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The Renal Society of Australasia Conference

Volume 4 / Supplement 1 / June 2008

Abstracts

Renal Society of Australasia 36th National Conference





Renal Society of Australasia Journal

Journal of the Renal Society of Australasia

ISSN 1832-3804
VOLUME 4:S1 JUNE 2008

The *Renal Society of Australasia Journal* is an official publication of the Renal Society of Australasia Incorporated

Renal Society of Australasia Incorporated

Publisher

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The RSAJ is a peer reviewed journal indexed in CINAHL, Expanded Academic and stored with the Australian Serials Unit, National library of Australia.

Aim and Scope

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.

Articles contained in this journal are the opinions of the authors and not necessarily those of the Editor, Editorial Board or the Renal Society of Australasia.

The Editor welcomes the submission of articles, research papers, case reports, reviews and letters.

Subscription

Members of the Renal Society of Australasia receive the Journal as part of their annual membership. To receive a Renal Society of Australasia Journal you are required to join the Renal Society of Australasia.

The RSAJ will be published three times per year in March, July and November of each year.

To receive further issues go to:
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and follow the links to new membership.

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Conference Program

Renal Society of Australasia 36th National Conference

SYDNEY, NEW SOUTH WALES
JUNE 26 - 28, 2008

Thursday, 26 June 2008

07:00-08:15

Amgen -
Dialysis Access Nursing - People & Practices
Parkside Room 110 A

08:15-08:30

Welcome from Organising Committee
Parkside Auditorium

08:45-09:30

**Keynote Presentation by
Prof Mary Chiarella**
Parkside Auditorium

09:30-10:15

**Keynote Presentation by
Dr MK Mani**
Parkside Auditorium

10:45-12:00

Models of Care
Parkside Auditorium
Clinical Issues (1)
Parkside Room 110 A
Dialysis
Parkside Room 110 B

12:00-12:30

Poster Session 1
Hall 6
Poster Session 2
Hall 6
Poster Session 3 - Dialysis
Hall 6

13:30-15:00

Dialysis - Access
Parkside Auditorium
Clinical Issues (2)
Parkside Room 110 A
Education
Parkside Room 110 B

15:30-16:00

**Invited Presentation by
Dr Sean Kennedy**
Parkside Auditorium

16:00-16:30

**Invited Presentation by
Dr Steven May**
Parkside Auditorium

Friday, 27 June 2008

07:00-08:15

**Baxter Healthcare - Optimising Patient
Outcomes: Delivering High
Performance PD**
Parkside Room G04

**Roche - Improving Patient Outcomes
in Anaemia Management**
Parkside Room 110 A

**Fresenius Medical Care - Body
Composition Monitor - A Tool for
Individual Patient**

Fluid Assessment
Parkside Room 110 B

08:30-09:15

**Keynote Presentation by
Dr MK Mani**
Parkside Auditorium

09:15-09:45

**Invited Presentation by
Prof Jeremy Chapman**
Parkside Auditorium

09:45-10:45

RSA AGM
Parkside Auditorium

11:15-12:15

Renal Education
Parkside Auditorium
Clinical Issues (3)
Parkside Room 110 A

12:20-12:50

Poster Session 4 Hall 6

14:00-15:30

Transcultural/Dialysis
Parkside Auditorium
Vascular Access
Parkside Room 110 A

16:00-16:30

**Keynote Presentation by
Dr Tim Spicer**
Parkside Auditorium

16:30-17:00

**Invited Presentation by
Richard Knight**
Parkside Auditorium

Saturday, 28 June 2008

09:00-09:45

**Keynote Presentation by
Prof Leslie Campbell**
Parkside Auditorium

09:45-10:30

**Keynote Presentation by
Alan Barclay**
Parkside Auditorium

11:00-12:30

**Chronic & Complex
Parkside Auditorium
Clinical Issues (4)**
Parkside Room 110 A

13:30-14:00

**Invited Presentation by
Dr Bruce Cooper**
Parkside Auditorium

14:00-14:30

**Invited Presentation by
Robyn Speerin**
Parkside Auditorium

14:30-15:15

**Keynote Presentation by
Dr MK Mani**
Parkside Auditorium

15:15-15:45

**Presentations and
Launch of RSA 2009**
Parkside Auditorium

Selected Abstracts Renal Society of Australasia Conference

Developing the Model of Care in a Hospital Haemodialysis Unit: 103

Shelley A Tranter,
St George Hospital
Scott Dobson

Objective:

The number of patients on haemodialysis at our hospital has consistently increased over the past decade. Subsequently, two important questions have been repeatedly raised by haemodialysis nurses:

1. As demand continues to rise, what is the best way to ensure that all patients are managed comprehensively, promoting best possible outcomes from chronic renal disease? and
2. In an environment that is looking more and more like a factory floor how can we maintain the focus on patient centred care?

The aim of this project was to change the way that work was organised and care was provided for patients receiving haemodialysis treatments in our unit from the former ad hoc primary nursing model to a formal case management model with clear guidelines and supportive mechanisms.

Methods:

Using a Practice Development framework, a group of interested nurses met regularly to undertake project activities. The first steps in the project were an evaluation of the current situation and a review of the literature on haemodialysis nursing models of care.

Results:

Outcomes from the project involved the development of guidelines for the Primary nursing program, teaming primary nurses, offering nurses time to attend to primary nursing functions, case management meetings and the development of a fluid management education package.

Conclusions:

Primary nursing is an effective way to holistically manage dialysis and other issues related to chronic disease. Primary nursing guidelines and other resources developed by nurses in our unit can be used by other renal units

CKD Tsunami Early Warning and Management System: 104

Graeme L Turner,
North Coast Area Health Service

Approximately 1.1 million Australians have asymptomatic stage III (GFR 30-59ml/min) chronic kidney disease (CKD). These people are at increased risk of progressing to end stage kidney disease and are at increased cardiovascular disease risk. Their health needs are managed by general practitioners.

The introduction of automated reporting of GFR in Australia highlighted the number of patients in general practices with chronic kidney disease. Discussion with local GP's highlighted that they strive to provide chronic disease management but their efforts are often hampered by a lack of time and resources and their patients focus on acute episodic care. The Collaborative CKD nurse in General Practice Model was developed by the North Coast Area Health Service to provide evidence based management of people with early CKD aimed at identifying people with stage III CKD, slowing the progression of CKD, managing cardiovascular co morbidities.

