright 2004), quality of interpersonal relationships (Bar-on 2000), and work success (Salovey et.al 2002).

The poster will present a brief overview of the development of Emotional Intelligence and include a definition and concepts of Emotional Intelligence. As the Chronic Kidney Disease patients go through different emotional stages such as anxiety, stress, depression, etc, the staff that are in permanent contact with them have to be ready to cope with them, therefore a good level of Emotional Intelligence would be appropriate for them to achieve. Personal, professional and organisational implications in relation to Emotional Intelligence will be addressed and strategies will be offered to increase the level of Emotional Intelligence in staff working with Chronic Kidney Disease patients.

The poster will also include justification for the use of Emotional Intelligence for the staff working with Chronic Kidney Disease patients and propose expected outcomes including longer working life, prevention of burnout, prevention of depression, little to no absenteeism, and controlling of emotions for both staff and patients.

The use of Alternative Therapy to Clear Vancomycin Resistant Enterococcus (VRE) in Haemodialysis Clients: P56

Mrs Chari Mercado
Canberra Hospital

Background: VRE (vancomycin resistant enterococcus) positive haemodialysis clients are increasing in numbers despite the hospital's infection prevention and control guidelines the unit was adhering to. The unit decided to clear these clients using probiotic therapy based on a study conducted by KJ Manley et al which resulted in these clients becoming VRE negative after using probiotic therapy in weeks.

Aim:

- Reduce the number of VRE positive haemodialysis clients by using Probiotic Therapy.

Methods:

- VRE positive clients in the haemodialysis unit were identified, given verbal and written information and verbal consent sought to participate in the study.
- Pathways to commence and to clear VRE positive patients were followed according to the Infection Prevention and Control guidelines.

Result: At the end of the study there was a 58% reduction in VRE positive clients.

Conclusion: The result of the study shows that the use of probiotic treatment is effective in clearing VRE positive clients and assists in the prevention and control of the spread of VRE.

Exploring New Territory: Our Experience with an online Education Module: P57

Ms Jodie Morgan
North West Dialysis Service,
Melbourne Health
Ms Jenny Beavis
NWDS, Melbourne Health
Janice Pickering
NWDS, Melbourne Health

Background Since the introduction of an annual skill assessment in 2000, the mandatory completion of assessments has provided staff with ongoing professional development and has reinforced knowledge of organisational policy and procedure. Whilst staff have consistently achieved the target of 100% successful completion, growth of the service and workforce has increased the demands on educators. An increased trend to part time work requires more flexibility from both educators and staff to deliver and complete assessments.

We took on the challenge of introducing an on-line skill assessment with the objective of reducing the time required of educators to conduct the assessment and to improve accessibility for staff.

Aim: To implement an on-line skill assessment tool to improve delivery efficiency.

Method: Internet-based open-source education software was used to create an on-line assessment package. A bank of 100 questions was formulated relating to organisation and departmental policies, drug and fluid calculations and dialysis specific medications. The questions were reviewed for relevance and ambiguity. Individual assessments comprised 20 selected questions. The time taken in the delivery, processing and completion of assessments was reviewed.

Results: The on-line tool has made for easier delivery of education. There was a substantial improvement in time required for delivery, assessment and feedback. Staff response to the assessment method was positive.

Conclusion: As a result of the improvement in efficiency of education delivery and the positive response of staff, we will use this tool for future skill assessments, and will be able to include the wider network of regional staff.

Educational needs for people with advanced Chronic Kidney Disease choosing supportive care: A literature review: P58

Mrs Jacqui Moustakas
Royal Prince Alfred Hospital
Ms Jane Nicholson
Royal Prince Alfred Hospital
A/Prof Paul Bennett
Deakin University / Southern
Health Nursing Research Centre
Dr Shelley Tranter
St George Hospital

Background: Despite much being written about the symptom management of people with advanced chronic kidney disease who have chosen supportive care, there is little research on why the patient and or their carer and family made this decision and what assistance they require after this decision has been made.

Objectives:

1. To identify why the supportive care pathway had been chosen by the patient and or their carer and family.
2. To identify future areas for research that would benefit the patient and or their carer and family when making this decision.

Results: Themes from the literature review included 'the need for shared decision-making between the patient, carer and their family and health professionals', 'how the patient perceives their quality of life' and 'level of patients educational support'. More specifically there was a lack of evidence based knowledge in why patients chose supportive care and discrepancy between what the health professional and the patient thought regarding why the decision had been made. In the literature there was also a lack of consistency in the terminology, for example a definition of elderly, which made it difficult to make clear comparisons.

Conclusion: On review of the literature there appeared to be a difference in what the patient needed to assist them in making the decision to dialyse or not compared to what the health profession thought they needed. This finding has implications for clinicians, managers, educators and researchers.