Our model of care is based on collaborative management between general practitioners and a specialist chronic kidney disease nurse for people identified with stage III CKD. The general practitioners identify patients with stage III CKD. The CKD nurse reviews patient's history and triages patients to; nephrologist referral, CKD nurse clinic review or general practitioner management. The general practice and CKD nurse arrange time and space in the GP's rooms for CKD clinics. The GP rooms book patients into the clinics and arrange recall. This model of care is currently being piloted in a few general practices and interest by other general practices is growing.

Points of Contact: The Journey of People with Chronic Kidney Disease (CKD) from Diagnosis to Commencement of Dialysis: 105

Sandra J Campbell,
University of Tasmania

The incidence of chronic kidney disease (CKD) is on the increase. This presentation outlines the preliminary qualitative research plan that aims to illuminate where people with CKD access information related to preservation of kidney function and what decisions are made with that information. Identification of significant points of contact with health care professionals along this journey will allow a clearer understanding of where nephrology nurses can have a greater influence on preventive health for the nursing care of people who develop CKD.

This presentation will explain the philosophy of primary health care within the context of CKD, the researcher's positioning within the problem, how grounded theory is an appropriate qualitative methodology to answer the research question and preliminary progress made on the project.

Addressing Modifiable Risk In Peritoneal Dialysis Patients Through Comprehensive Nursing Outpatient Clinics: 106

Lesley D Salem,
Lower Sector Hunter New England

Introduction:

The patient receiving peritoneal dialysis can experience many adverse events. This genus of events can be unique to peritoneal dialysis, from the complications and comorbidities of chronic kidney disease or from the fallout of self-management of end stage disease remote from specialist and technical support.

These adverse events have many modifiable risk factors. Renal nursing has evolved into sub specialities with relevant skill sets capable of addressing these modifiable risk factors associated with the comorbidities and complications of end stage kidney disease and the complications of peritoneal dialysis.

The renal nursing subspecialties with expertise required to address modifiable risk in this dialysis group include; nephrology nurse practitioner, vascular access coordinator and expert peritoneal dialysis unit staff (training, home visiting and maintenance).

Objectives:

- Conduct nursing outpatient health promotion clinics within convenient community centred locations
- Develop unique peritoneal dialysis centred patient assessment
- Detect exit site infection early
- Maintain optimal dry weight with reduction of cardiac events of fluid overload or dehydration
- Dialysis adequacy with tailored dialysis prescription
- Preservation of cardiac stability through pharmacological intervention
- Preservation of residual renal function through tailored initiation prescriptions
- Vascular access planning, creation, maintenance and preservation
- Regular tailored patient education
- Mentoring for nursing staff

Conclusion:

The findings and results of the multi-nursing-disciplinary peritoneal dialysis health promotion clinics indicates that comprehensive nurse conducted clinics are an essential component of maintaining good health in peritoneal dialysis patients with the possibility of enhancing longevity on this renal replacement modality.

Collaborative Care for Haemodialysis Patients in Residential Aged Care Facilities: 107

Susan Coppola,
North West Dialysis Service,
Melbourne Health

Consistent with the Victorian policy document Improving Care for Older People: a Policy for Health Services (DHS, 2003), North West Dialysis Service (NWDS) continues to acknowledge and address the needs of our older patients.

Angela Lindsey,
North West Dialysis Service,
Melbourne Health

Recognising the often extensive needs of patients who reside in aged care facilities, our dialysis staff identified the importance of collaboration to ensure that the care delivered by different providers was both consultative and complementary for each dialysis patient. In 2007, NWDS established a working group to explore the existing relationships, communication and mutual understanding between our metropolitan dialysis services and the ten residential facilities that accommodated our dialysis patients at that time.

A structured telephone interview survey was conducted with senior personnel from each residential facility to elucidate their staff needs and preferences regarding education and communication with respect to the care provided in the dialysis setting. The survey also sought an appreciation of their concerns regarding issues such as transport, nutrition, medications, haemodialysis knowledge and communication. All facilities participated in the survey.

Information derived from the surveys has led to the development of an information booklet including dialysis "jargon" and a dialysis presentation on CD, both of which have been trialed and refined in consultation with our current metropolitan residential facilities. In addition, a more regular and structured approach to communication and a database to record the dissemination of relevant information to our residential care partners ensures that we are working together for the benefit of dialysis patients who are in our mutual care.

'Sarcoid what? Granules what? I just thought I had a Bad Chest. I had no idea how my life was about to change': 108

Anne C Gilmore,
Princess Alexandra Hospital,
Brisbane

This is a case presentation about a woman diagnosed with sarcoidosis, about her disease process and the impact it has had on her life. She will be known as "Gabby" for this presentation in honour of the home of her beloved Brisbane Lions Football Club.

Sarcoidosis is a systemic granulomatous disease of unknown cause affecting young and middle aged adults. It is a multisystem disease which follows a very variable path. For some it has minimal effects, but for others it is associated with high morbidity andearly mortality. Holistic care on an individualized basis is required. Investigation, diagnosis, treatment, education and management need to be understood by nurses to assist patients and families to manage and enjoy the best quality of life.

Gabby was diagnosed with sarcoidosis by lymphadenopathy on a routine chest X ray in 1980. Chronic renal failure caused by granulomatous interstitial nephritis secondary to sarcoidosis was diagnosed in 1994 after an admission with a rare steroid resistant nephrotic syndrome secondary to minimal change glomerular disease. Granuloma, the hallmark of sarcoidosis, may cause both interstitial and membranous nephritis from direct infiltration.

She commenced renal replacement therapy in the form of haemodialysis in 1998. "Against all odds", Gabby continues to be an excellent role model to the patients and staff of our unit, is compliant and determined to remain positive.

Have you got Rocks in your Head? A Case Review: 109

Sheemol G Barrett,
Prince of Wales Hospital
Suyeon Son
William T Hoswell
Michaela MB Kelleher

Benign paroxysmal positional vertigo (BPPV), is a condition affecting 20% of people complaining of dizziness. It is due to debris (ear rocks) collecting in part of the inner ear. Ear rocks are small crystals of calcium carbonate derived the utricle. 50% of people over the age of 50 with dizziness have BPPV, many cases of which are undiagnosed. The symptoms include dizziness, imbalance and nausea. Activities which bring on symptoms vary, but are almost always precipitated by a change in position of the head in relation to gravity. Getting out of or rolling over in bed are common problem motions.