Social, Spritual, Psychological effects of Dialysis on Aboriginal Auatralians Dialysing in Metropoiotan Areas: P59

Mrs Bharti Nathoo
Diaverum Renal Group Services

Objective: Creating an awareness within the Renal Fraternity of the plights of patients from rural, remote as well as country areas and reviewing of our health care system to ensure accessible and equitable health care

Contents: Observational study with a questionnaire for patients to survey so that issues affecting their daily activities of life is highlighted, enabling us to provide a holistic approach to healthcare

Key message: Being aware of the issues and creating a multidisciplinary approach to alleviate the problems/issues. Reviewing the infrastructure, establishing more facilities as well as creating positions for more specialised staff to be deployed in remote, rural arrears. preventing patients travelling to metropolitan regions for dialysis, as well as ensuring that the family unit is not displaced .

Conclusion: More research as well review of current health care and provision of health care facilities

There are many ways to change a dialyser: P60

Mrs Pauline Nicholas
Royal Brisbane and Women's Hospital
Dr Sharad Ratanjee
Haemodialysis RBWH
Ms Kerriann Morrissey
Haemodialysis RBWH

With the arrival of new dialysers in the market, although driven by economy but seeking best practice for patients, we saw an opportunity for staff members to enter into research practice through a soft approach which could also help inform product choice in our unit.

This poster will present the results of a prospective audit of dialysers within our department, and the outcomes of introducing small projects to garner enthusiasm for research from within the haemodialysis nursing staff.

A prospective audit was undertaken on 28 patients on a modified cellulose dialyser (Exceltra) who were randomly selected into two groups at 3 months. Group A remained on Exceltra for further 3 months, and then switched to Xenium (a fully synthetic dialyser) for 3 months. Group B were switched to Polyflux (a fully synthetic dialyser) for 6 months. Biochemical data was noted over the full review period.

Group A data were compared pre and post change of dialyser, that is within group analysis, for CRP and Phosphate. Similarly for Group B. Group A were then compared to group B after change to respective synthetic dialysers, that is between group analysis (CRP and beta 2 microglobulin).

As expected for a short review period, there was minimal change noted for CRP and phosphate, but clearances for beta2 micro globulin were improved for the Polyflux dialyser. The attempt to garner interested persons from within the haemodialysis nursing staff to perform the research was unsuccessful, and this is outlined further in the full presentation.

Staff perceptions of Supernumerary Time in Haemodialysis: P61

Ms Peggy Ooi
Flinders Medical Centre
A/Prof Paul Bennett
Deakin-Southern Health Nursing
Research Centre
Ms Kathy Hill
Flinders Medical Centre

Background: In South Australia, supernumerary time for nursing staff commencing in haemodialysis units varies between 5 to 20 days. Supernumerary time is defined as the period of time in which a staff member is additional to the number of staff rostered per shift. Supernumerary time also includes time spent for unit orientation.

Aim: To explore South Australian metropolitan haemodialysis nurses' perceptions of their unit's practice regarding supernumerary time.

Method: The survey was designed and posted on a web-based survey tool. Information about the survey was sent to all South Australian haemodialysis unit Clinical Service Coordinators and South Australian Renal Society of Australasia members. The survey comprised 10 questions covering demographic, quantitative and qualitative replies.

Results: A total of 71 nurses participated and over 60% were experienced haemodialysis nurses. The other 40% of responses comprised of beginner, novice and intermediate. Supernumerary time received for 62.5% of respondents was 1 to 5 days, 21.9% received 6 to 10 days and 15.4% received greater than 10 days. The overwhelming majority of respondents felt that supernumerary time should be greater than 5 days.

Conclusion: The findings of this survey will be used to make a recommendation to the Adelaide Health Service and SARNEG (South Australian Renal Nurse Education Group) that supernumerary time in haemodialysis be standardised across all units. The duration of supernumerary time should be greater than 5 days.

CKD Patient Passport: P62

Ms Penny Paton
Monash Medical Centre
Southern Health, Victoria

Increasing numbers of patients presenting to dialysis unprepared, with little or no education and no access, prompted review of the management of predialysis patients with Chronic Kidney Disease (CKD) Categories 3,4 & 5.

The objectives of this project are to improve the provision of care to people with near end stage renal failure, improve patient access to predialysis education and services, and to facilitate timely surgical access when dialysis is the treatment of choice.

The CKD Patient Pathway was reviewed. To give patients autonomy it was decided to use a patient held document, the Patient Passport, kept and managed by them, to guide them through the steps of making a decision re End Stage Kidney Failure Options, and implementing their decision. A consumer patient group was consulted. The Patient Passport is designed to be used with the assistance of medical, nursing and Allied Health staff to enable patients to track information gathering, decision making, and practical requirements eg. medical and surgical appointments, on the journey to their treatment choice.

Annual audits are conducted. Of patients commencing dialysis excluding late referrals, 50% attended formal education sessions, and 58 % commenced haemodialysis with permanent access in 2009. We hope to improve these results with the implementation of the Patient Passport and will report on this in the future.