The following case presentation is of a 77 year old woman on peritoneal dialysis who had multiple admissions with vomiting, dizziness and orthostatic hypotension. The diagnosis was dehydration secondary to vomiting. The patient was re hydrated and her dry weight adjusted. However, the debilitating symptoms of dizziness and nausea persisted. The patient was commenced on stemetil which proved ineffective, BPPV was considered. Diagnosis was made using the Semont maneuver, the classical sign of nystagmus was elicited, confirming the diagnosis. The patient was educated on how to get out of bed to prevent the symptoms. Since diagnosis and education the patient has had no further admissions. Treatment for BPPV is neuropharmacological and takes 10 minutes to teach the patient. The purpose of this paper is to present a brief overview of BPPV, followed by a case review. BPPV should be considered when other causes of dizziness have been excluded.

Infection Control Bugs Everyone: 110

Carolyn Chenoweth,
Baxter Healthcare
Mary Frost
Kate North
Louisa Moloney
David McCallum

Objective:

The staff at Baxter dialysis centres recognised the need to develop an infection control program tailored to haemodialysis centres, that was standardised and complied with Australian Infection Control Guidelines.

The types of haemodialysis centres included:

- Incentre hospitals with outpatients and acute care patients,
- Satellite centres with dependant chronic patients,
- Satellite centre with self care patients.

Baxter also recognised diverse infection control precautions required for:

- Bloodstream infections
- VRE active and inactive
- MRSA, UK MRSA
- Non-infected patients at high risk.

Methods:

The key areas in our infection control program are:

- Baxter's commitment to an infection control program.
- Creating a tactful alert for all staff when additional precautions are required.
- Developing a surveillance program for routine and additional screening.
- Early and continuing education of staff and patients
- Procedures on standard and additional precautions
- Developing key performance indicators to monitor the success of the program

Conclusion:

The challenge for the 21st century is the increasing prevalence of the 'super bug', multi-resistant organisms. Before antibiotics, infection control was the main defence against micro-organisms. In the fight against multi-resistant organisms, infection control has again become the main defence.

Multiresistant Organisms are on the Increase: 111

Christine A Bond,
Princess Alexandra Hospital,
Brisbane, Queensland

Infection Control is now the priority in renal nursing. Patients that suffer end stage renal disease and are on permanent dialysis already have a shortened life expectancy. Now they must contend with the ever increasing number of multiresistant organisms (MRO) evolving.

When a patient is confirmed as being positive to a MRO or multiple MRO's a strict isolation protocol is immediately implemented. Infection Control recommendations followed, Renal Consultant notified and depending on what MRO it is depends on whether all the patients are swabbed and the ward closed to further admissions or only the room of patients the MRO is found in is swabbed and the ward remains open to further admissions.

It is an up hill battle in the renal world where antibiotics are regularly used to treat sepsis and infections. Permcath sepsis is increasing and we are now being faced with multiple strains of the same MRO, eg. multiple resistant staphylococcus aureus (MRSA), Non-MRSA, UK-MRSA, UKE-MRSA and UKE15-MRSA. The different strains of MRSA must be isolated separately and strict hand washing must be highlighted and educated to the patient, family and staff.

When a patient is placed in single room isolation they experience decreased sensory input which often triggers psychosomatic problems and can lead to depression, especially if hospitalised for a long period of time.

MRO's are putting pressure on already struggling hospital systems due to requiring more single room accommodation with en suite facilities in order to isolate and prevent the spread of infections and outbreaks.

Clinical Experience with Lanthanum, Sevelamer and Cinacalcet at a Regional Dialysis Unit: 112

Jenny R Galea,
Wodonga Regional Health Service
Jenny A Beavis,
North West Dialysis Service

Abnormalities in mineral metabolism are an established part of chronic kidney disease, with a growing body of evidence suggesting that parathyroid hormone (PTH) and hyperphosphatemia are major risk factors for mortality in dialysis patients. Novel pharmacological therapies are available to treat these conditions. Cinacalcet (1) has been demonstrated to be an effective treatment for secondary hyperparathyroidism, whilst Sevelamer (2) and Lanthanum (3) are phosphate binders that contain no calcium or aluminium, thus potentially reducing harmful side effects.

The Wodonga Regional Health Service dialysis unit was established in 1990 to provide Haemodialysis treatment to clients in the Albury-Wodonga region. In this presentation we use case studies to describe our experience with Cinacalcet, Sevelamer and Lanthanum in a regional dialysis unit.

Patients were followed closely for effectiveness of treatment and side effects with their pathology monitored monthly, looking at calcium, phosphate and PTH levels.

Despite initial concerns with side effects, all patients are now doing well with decreasing calcium, phosphate and PTH levels.

References:

1. Block GA, et al, 2004, Cinacalcet for Secondary Hyperparathyroidism in Patients Receiving Hemodialysis, The New England Journal of Medicine, 350: 15, 1516 – 1525.
2. Chertow GM, Burje SK, Dillon MA, Slatolpolsky E, 1999, Long-term effects of Sevelamer hydrochloride on the calcium x phosphate product and lipid profile of haemodialysis patients, Nephrology Dialysis Transplantation, 14: 2907 – 2914.
3. Hutchinson AJ, et al, 2006, Long-Term Efficacy and Tolerability of Lanthanum carbonate: Results from a 3-Year Study, Nephron Clinical Practice, 102: c61 – c71.

Interdialytic Weight Gain: The Transition to Acceptance: 113

Peter Sinclair,
Hunter New England
Area Health Service
Vicki Parker,
Hunter New England
Area Health Service

Patients undergoing haemodialysis are required to follow a complex treatment regimen that includes dietary and fluid restrictions. Of these restrictions, interdialytic weight gain is often used as a marker of measuring adherence.

Historically, research into interdialytic weight gain has focussed on interventions devised by clinicians and utilised quantitative methodologies with little consideration being given to the patients experience of dealing with fluid restrictions. This paper reports the qualitative phase of a mixed method study that aimed to understand the experiences of patients who do and do not achieve acceptable interdialytic weight gain.

Participants were randomly recruited from a population of community haemodialysis patients that had been stratified according to average interdialytic weight gain. 10 individuals participated in semi structured interviews that lasted between 12-55 minutes.