Developing an e-learning package for nurses about Chronic Kidney Disease Mineral and Bone Disorder (CKD-MBD): P63

Ms Debbie Pugh
Prince of Wales Hospital
Ms Jennifer Beavis
North West Dialysis Service, Royal
Melbourne Hospital, Melbourne
Ms Angela Henson
Princess Alexandra Hospital, Brisbane

The Nephrology Educators Network (NEN) launched their first e-learning package in 2010. NEN's ongoing commitment to education is to develop a number of e-learning packages, one of which is Chronic Kidney Disease Mineral and Bone Disorder (CKD-MBD). CKD-MBD is an integral area in the care of kidney disease. It is a complex disorder that is associated with patient mortality and morbidity.

Collaboration was formed between three speciality nurses working in this area to develop a national information and interactive e-learning package. E-learning is an active form of learning that offers engagement, flexibility, provides ongoing feedback, is accessible and easy to use. This e-learning package will be available to all staff, via the NEN website.

The package will be divided into two sections: an introductory section and an advanced section. All aspects of kidney dysfunction associated with CKD-MBD will be explored including symptoms, management, treatment and the nursing role. These will be explained and explored via quizzes, case studies and feedback scenarios. The development of this e-learning package; the introductory and advanced objectives and the anticipated rollout will be explored and explained in more detail in this presentation.

Dialysis Workforce Innovations: Creating a sustainable future: P64

Ms Wendy Purcell
Western Health
Ms Krystyna Bender
Western Health
Ms Marie McIntosh
Western Health

Context: In the last three years our renal service has undergone a rapid increase in demand for dialysis. To meet this demand, a change to our workforce model was required beyond our current staff cohort of Division 1 RNs.

We identified 2 groups of nurses who could be HD trained and contribute to building a sustainable future workforce model:

- a. Graduate Registered Nurses
- b. Enrolled Nurses - IV medication endorsed

Key Messages: Our health service employs approximately 120 newly graduated RNs each year, who undertake 3 workplace rotations in 12 months. We coordinated the inclusion of haemodialysis, never previously offered, into the program. In February 2009 graduate nurse rotations commenced into our acute and satellite dialysis units.

The enrolled nurse program was part of a wider health service initiative to increase the number of ENs in our workforce. Grants were made available that allowed us to train ENs in haemodialysis nursing.

Role descriptions and scope of practice for these new positions had to be defined. Training packages were developed including education days, a competency based training manual, and on-line e-learning. The existing Division 1 workforce was offered education in supervision and mentoring the new workforce.

Barriers encountered included staff fears regarding perceived competence of the different workforce, the burden of continually training new staff, and traditional roster practices around skill mix.

Conclusion: Graduate RNs and ENs have been successfully incorporated into our dialysis workforce, increasing the sustainability of our workforce to cater to future growth in demand for dialysis.

Impact of a switch to synchronised, once-monthly ESA administration on nurses' workplace satisfaction: A single-centre experience: P65

Ms Glenda Rayment
South West Sydney Local Health
Network
Associate Professor Josephine Chow
South Western Sydney & Sydney
Local Health Network
Dr Bruce Cleland
South Western Sydney Local Health
Network
Professor Michael Suranyi
South Western Sydney Local Health
Network

Background: Treatment of anaemia associated with chronic kidney disease using erythropoiesis-stimulating agents (ESAs) is time consuming for nurses. Time-and-motion studies indicate ESA administration takes between 31 and 75 working days/year (100-patient unit). Use of a once-monthly ESA for haemoglobin maintenance in dialysis patients offers haemodialysis units the potential to coordinate ESA administration to the same 1 or 2 days each month ('ESA synchronisation'). This may reduce demands on healthcare resources, including nursing hours required to manage ESA administration.

Aim: This single-centre, qualitative study investigated whether a unit-wide, synchronized ESA regimen impacted nurse satisfaction, with respect to efficiency of ESA administration, and resulted in a perceived reduction in workload.

Methodology: A baseline survey (N=39) assessed nurses' satisfaction with care provided in their unit and their views about ESA synchronisation. The survey was repeated at 3 and 9 months post-ESA synchronisation.

Results: A McNemars test was used to analyse any change in the responses collected post-synchronisation, compared with those from baseline. It was revealed that significantly more nurses agreed that ESA synchronisation would not increase their workload (P=0.005), and that they would cope well with the introduction of the ESA synchronisation regimen (P=0.005).

Conclusion: Findings from this single-centre, qualitative study assessing nurse satisfaction following unit-wide, ESA synchronisation suggest that a simplified ESA treatment regimen is likely to be well-received by nurses. Ongoing analyses will determine whether this regimen can reduce demands on healthcare resources, including nursing hours required.

Preceptorship in Vascular Access Nursing: P66

Mrs Gail Read
Royal Hobart Hospital

Background: Despite recognition of the importance of education and preceptorship, when establishing the role of vascular access coordination in Southern Tasmania, there was limited opportunity for clinical learning in this field. The absence of a formal Australian tertiary clinical education programme and preceptorship programme to assist in role transition provided significant challenges to establishing this new role

Aims: Given a lack of structured education for nurses commencing the vascular access coordination role, the objective of any clinical learning in the vascular access area should facilitate knowledge acquisition and skill development.

Method: The assistance of the Amgen/RSA Career Mobility Sponsorship facilitated an opportunity to participate in preceptorship programs at a local, national and international level, providing the transition and networking support essential for developing optimal clinical outcomes. A multifaceted approach was taken to make a successful transition to the vascular access nursing role. This included membership of vascular access interest groups, attendance at relevant courses which covered surgical, radiology and ultrasound procedures. Significant research of relevant literature underpinned all of these activities and collectively this approach provided a solid foundation for achievement of educational outcomes.

Results: Undertaking these activities has been successful in enacting the professional role of vascular access nurse and implementing best practice standards for patient care in this field.

Conclusion: In future, these activities could be a model of education that is a useful resource for the planning, implementation and education for new vascular access nurse roles.

Vitamin D and Hyporesponsiveness: P67

Mrs Gail Read
Royal Hobart Hospital
Ms Margaret Morris
St. Vincents Hospital
Ms Tracey Mandic
Barwon health
Mr. Sean O'Sullivan
Alfred Hospital
Mrs. Belinda Butcher
Biostatistics & Medical Writing
WriteSource Medical Pty Ltd

Background: Secondary hyperparathyroidism (which is caused by vitamin D deficiency) is associated with erythropoietin replacement therapy (ERT) hyporesponsiveness. The aim of this study was to determine whether vitamin D deficiency itself is associated with hyporesponsiveness to ERT.

Method: Data from pre-dialysis, peritoneal dialysis and haemodialysis patients were extracted from the Renal Anaemia Management database for the period November 1999 to October 2010. Patients were categorised as being hyporesponsive to ERT if their erythropoietin or darbepoetin requirements were greater than 300 IU/kg/week or 15µg/kg/week, respectively. 25-hydroxyvitamin D deficiency was defined as a level <50 nmol/L, and insufficiency as a level between 50 and 74 nmol/L.

Results: There were 229 patients who had weight and vitamin D information available: 227 had 25-hydroxy levels and 44 had 1,25-dihydroxy levels recorded. Their mean age was 63±14 years, 11% were of Aboriginal or Torres Strait Islander origin and 56% were male. The most common primary diagnosis was insulin-requiring type 2 diabetes (14%). Most patients were on haemodialysis (67%). 25% of patients were considered vitamin D sufficient, 31% were insufficient and 44% were deficient. There was no difference in mean 1,25-dihydroxy vitamin D levels between those without ERT hyporesponsiveness and those with (66±30 vs. 55±29 pmol/L, df=35, p=0.265); nor was there any difference in mean 25-hydroxy vitamin D levels (55±26 vs. 55±26, df=158, p=0.994).

Conclusion: We found no differences in vitamin D levels between those with and without ERT hyporesponsiveness. Further research, with larger patients numbers is warranted to confirm this lack of association.

The Role of the Renal Rural Clinical Practice Consultant in South Australia: P68

Mrs Christine Russell
Central Northern Adelaide Renal
and Transplantation Service

Background: The Rural C.P.C. position was created in January 2010 as a result of recommendations made by the Renal Clinical Network in response to the rapidly increasing demand for haemodialysis services in country S.A. These services were previously co-ordinated through the Home Dialysis Unit.

Aim: To transform health outcomes for patients in regional dialysis settings.

Discussion: The purpose of this presentation is to describe this new and innovative role that has been created in South Australia. It is a varied and challenging role that encompasses:

Transitioning the model of care from Home Dialysis to a Satellite model

Identifying the educational requirements for regional dialysis staff, and developing an education pathway in conjunction with the Post Graduate Nephrology course.

Improving communication and patient pathways with the metropolitan units and the parent hospital.

Providing nursing representation to Country Health

Standardization of policies and procedures across regional units .

Introduction of new technologies.

Conclusion: Whilst this role is in its infancy, transformation is occurring with an increase uptake in the Post Graduate Nephrology Course, improved communication and collaboration between metropolitan and regional dialysis units, and a raised awareness of the complexities and challenges faced by staff and patients in the regional setting.

Clinical Pathways: Maintaining Quality and Continuity of Care: P69

Mrs Hasija Salihovic
Melbourne Health
Mrs Jo-Anne Moodie
NWDS/Melbourne Health
Mr Jamie Rutherford
NWDS/Melbourne Health

Our dialysis service operates under a hub and spoke model, with new patients directed to commence dialysis in-centre before transfer to a satellite dialysis unit. If introductory tasks are not completed in-centre, patient transfer to satellite units is delayed. Anecdotal evidence suggested that the existing clinical pathway for new dialysis patients was not adequate to ensure that all tasks were completed in the allocated timeframe. Therefore, we undertook an audit to identify problem areas.

Over a 3 month period, an audit of medical records for 25 new patients identified that using the clinical pathway dialysis management form yielded on average a 60% form completion. Items missed included administration of hepatitis B vaccination in accordance with treatment parameters set out in unit protocol and only 50% of the required data entered into the renal patient database.

To address these issues, we redesigned our dialysis management form, to include a more detailed checklist. Recommended changes to the clinical pathway were submitted to the Documentation Committee with the revised form released for use 12 months after the initial audit.