Superordinate themes arising from data analysis include magnitude of loss, constant struggle and transition to acceptance. Participants experienced each of these themes in varying degrees and at varying stages of their illness trajectory. Transition to acceptance is not a linear progression to understanding and compliance but a multifaceted, tortuous struggle unique to individuals and largely dependant on support, belief in a life worth living and willingness to engage in surveillance and maintenance behaviour.

Understanding where patients are positioned along this continuum will assist nursing staff to identify strategies to support patients, to help them understand and accept fluid restriction and to engage successfully in healthy fluid gain behaviours.

Nurses' Dry Weight Assessment of Chronic Haemodialysis Patients: 114

Wendy Purcell,
The University of Melbourne
Allison Williams,
The University of Melbourne
Elizabeth Manias,
The University of Melbourne
Rowan Walker,
Royal Melbourne Hospital
and North West Dialysis Service

Objective:

Attention to achieving accurate dry weight can normalize blood pressure and decrease the risk of cardiac disease in haemodialysis (HD) patients. This study aimed to investigate Victorian satellite HD nurses' assessment of dry weight in HD patients.

Method:

Following ethics approval, 277 questionnaires regarding physical assessment of dry weight in HD patients were mailed to Victorian satellite HD nurses identified by unit NUMs as meeting the selection criteria. Ten nurses from one satellite HD unit were also observed for 6 hours while caring for their HD patients.

Results:

115 (41.5%) questionnaires were returned. Results indicated that HD nurses regularly altered dry weight of their patients based on their own assessments. They used blood pressure and weight routinely, and occasional assessments of peripheral oedema. Informal enquiries of well-being and dyspnoea also informed their assessments. However, JVP and chest auscultation were rarely performed. Half the nurses in the survey had not received education regarding dry weight assessment in the last 12 months and only 16% reported using a policy regarding dry weight assessment. The nurses lacked a common language to communicate their assessment of a patient's dry weight, in particular regarding descriptions of severity of peripheral oedema.

Conclusion:

The clinical assessment of dry weight is complex and requires mastery of physical assessment skills and a broad knowledge of the clinical issues that may confound the assessment. HD nurses would benefit from a greater repertoire of physical assessment skills, education, and the formation of policies to guide their assessment of dry weight.

Electrical Safety in Home Haemodialysis – Do We Comply?: 115

Megan L Ruff,
North West Dialysis Service

Introduction:

The Australian Standard for electrical installations in hospitals and patient treatment areas (AS/NZS 3003) was revised in 2003 to specifically include all haemodialysis treatment including home installations. Under Victorian law these standards are legal requirements. However, compliance is more easily said than done.

Methods:

North West Dialysis Service (NWDS) has conducted a comprehensive review to evaluate the effect of these changes. This has compared our current practice against the standard and reviewed compliance strategies including suitable electrical inspector services, investigation with EnergySafe Victoria into inspector qualification requirements and the possibility of variations or exemptions in special circumstances.

Results:

At present, Standard AS/NZS 3003 and EnergySafe Victoria have not accommodated the practical logistic challenges of successfully fitting compliant electrical installations in every domestic situation, nor is there allowance for exemptions or long-term variations in situations where compliance may offer significant disadvantages to the patient.

Currently, it is difficult to find a qualified M-class inspector for home installations, particularly in regional and remote areas of Victoria. Those available are often expensive due to travel costs. No specific course is available to qualify dialysis service technicians or biomedical engineers to conduct such installation inspections.

Conclusion:

In 2008, Australian electrical safety standards for home haemodialysis electrical installations and appropriate, affordable resources are not complimentary. If resolutions cannot be found for complex domestic circumstances and current inspection challenges, a review of standard AS/NZS 3003 with respect to home haemodialysis situations may be warranted.

Heparin Free Haemodialysis with Blood Transfusion: 116

John H Yung,
Fremantle Hospital Renal Unit

Anticoagulant is commonly use during haemodialysis, it prevents clotting of the blood circuit to minimize blood lost during haemodialysis.

However, there are situations such as pre-operation, prior removal of dialysis catheter, bleeding problem before dialysis such as bleeding gastric ulcers or post-operative states, that requires heparin free dialysis.

Our unit had tried a lot of ways over the years to try to prevent the clotting issue, now and then we couldn't make it. Imagine we had to perform blood transfusion at the same time, it is much harder to prevent the clotting happening. Which demised the effectiveness of blood transfusion.

I had visited Hong Kong in 2007 and learnt a new way from them, in which I can achieve a better result. Later on, I modified the method and had successfully performed blood transfusion without clotting the circuit.

Procedure:

1. Connect an IV infusion to the arterial chamber, running the rate of 500ml/hr of normal saline throughout the treatment. That will minimize the clotting effect of the dialyser.
2. Administer blood transfusion through the venous chamber with and infusion pump, that will prevent the clots developed in the circuit.
3. All solution used and blood volume transfused were calculated in the total UF goal to prevent the occurrence of Pulmonary Oedema.
4. Hourly manual flush with normal saline if the veinous pressure is elevated since started.

Conclusion:

We had successfully provide the blood transfusion without complication.

Impacts on Patients with Extended Dialysis Therapy by Manipulating Dialysate Calcium Concentration, Control Serum Phosphate Levels and Induction of Rocaltrol Treatment: 117

Patty Tsang,
Dame Eadith Walker Dialysis Centre
Youn Park,
Dame Eadith Walker Dialysis Centre

Introduction:

Reviewing and sharing our experiences in successfully managing twenty patients to be able to suppress parathyroid hormone (PTH) by manipulating calcium dialysate, dialysis time and Rocaltrol dosage.

Discussion:

We have observed that since our home patients commenced the extended hours haemodialysis therapy, they were able to cease phosphate binder and achieve serum phosphate levels within the normal limit, calcium x phosphate by product below 4.0 and calcium levels within the lower normal limit. Most of them were able to achieve normotensive and ceased or reduced antihypertensive drugs, but their parathyroid hormone rose rapidly. Those patients having more dialysis had their PTH levels raised faster. Some patients experienced bone pain during dialysis.

We experienced that the change of higher calcium dialysate for a short period of time could rapidly reduce PTH levels and alkaline phosphatase to minimize the chance of parathyroidectomy.

Conclusion:

The dialysate calcium concentration for long hours of HD therapy needs be individualised to meet the specific requirements of patients by optimising management of bone disease. Low calcium dialysate concentrations expose patients to the risks of negative calcium balance with increases in PTH levels and worsening of secondary hyperparathyroidism.