After its introduction, a follow-up audit of 15 patients indicated on average only 40% of pathways were completed, although there were specific improvements in hepatitis B vaccination administration, adherence to treatment parameters and data entry into renal database.

Although nursing staff remain committed to these improvements, our results show the importance of a timely roll out to maintain momentum. Our experience shows that changing documentation in isolation is not necessarily sufficient to change behaviour.

Dialysis Transport: P70

Ms Kay Schafer
Kidney Support Network

NOT FOR PROFIT ORGANISATION SUPPORTING RENAL UNITS IN VERY PRACTICAL WAYS –HOW DO WE DO IT?

Why is it only available in Queensland? Ambulance services are stretched to the limit all over Australia causing (in many areas) have long waits and unexpected delays to Non Urgent Health Related Transport (Dialysis Transport)

Getting to and from dialysis three times each week is a huge issue for patients and their carers.

In Queensland a dialysis specific transport service has been set up by a not for profit and is running successfully in 5 districts.

Coordinating:

- 14 Vehicles (All getting maintenance checks each time a driver starts)
- Support by >250 Volunteers from the local community
- >2,000 patient trips per month
- Volunteers undergo significant training and are presented in uniforms, id badges, police checks and have medical checks which ensure they are authorized driver.

Challenges:

- Service is Needed: 52 weeks of the year, 3 times each week for each patient (6 trips)
- Early starts 6am /late finishes 11pm
- Not all patients start together or finish dialysis together (Delays due to blood pressure or bleeding is common)

Satisfaction Surveys: Evidence to support that service is reliable. Drivers are caring and go out of their way. Patients, carers and family are extremely grateful for the services and dependant on it continuing.

Transport Volunteers (like nursing staff) become part of the extended family and vital for providing a caring service which understands the patients needs.

Indigenous Art for our walls: P71

Ms Kay Schafer
Kidney Support Network

INDIGENOUS ART ON LOAN TO RENAL UNITS:

Issue: The walls of renal units are always the same. Patients receive treatments 3 times each week 52 weeks of the year. We need to do something to liven up this environment but also make it welcoming to all and also acknowledge our indigenous people and their beautiful art.

Indigenous patients often refuse treatments due to feeling quite displaced when coming for treatments.

Art is therapeutic for patients, interesting for visitors and changing for nursing staff.

A not for profit organisation is engaging with indigenous artists to showcase their art on the walls of renal units.

- At no cost to unit - changing walls
- Exposure for indigenous artists
- Insurance for art is covered by program
- Variety of sizes to suit all walls and colours
- Art available on loan for 3 month period
- Samples of art available for poster

Supporting CKD patients in a disaster: P72

Ms Kay Schafer
Kidney Support Network

DISASTER MANAGEMENT

BE PREPARED TO RESPOND TO EMERGENCY SITUATIONS:

Queensland has seen a lot of emergency situations already in 2011.

It is imperative that kidney patients are able to access dialysis treatments, medications, special diets and more.

Health Departments have emergency responses which are great on paper. Nursing staff are the front line for the patients, how can you be prepared and what things do we need to think about? So that in an emergency situation, how can you bring order out of chaos?

- Type of Disaster - Fires, Floods, Cyclone, Tsunami
- Risk Management – How can you assess the risk to make good decisions
- Plan - What is in place already. Plans are imperative for success. What needs to be included and thought about ahead of time.
- Training - Who needs to know what? Leaders and teams need to know what to do. Discuss options with your team ahead of time. What will you do if you are short staffed?
- Logistics – how to make it actually work in practical terms
- Partnerships – who else needs to come on board eg. transport, support agencies, private hospitals
- Identify Support that patients / carers will need. Minimise stress and anxiety to them by being prepared.
- Debrief – how could you do it better next time, what would you change,

Think it all out in calm times.

Be prepared ahead of time so that it flows!

Why do some patients meet their HB targets while others do not? : P73

Mrs Susan Sheehan
John Hunter Hospital
Ms Pam Fowler
John Hunter Hospital
Ms Veronica Britos
Liverpool Hospital
Ms Beverley Hiles
Lismore Base Hospital
Mrs Jennifer Bradley
Janssen Ciilag
Mrs Belinda Butcher
Write Source Medical

Background: The aim of this analysis was to determine why some patients reach their haemoglobin targets while others don't.

Methods: Data were extracted for haemodialysis patients from the Renal Anaemia Database for the period November 1999 to October 2010. Patients were categorised into "Meeting Targets" or "Not Meeting Targets" according to CARI targets for haemoglobin, ferritin and transferrin saturation. Those who fell within range for all 3 values were considered to be "Meeting Targets".

Results: There were 3,764 haemodialysis patients. Of these only 147 were meeting haemoglobin, ferritin and transferrin saturation targets according to CARI. A smaller proportion of ATSI patients were meeting targets (3.4% vs. 10.4%, $\chi^2=7.61$, $p=0.006$). The most common primary disease for those meeting targets was IgA positive mesangial proliferative disease (11%) compared to non-insulin requiring type 2 diabetes (13%) in those not meeting targets. There was no difference in the proportions of men and women; mean age; erythropoietin stimulating agent type; iron dose; or cumulative iron dose between those who were meeting CARI targets and those who were not. Those who achieved CARI targets received lower doses of erythropoietin or darbepoetin ($6,083 \pm 4,534$ vs. $8,183 \pm 6,958$ IU, $df=979$, $p=0.07$ t-test; or 34.6 ± 23.8 vs. 44.4 ± 33.6 μg , $df=2060$, $p=0.008$, t-test, respectively).

Conclusion: Those that achieve haemoglobin, ferritin and transferrin saturation CARI targets are more likely to have mesangial proliferative disease compared to diabetes type 2 and be of non-ATSI heritage. Those meeting targets may have slightly less erythropoietin stimulating agent requirements.

Living donor Kidney V's cadaveric Donor Kidney: P74

Ms Caroline Shelverton
Royal Brisbane and Women's Hospital
Mrs Margaret Jacks
CN Renal Transplant case manager
Royal Brisbane and Women's Hospital

One of the most frequently asked questions by potential renal transplant recipients is "what is the difference between living donor kidney and cadaveric donor kidney transplant, and which is better?" It was decided to conduct a systematic literature review for a nursing grand rounds presentation to review the evidence.

This poster will outline the systematic literature review investigating the question of living donor kidney V's cadaveric donor kidney which has the "better" outcomes.

The systematic review generated 5 retrospective and 1 prospective studies and revealed the following:

3 retrospective studies concluded that live donor kidneys had better long term patient and graft survival

2 retrospective studies concluded no difference in patient survival between living donor and cadaveric donor kidneys, and no difference in graft survival except 1 of these studies revealed graft survival was better for live unrelated donor at the 9.6 year mark.

1 prospective study examined non heart beating donors, conventional cadaveric and live donors concluded long term graft survival does not differ significantly from the results of heart beating and live donors.

While these results did not give a definitive answer to the question investigated, they provided excellent learning and discussion for nursing grand rounds.

Flexible practice patterns to optimize holiday opportunities for people on haemodialysis: P75

Ms Rosemary Simmonds
Barwon Health
Mrs. Vicki Norton
Lorne Community Hospital
Ms Janeane Boddinrton
Barwon Health
Ms Raelene Hungerford
Barwon Health
Mr. Anthony Perkins
Barwon Health

Context: Holidays for people with CKD-5 on haemodialysis are becoming increasingly hard to secure as Dialysis Units become congested with permanent patients. For people who choose more frequent longer hour haemodialysis it is almost impossible to have a break from routine without compromising their health and their holiday with less efficient dialysis.

Key messages: A community hospital in a coastal resort town with a 2-chair haemodialysis unit no longer has permanent patients and is reliant on people requiring dialysis whilst on holiday to retain their Unit. The Unit averages >200 holiday dialysis runs/yr, mostly at peak holiday times. To increase numbers the hospital has undertaken a marketing campaign to advertise their dialysis unit and has reviewed practice patterns. In addition to supervised conventional daytime haemodialysis they now offer unsupervised overnight dialysis to patients who are self-care trained and wish to have more frequent longer hour dialysis while holidaying.

Over Summer, the first nocturnal patient was welcomed by hospital staff and admitted overnight to the ward. The dialysis machine was located in a single room. The night staff are untrained in the dialysis procedure however dialysis staff were on call for the ward overnight. The patient was encouraged to contact their parent Unit on-call service should they have required assistance.

Conclusion: The patient maintained his home regime and haemodialysed 8 hrs alternate nightly for a fortnight while holidaying with his family in the local caravan park. The experience for all was positive, and importantly was financially viable for the hospital.

Access Insufficiency Project: Improving Vascular Access Preparation for Haemodialysis: P76

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Ms Lian Ngoh
RN, CNS, Renal Unit, Concord
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Background: Establishing and maintaining permanent access for dialysis is one of the core duties of any renal unit. In 2005 at a metropolitan renal unit in Sydney, the provision of this service was creating frustration amid concerns that dialysis access processes were less than ideal. Accordingly a quality improvement initiative was undertaken to address these concerns.

Aims: Initial aims focused on reducing patient exposure to temporary dialysis catheters and catheter related infections, reducing the time between insertion of dialysis catheter and creation of permanent access, and increasing the rate of referral of pre dialysis patients for creation of permanent access.

Methods: A multidisciplinary group was formed with a view to streamlining the system of care of dialysis access. Strategies included raising awareness in the dialysis unit, establishing a database, allocating dedicated staff for monitoring of all temporary access, intensive consultation and collaboration with the vascular surgical team and radiology, and developing a CKD pathway.

Results: There has been a clear reduction in the burden of infectious complications from dialysis catheters from 2007 onwards. There has been an overall reduction in AVF thrombosis which perhaps reflects the pre-emptive work going on in the unit. There has also been a reduction in tunneled line days.

Conclusion: The findings of this project demonstrate that a dedicated, collaborative approach has the potential to reduce vascular access related complications, reduce exposure to dialysis catheters and create a more streamlined system of management of vascular access for dialysis.