The Evolution of the Dialysis Access Coordinator: 2 Years Journey: 118

Noemir L Gonzalez,
Liverpool Health Service
Michael Suranyi,
Liverpool Health Service
Josephine Chow,
South Sydney West
Area Health Service
Susana San Miguel,
Liverpool Health Service

Placement of dialysis access is considered pivotal in the care of patients with end-stage renal disease, but has been problematic due to: late referrals, poor coordination, lack of communication between services, i.e. dialysis team and surgical team. This has led to the recognition of the need for innovative roles such as a Dialysis Access Coordinator.

Aim:

- To facilitate coordination and timely access placement for patients with end-stage renal disease.
- To improve communication between services.
- To coordinate surveillance program for all dialysis access

Summary of the role

The access coordinator has developed a number of roles including:

1. Patient education – need for access, modality choices impacting on access choice, post surgical access development, detection of early access failure etc
2. Access surveillance – identifying access at risk as early as possible
3. Access coordination – arranging and supervising surgical appointments and theatre attendances
4. Communication between Renal Physicians and Access Surgeons
5. Nursing education
6. Assisting at access interventions by Vocational Renal Registrars/Renal Consultants
7. Data collection- Key Performance Indicators, reports and seminars

This paper will discuss how the role has evolved over the 2- year period, and how the expectations and aim of the role were met. It will also discuss the barriers, hurdles, frustrations, and the joys of being a dialysis access coordinator.

Conclusion:

This role has proven to be pivotal in improving the dialysis access coordination in our facility. The role has evolved beyond everyone's expectations and the need for it is highly understated.

Can You Have Too Many Balloons? The Use of Percutaneous Transluminal Angioplasty in the Treatment of Stenoses: 119

Dianne M Du Toit,
Gold Coast Health Service District

Upon informing staff within the Gold Coast Hospital (GCH) dialysis unit that we would be performing another balloon angioplasty on a patient's AV fistula, it is often commented "isn't it about time we fixed it properly". Since Jan 2007 there has been an increasing trend towards treating stenoses using Percutaneous Transluminal Angioplasty (PTA) at GCH.

A Search of the Renal Access database showed that the majority of interventions performed at GCH in 2007 have been PTA's. The reasons for increased use are multi factorial. They include; the implementation of monthly access flow monitoring in 2007, minimal invasiveness, ability for immediate use of the access, short waiting time for intervention and preservation of access. In 2007 there were 20 PTA's performed on 13 patients' AVF's (compared to 2 in 2006). Of that group, 9 had 1 PTA and 4 had multiple PTA's. Long term assisted patency has been 100%. In 3 of the 4 patients requiring further angioplasties, a new significant stenosis also required angioplasty. If the patient had received surgical revision, re-intervention would still have been necessary.

Native fistulas, despite being called "permanent access" are rarely that. Significant stenoses often recur or develop elsewhere. At GCH, PTA has proven to be a minimally invasive procedure which does not disrupt dialysis time and allows the continued use of an access which previously may have thrombosed, been surgically revised or abandoned. Despite some patients requiring multiple PTA's, it remains a first line treatment for significant stenoses.

Translumbar Central Venous Catheter – A New Experience for Our Haemodialysis Unit: 120

Helen M O'Connell,
Waikato Hospital, New Zealand
Rachel Falconer,
Waikato Hospital, New Zealand

Robert has been on the chronic haemodialysis programme for approximately 8 years. Vascular access has always been a concern due to his size, shape and poor peripheral vessels.

Robert has end stage renal failure secondary to diabetic nephropathy. The last in a long line of peripheral accesses failed in April 2005. A permanent central venous catheter was his only option for long term vascular access. Due to his history of previous episodes of acute haemodialysis via a subclavian central venous line, Robert had developed multiple severe stenosis in all of his major central veins. This in turn has made placement of central venous lines impossible.

Investigation by the interventional radiologist led to a translumbar central venous catheter being placed directly into Robert's inferior vena cava, through his right side.

This approach is Robert's only chance for continued treatment. As a unit we have had to ensure the survival of these lines at all costs. We have instituted a number of amendments to usual protocols to maintain line survival and reduce the risk of central venous catheter complications.

We will present Robert's story and show how this approach to access has also helped another long term vasculopath in our unit continue haemodialysis.

Erica R Parker,
Launceston General Hospital

Vascular access is a necessary evil for those requiring dialysis. Timely access creation within a year of anticipated therapy commencement or at stage 4 of chronic kidney disease (CKD) [creatinine clearance <25ml/min or eGFR 15-20mls/min] contributes to a smooth transition with better patient outcomes. In order for this to occur the need for a designated person to facilitate this process was recognised in our Unit. This need has led to the establishment of a 0.63 FTE vascular access nurse (VAN) position and the identification of primary objectives.

Primary objectives include the:

- Clinical and educational advancement and support of staff and patient understanding of vascular access and cannulation
- Facilitation of a functional pathway to vascular access creation
- Establishment of a vascular access monitoring program
- Collection of data to support quality improvement activities and evidence - based practice
- Continuous liaison with the multi-disciplinary team, including nephrologists, registrars, radiographers and surgeons

Achievements so far:

- Vascular access data collection have been established with data input continuing
- Cannulation education presentations
- Liaison with new patients, clinics and surgeons, becoming streamlined
- Support for new and existing patients when attending appointments or procedures
- Clinical support and resource person to staff
- Networking with other vascular access nurses
- Enrolment in renal ultrasound course
- Enrolment in access database course

The position commenced in September 2007 and is very much a "work in progress"!

Interventional Nephrology: A Horizon of Clinical Practice in Dialysis Access Management: 122

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Tim Spicer,
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Background:

Prompt theatre time for haemodialysis and peritoneal dialysis access surgery has been identified as a major issue in our dialysis unit. The lack of access to definitive surgery and the consequent reliance on temporary and tunnelled haemodialysis catheters (TDCs) is associated with infections, unnecessary hospitalisation, and avoidable morbidity and mortality.

In our renal unit, renal medical teams are trained in the insertion of simple percutaneous catheters. Two of our renal staff specialists who actively insert/rewire/remove TDCs were additionally accredited in late 2006 to perform the peritoneoscope insertion of peritoneal catheters under local anaesthesia.