Renal Transplantation: Understanding the patient's needs: P77

Miss Stephanie Swasbrick
Monash Medical Centre,
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Miss Amelia Johnston
MMC, Southern Health

The incidence of Chronic Kidney Disease (CKD) within Australia continues to climb. One of the most popular forms of renal replacement therapy is transplantation. Transplantation can be seen not only as a treatment option but in many cases as a life changing event. Due to the number of transplants performed per annum, it is easy as nurses to lose sight of the enormity of transplantation and the psychological and psychosocial effects the process has on our recipients and their families.

Most current transplant protocols aim to individually address these effects, focusing on a number of factors that may assist the patient and help to reach the best possible outcomes following surgery. As nurses we are able to recognise the need for the provision of full holistic care, involving not only ourselves but also the medical and allied health teams. We have an understanding that each patient is different and so we must seek and implement the coping strategies and nursing care specific to their individual needs.

The following poster presentation discusses the current psychosocial and psychological protocols used and the efficiency of these protocols. It also highlights some areas of care that need to be improved and ways that we as senior nurses can educate our junior team members to make the process of transplantation happy, comfortable and rewarding to all involved.

“This is how we do business...” Partnerships in Kidney Health Care: P78

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 Royal Brisbane and Women’s Hospital
 Mrs Helen Redfern
 Department of Social Services, Royal
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Chronic disease morbidity and mortality experienced by Aboriginal and Torres Strait Islander (ATSI) peoples is at epidemic levels compared with other Australians. There is a significant proportion of ATSI people’s population within the Brisbane North catchment area (the 2nd largest indigenous population base for Queensland is within this catchment). The current data indicates that this section of the population is significantly underrepresented within the current population undergoing treatment for stage 3-5 Chronic Kidney Disease (CKD) at the Royal Brisbane and Women’s Hospital (RBWH). This highlights significant issues relating to access and engagement of local Indigenous communities around this critical health issue.

A pilot program of culturally respectful renal services has been developed through a partnership known as ‘Kidney Business’ involving local Indigenous Elders and the key community support agency, Kidney Support Network. The aim of the program is to raise awareness in early detection, referral and education of CKD and to engage the community to deliver shared services in a variety of innovative ways. The focus of the program includes empowerment of local Indigenous communities through elder driven program initiatives and identification of CKD through opportunist screening and education at local Indigenous festivals. Other endeavours include incorporating culturally safe practices by increasing cultural capability in the clinical workforce.

The program has identified clinical challenges and highlighted the access barriers for the local indigenous communities. This program has explored new territories for our renal service which will inevitably transform our service into a culturally appropriate model of care.

Do the benefits of buttonhole cannulation outweigh the risk of serious systemic infection? Our four year experience: P79

Mrs Yvonne Thomas
 Canberra Hospital
 Mrs Liz Coroneos
 Toowoomba Renal Unit

Context: Since 2006, buttonhole cannulation had been adopted as standard practice in our Home Haemodialysis Training Program and by 2010 one hundred percent of these patients were using this technique. During this time we experienced limited localised infections and no reported buttonhole related blood stream infections. A positive outcome was observed with regards to more efficient cannulation training times and patient satisfaction. The patients reported shorter bleeding times, less pain, and less infiltrations.

In 2010 however, we observed an increase in buttonhole infection rates and the number of patients requiring establishment of new buttonhole tracts due to cannulation difficulties. Interestingly, these problems occurred in patients who had been using buttonhole cannulation for greater than two years. Patients were re-assessed on scab removal and cannulation technique and were provided with additional training as required. Staff and patients were alerted to increased infection risks associated with buttonhole cannulation.

Objective

- To minimise fistula and blood stream infection rates
- To decrease cannulation issues.

Key message: Do the benefits of buttonhole cannulation outweigh the risk of serious systemic infection?

Conclusion: Despite these additional measures we had two patients admitted with suspected buttonhole related discitis and a consistent number of patients having difficulty with buttonhole cannulation. As a result, 95% of patients have now changed to rope ladder cannulation. In reflection, other factors such as patient isolation and distance from the training unit, as well as patient anxiety and lack of confidence in sharp needle cannulation may have significantly contributed to this problem.

Combating Accidental Contamination in Peritoneal Dialysis: P80

Miss Andrea Whittle
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Miss Tracey Clark
Royal Hobart Hospital

Background: The increased incidence of accidental contamination of the PD Tenckhoff catheter line end due to minicaps falling off became an issue for concern in early 2010. One of these episodes resulted in peritonitis, as the patient did not advise the PD unit of the contamination; other episodes required a line change and a one off antibiotic dosage as per hospital policy.

The impact of increased numbers of line changes equated to greater financial cost, increased workload for staff, increased risk of accidental contamination by staff during line change and the potential for patients to develop resistance to antibiotics.

In an attempt to reduce the risk of minicaps falling off it was decided to trial the introduction of a belt to hold the Tenckhoff catheter line end.

Aims: To reduce the incidence of accidental contamination by caps falling off the end of the catheter line due to friction against clothes. Reduction in potential source for contamination resulting in peritonitis.