Outcome Data:

A total of 166 tunnelled dialysis catheters were placed by the renal interventionists between April 2005 and December 2007, and 36 PD catheters have been inserted in the 12 months following accreditation. There have been no major adverse events with any of the above procedures.

No additional clinician time enhancement was provided. Total staff time for insertion per TDC is 2.5 person hours with consumable costs of \$428, per peritoneal catheter is 3 person hours with consumable costs of \$1036. The following clinical benefits are achieved.

- Avoid requirement for general anaesthesia & theatre time.
- Improve patient choice of management.
- More timely dialysis access creation.
- Prompt intervention for complications
- Immediately usable dialysis access.
- Significant reduction in hospital admission/stays.
- Improved understanding of dialysis access throughout the unit.

Conclusion:

Interventional nephrology has revolutionised the traditional management of our dialysis access. This paper will discuss the success of this initiative.

Virginia Ocampo,
North West Dialysis Service,
Melbourne Health

The North West Dialysis Service (NWDS) has experienced a steady growth in patient population in recent years. In July 2005, NWDS had 625 patients, now we have a total of 703 patients across satellites in Metropolitan and Regional Victoria. New patients are placed on a "waiting list" for a satellite closer to home. Sunshine Dialysis Unit (SDU) located in the metropolitan west of Melbourne has the biggest growth in recent years. At the start of 2005 there were 15 patients on the list. The ideal solution to such a problem would be the establishment of a new satellite unit. Unfortunately, NWDS has not been able to gain approval from relevant external third parties to open a new unit in this side of town for the past 5 years. The only viable alternative was to expand within the current resources and infrastructure - this entailed opening a third shift. Opening a third shift to the existing 12-hour roster day created new challenges and raised several issues on staffing and Occupational Health and Safety. Staff, management, ANF and Human Resources representative were involved to identify, negotiate and resolve identified issues.

In February 2006 the third shift commenced with 6 patients, eventually growing to 9 patients and 3 staff members. To date, SDU still records 25 patients on its waiting list.

The establishment of the third shift at SDU illustrates that when an ideal solution is not feasible, creativity and flexibility can be utilised to establish an appropriate and successful, albeit short-term, solution.

Pathology for Renal Nurses: The When, Why and How of Testing in a Pocket Guide: 125

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The Canberra Hospital
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Patients with kidney disease face a plethora of blood testing throughout the course of their illness, from early stage chronic kidney disease (CKD), through to end stage kidney disease (ESKD), including dialysis, transplantation and conservative management.

The role of the renal nurse is to take samples as requested, however with such a variety of available tests, this poses challenges, including:

- When is the best time to take the sample?
- What is being examined with this sample?
- How should it be collected?
- What information is pertinent to the analysis and interpretation of the results?
- Why?

The renal nurse is also faced with (limited) interpretation of those results and understanding the confounders to accuracy of the test results.

The 'Pathology for Renal Nurses' handbook aims to answer these questions and more to ensure improved efficiency in sampling and to develop nursing knowledge. The primary outcome is to provide quality care for people with kidney disease.

Pocket Guides and handbooks are a successful resource for traditional 'hands-on' professionals, ensuring that users have ready access to material essential for their daily practice, without needing to access online material or cumbersome reference books.

The objective of the handbook is to create a simple reference tool that can be used by all renal health professionals, and to provide an informative, yet time saving resource.

Pre-Dialysis Patient Tracking - Ensuring our Patients Have the Opportunity to Receive Timely Education, Access Creation and Dialysis Modality Choice: 126

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Laney Edgell,
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Jayne Amy,
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Dana McInnis,
North West Dialysis Service

Late referral and delayed preparation for dialysis result in worse outcomes for people with chronic kidney disease (CKD), including poor long term survival, increased hospitalisation, inadequate access and reduced quality of life. In 2000, a review of North West Dialysis Service (NWDS) CKD patients indicated that a high proportion were inadequately prepared for dialysis, primarily due to late referral. As a result, a major process improvement project was undertaken and a formal pathway was established to provide timely registration, education and access referral, enabling increased numbers of patients to be fully prepared for the commencement of dialysis. In 2007, a follow-up review of the pathway identified areas for further improvement, including the potential for improved multidisciplinary consultation regarding Stage 4/5 CKD patients. Since November 2006, a multidisciplinary team has met monthly to discuss all registered pre-dialysis patients. Through these meetings, the team is able to identify and follow up with appropriate nephrologists any missing information which may be required to ensure a smooth transition for the patient. A letter is sent to the nephrologist outlining the patient's progress, including education, access creation and planned dialysis modality. This has generated positive feedback from the nephrologists, who also have the opportunity to feedback to the Pre-Dialysis Educator further requests or information. These "tracking" meetings have ensured that patients who may have "slipped through the cracks" in the past are now being captured, individually followed up, receive timely education and access creation and have a well planned introduction to their chosen modality.

A Workforce Vision for the Future: 127

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Southern Health
Chris van Bakel,
Diaverum
Martine Grant,
Melbourne Health
Tony Ryan,
Bayside Health
Usha Mudaliar,
Department of Human Services
Jenny Soding,
RSA Vic Branch President

With national average age of nurses over 42 years and generational change in attitude towards nursing specialties as long term career commitments, the renal community recognised the need to develop a vision for its' future workforce. In March 2007, with Renal Society of Australasia (RSA) Federal Board endorsement, the RSA Victorian Branch convened a diverse working group to explore relevant issues and develop workforce enhancement strategies for nephrology across the state.

In October 2007, the working group convened a consultative meeting and workshop, where senior stakeholders from metropolitan and regional services gathered to consider opportunities for state-wide workforce planning and potential synergies for attracting and retaining staff, particularly younger people into the nephrology speciality. The meeting was supported by Department of Human Services Victoria, with presentations from McArthur Management and the Chair of the National N3ET Taskforce.

In November 2007, the working group presented the Australian nephrology workforce situation to the Melbourne University School of Business as a case study to Master Students.

In 2008, the recognised challenges in Victoria are to analyse and promote the strengths that nephrology has to offer and develop and embrace a culture that will appeal to both early retirees and young workforce talent over the next decade. While our stakeholders have traditionally competed to attract staff from a limited pool, increasing the pool via a collaborative approach to employment is now our primary collective target. The overwhelming need is to market ourselves effectively, employing new strategies such as speciality branding and synergistic promotional opportunities.

In-Centre Dialysis Nurse Stress is Different to Satellite Dialysis Nurse Stress: 128

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Aim:

To explore nurse stress in both in-centre hospital haemodialysis and satellite haemodialysis units in one Australian city's health service.

Method:

Focus groups (n=19) and questionnaires were undertaken in both in-centre and satellite dialysis units. Carey's data analysis method using NVivo Software was used to analyse focus groups and Fishers exact test using SPSS Software analysed the questionnaire data.

Results:

In-centre nursing staff rated the busy-ness of the unit as the maximum stress and stated that they felt this high level of stress on a daily basis. The mostly notable stressors for satellite unit nurses related to patient behaviour, the perceived unrealistic expectations of the patient and patients arriving unwell at the unit.

Conclusion:

Nurses suffer stress on a daily basis in both in-centre and satellite dialysis units. The major stressors differ from in-centre to satellite dialysis units.

Clinical Implications:

Administrative, nursing and medical managers may need to consider the differing stressors in the management of different dialysis environments. Dialysis nurses should be aware of potential stressors to be able to develop stress avoidance strategies. Stressed dialysis nurses are less likely to be in a position to offer quality, empowering nursing care.

Tiwi Islands and Beyond: The Benefits of External Specialised Renal Course Placements: 129

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Austin Health

In 2004 the renal course was transferred from a hospital based certificate to a graduate certificate/diploma at La Trobe University. This required a change of course structure with the need to develop an extra subject called advanced renal nursing. It was decided that this subject would look at specialised areas within renal nursing.

The areas chosen were:

- paediatric
- pregnancy
- aged care
- rural/remote
- indigenous

Students were required to focus on one area and have a clinical placement in that area.

This presentation will look at the students experiences of this subject and their placement. Information about this was gained from an interview with each student, looking at benefits and suggestions for improvements in future placements. Overwhelmingly the interviews reported a positive experience.

In 2009 the course structure is due for change again and the coordinators now have evidence to maintain these placements.

Using Grounded Theory Research to Uncover Expert Nephrology Nursing Knowledge: 130

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Background:

Benner's novice to expert research has assisted with revealing the existence and acceptance of expert nursing practice, and whilst there is general agreement within the literature that expertise is dependent upon the acquisition of a number of skills and attributes, the description of expert practice is, nevertheless, incomplete.

Objectives:

The aim of the study sought to explain the characteristics and differences of non-expert and expert nephrology nurses. This paper reports on the emerging evidence of knowledge within the ordinary everyday practice of expert nephrology nurses.

Methods:

Using grounded theory methodology, the study was conducted in a metropolitan renal unit, and consisted of six non-expert and 11 expert nurses. Data were obtained from participant observations and semi-structured interviews with nurses while they practiced in the renal unit.

Results:

The results revealed that having extensive nephrology nursing knowledge was a striking and extremely important characteristic of expert practice as it enabled these nurses to provide precise rationales for their practice. Expert nephrology nurses utilised multiple sources of knowledge including knowing the patient to guide and inform their practice. Expert nurses clearly relied on and utilised this knowledge to underpin their level of practice.

Conclusion:

Of importance for nursing, the results of this study indicate that specific renal nursing knowledge is crucial to the acquisition of expert practice, and that specialty education programs are essential for the achievement of this level of practice.

The Nephrology Educators Network... an Evolution: 131

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Health Service

Time and workload are not new issues to nursing education. Unique difficulties face Australian nephrology educators in terms of access, equity and support due to the geographical isolation of many nephrology units particularly those away from seaboard cities. The Nephrology Educators Network was established in April, 2007 to help address some of these issues and currently exists in an online format with 26 members. It was established, initially, for those involved in nephrology education in New South Wales via the Human Services network in order to develop a strong network that facilitated collaboration, benchmarking of practices and networking to be optimally effective in providing quality nephrology nursing education. However, due to overwhelming interstate interest, membership was opened throughout Australia and New Zealand. Forum content is driven by members and therefore represents current issues and trends in nephrology nursing today. To date it has generated 34 topics for discussion including Endorsed Enrolled Nurses scope of practice, post operative management of vascular access, buttonhole technique and the use of prophylactic antifungals. Members are afforded the opportunity to share information via a documents link. This paper will report the evolution of the Nephrology Educators Network and discuss the challenges that will need to be overcome in order to provide a sustainable vehicle to provide support to Australasian Nephrology Educators in the future.

A Skill Assessment Tool for Home Dialysis Staff: 132

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Jan Randell,
North West Dialysis Service

In 2000, North West Dialysis Service (NWDS) introduced annual staff skill assessments as a measure of the effectiveness of our professional development program. The Skill Assessment Tool (SAT) is delivered in a three year cycle, i.e. Part 1: Comprehensive assessment of basic dialysis procedures via an intensive 2 day practical and theoretical module, and Part 2: Varied advanced learning and self-assessment modules completed in years 2 and 3.

In 2007, the adequacy and suitability of the SAT Part 1 for our Home Dialysis Service (HDS) staff, skilled in both haemodialysis and peritoneal dialysis, was challenged by our education team. The requirement to complete a SAT for two modalities was labour intensive, impractical and failed to assess the primary training role of home dialysis staff, i.e. to successfully impart knowledge and skills to home patients and measure their effective learning and retention within a self-care model.

A literature search failed to identify a suitable assessment tool for HDS staff that train and assess patients. Further, there was no suitable tool within Melbourne Health that could be adapted to suit our requirements. Hence, the NWDS Nurse Educator, in consultation with HDS staff, developed a SAT based on clinical management pathways and adult learning principles, which specifically aimed to measure our staff skills and confidence in training, educating and assessing dialysis patients.

Following implementation of the new tool, feedback from HDS staff acknowledged that the revised SAT process was less time consuming, less stressful to complete and far more meaningful to their practice.

RAN-Vic, Renal Access Nurses of Victoria Unite: 133

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Emmett O'Flaherty,
St Vincent's Health
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Austin Health
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Mechelle Seneviratne,
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Elizabeth Robinson,
Alfred Hospital

The renal access nurse has recently become an integral member of the renal health care team in Australia. Research has shown that the introduction of a renal access nurse into dialysis units enhances the referral process for new access, improves survival rates and success of access creation. Australia has been relatively slow in the introduction of the role of the renal access nurse. The USA, UK and Europe have been utilising renal access nurses in renal units for many years and their roles are firmly entrenched.