Methods: The belts were sourced, funding secured and patients were provided with 2 belts each. They were instructed on their use and reminded of the correct application of minicaps and procedure for accidental contamination.

Results: During the 9 months of trial the incidence of accidental contamination has reduced significantly. The peritonitis rate due to accidental contamination has remained unchanged.

Conclusions: Around half of the PD patients did not wish to use the belts for a variety of reasons, the remainder expressed comfort and reassurance by the introduction of these belts.

Reflective Practice for Dialysis Nurses: P81

Mrs Belinda Wood
St Vincents Health Melbourne
Mrs Nuala Barker
St Vincents Health Melbourne

Background: Staff working in a busy in-centre dialysis unit, experience cumulative stress and emotional labour. Caring for an individual with chronic kidney disease can place many emotional stressors on the nurse impacting on his/her emotional wellbeing. Reflective Practice group sessions were organised monthly which created extra support for the emotional labour of the dialysis nurse.

Aim: Reflective Practice:

- To decrease Cumulative stress experienced by the dialysis nurse.
- To provide emotional support for the dialysis nurse
- To Improve the nurse-patient relationship and best practice
- To improve one's awareness on emotional labour within the workplace
- To improve team morale
- To improve the emotional wellbeing of the dialysis nurse

Method: Survey staff:

- Discuss with Psych liaison nurse on setting up sessions
- Create confidentiality agreement

Results:

- Staff wanting reflective practice sessions to continue
- Found the sessions positive in discussing workplace issues/emotional labour.

Conclusion: The reflective practice sessions has stimulated a change in culture on addressing and supporting the nurse's emotional wellbeing within working hours.

CRP monitoring: Is this necessary for an Iron infusion protocol: P82

Mrs Jane York
 Royal Perth Hospital
 Ms Suzanne Betti
 Fremantle Hospital
 Ms Marianne Snedeker
 Sir Charles Gairdner Hospital
 Ms Belinda Butcher
 Janssen-Cilag
 Ms Jennifer Bradley
 Janssen-Cilag

Background: Research shows an inverse relationship between inflammatory indices, such as c-reactive protein (CRP) and erythropoietin stimulating agent (ESA) responsiveness, with greater ESA requirements in those with CRP > 20 mg/L. Ferritin is also an acute phase reactant; levels can be increased in the presence of raised CRP. The aim of our analysis was to determine whether CRP measurement can aid the interpretation of ferritin, transferrin saturation or haemoglobin in haemodialysis patients. (Raised CRP was defined as levels of 10mg/L or above in keeping with the most common Australian laboratory parameters)

Methods: Data from haemodialysis patients were extracted from the Renal Anaemia Management (RAM) database from November 2009 to 30 September 2010. The RAM database assists collection of information on the outcomes of patients with chronic kidney disease at 20 centres in Australia. Demographic, ESA treatment, ferritin, transferrin saturation, haemoglobin and CRP results were extracted.

Results: There were 3,323 haemodialysis patients with CRP data available. Their average age was 61±15 years, 24% were of Aboriginal or Torres Strait Islander origin and 58% were male. The most common primary diagnosis was non-insulin requiring type II diabetes (17%). High-CRP (10 mg/L or above) occurred in 63%. Those with high CRP levels had lower haemoglobin ($p<0.001$) and transferrin saturation levels ($p<0.001$), but higher ferritin levels ($p<0.001$). Those with high CRP levels received greater weekly doses of ESA.

Conclusion: We found that those with high CRP levels had lower haemoglobin and transferrin saturation levels, higher ferritin levels and received higher weekly doses of ESA.

The use of Expanded Criteria Donor for renal transplantation: P83

Miss Zumin Yu
 Monash Medical Centre
 Miss Aimin Jin
 Monash Medical Centre

According to the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA), there are 1650 patients on the transplant waiting list in 2009 and only 860 patients received transplants. The persistent shortfall between the number of kidneys available for transplantation and the ever increasing waiting list has made it necessary to develop new approaches to increasing the supply. The Expanded Criteria Donor (ECD) concept was codified in the United States in 2002. ECD kidneys are those kidneys as age>60 years, or aged between 50-59 years with two of the following criteria, had a cerebrovascular accident as the cause of death, a history of hypertension, or a serum creatinine >1.5 mg/dl. This poster will analyze the data from ANZDATA and Monash Medical Centre (MMC) in Melbourne, and compared the mortality in the patients post transplant from ECD and the haemodialysis patients on the transplant waiting list from 2005 to 2009 in Australia. The research in post-transplantation patients shows more graft failure in ECD transplant cases, however, the patients perform more advantages both physically and psychologically compared with those pre-transplant or patients undergoing dialysis. This poster will outline the process involved in evaluating the ECD kidney in Australia, especially in MMC and illustrate the benefit of extra life-years for ECD kidney recipients compared to wait-listed dialysis patients.

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RSA 2012

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and Diversity in Renal Care

30 May – 2 June 2012

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Jenny Beavis
Convenor RSA 2012

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