The first renal access nurse was introduced in Victoria in 2003, increasing to 7 in 2007. It was evident in 2006 that a networking system for renal access nurses was needed in Victoria, so RAN-Vic was born.

RAN-Vic consists of 6 renal access nurses from the major hubs in Melbourne and Geelong, thus covering a large part of the Victorian dialysis community through satellite units throughout the state.

The group meet quarterly, with the main goals being to network, share ideas, support each other with challenges arising from the new role, benchmark, quality initiatives and education of renal patients and nursing staff. By doing this, we hope to improve outcomes for patients, improve work practices pertaining to renal access, and further redefine the role.

RAN-Vic is the first of its kind in Australia, providing care of renal access for the dialysis population throughout Victoria. We recommend for all states in Australia to consider forming a Renal Access Group to help improve renal access outcomes.

Developing a Patient Teaching Program for the Commencement of PD: 203

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Princess Alexandra Hospital
Allison Brown,
Princess Alexandra Hospital

Renal failure is a significant concern in Australian society, with 16% of the population affected by some form of chronic kidney disease (Ausdiab, 2005). Increasing growth in Queensland causes a significant economic burden on healthcare resources. Peritoneal dialysis is a cost-effective, viable and easily attainable treatment option that is administered at home by the patient or carer. However, peritoneal dialysis does not come without risks and therefore successful patient education is essential to ensure patient safety and the long-term viability of peritoneal dialysis.

As part of the Princess Alexandra Hospital Magnet Accreditation we are responsible for providing an environment that positively influences patient outcomes. This project developed a flexible teaching program, for new peritoneal dialysis patients to ensure safety and competence when undergoing this home based therapy. The International Society of Peritoneal Dialysis recently published recommendations for patient training in peritoneal dialysis. These guidelines establish a recommended standard of practice; it is essential that current practice be evaluated to reflect these guidelines. The project involved an extensive literature review on self management of chronic disease, maintenance of quality assurance in patient education and principles of successful adult education. By collaborating with the staff of the Peritoneal Dialysis Unit, undertaking the literature review, and the critique of what is currently used for training, a new Patient Training Program for Peritoneal Dialysis was developed and piloted. The piloted program was evaluated by both patient educators and patients; suggestions were considered and assimilated into the final program.

Renal Patients' Satisfaction with Pre-dialysis Education: 204

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Griffith University - Logan Campus
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In the drive to achieve evidence based practice in health care, it is a significant step forward to include patients in the evaluation of the pre-dialysis education they receive. Renal nurses are aware that end stage renal failure patients' outcomes improve when they receive pre-dialysis education and support, however rarely are these patients consulted about the content or timing of the health education they received.

To identify what perceptions renal patients have about the type of pre-dialysis education they receive, nursing staff of one Queensland renal unit decided to involve renal patients in the evaluation of the pre-dialysis education they received. This ethics committee approved research project surveyed dialysis patients whom had commenced dialysis within the previous six months and had been included in the hospitals pre-dialysis education program.

Those patients meeting this criteria were invited to complete a lengthy survey which covered many aspects of pre-dialysis education including: renal or pre-dialysis seminars, one on one educational sessions, as well as asking the patient to rate the importance and satisfaction of the education they received.

This presentation will discuss the responses of the sixty-three patients who completed the survey and the ongoing implications this collaboration may have for future pre-dialysis education.

Improving Patient Understanding of Phosphate Binders: A Bony Challenge!: 205

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Clinical evidence shows that phosphate control in renal patients is suboptimal despite patients being prescribed phosphate binding medication. Education deficits and confusion exist as some of these medications are used for their phosphate-binding action as well as for other indications.

Aim:

The objectives of this project were to identify and assess deficits in patient education relating to phosphate binders and to implement strategies to promote better understanding of phosphate control, thereby improving patient outcomes.

Methodology:

This is a prospective observational quality project conducted over 12 months within the renal service of a tertiary hospital. This involved the distribution of pre & post survey questionnaires to 52 patients, and the provision and evaluation of educational material.

Results:

Results showed that patients have good understanding of dietary control of their phosphate level. However, the term 'phosphate binder' was unfamiliar to many patients (69%).

Results from pre & post surveys showed a significant increase from 31% to 69% in identifying phosphate binders, and an increase from 48% to 69% of patients identifying the reasons for taking phosphate binders.

Conclusion:

This project has proven the importance of information distribution to patient. It is important for health professionals to ensure renal patients are aware of and understand reasons for taking phosphate binders.

Future plans include: On-going patient seminars and education sessions and the development of a phosphate education poster and patient information leaflets in different languages.

Empowerment Through Education: Involving the Practice Nurse in CKD: 206

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Kidney Health Australia

In 2001, the Kidney Check Australia Taskforce (KCAT) was established under the auspices of Kidney Health Australia with the aim of improving health outcomes for Australians with chronic kidney disease (CKD).

Since its inception the KCAT program has focused on the education of health professionals – particularly general practitioners (GPs) – regarding the diagnosis and management of CKD.

However over the past few years the practice nurse has assumed an increasingly significant and pivotal role in the management of chronic disease. In CKD much of the monitoring and checking on progress can be conducted by the practice nurse.

It is therefore vital that these health professionals are included in CKD education efforts. Under the KCAT umbrella senior nephrology nurses have been presenting CKD education to practice nurses across Australia over the last three years. In the last twelve months a specific KCAT Sub-Committee has been established to focus on the education of nurses in general practice. The results of a survey of practice nurses conducted by this committee have assisted in the identification of important issues in practice nurse education.

KCAT is endeavouring to lead the way in developing special teaching programs (including on-line material) that appropriately fills the need of practice nurses and demonstrates that this approach is a cost-effective way of managing CKD.

The Comfort Study: A Randomised, Cross-over Study Demonstrating Less Injection Site Pain and Patient Preference for Subcutaneous Epoetin Beta Compared with Subcutaneous Darbepoetin Alfa in Patients with Chronic Kidney Disease: 207

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Objective:

Injection site pain may affect patient compliance and therefore is an important treatment consideration. This multi-centre, randomised, single blind, cross-over study compared the injection site pain of subcutaneous (sc) epoetin beta and darbepoetin alfa in adult patients with chronic kidney disease.

Methods:

48 patients were randomised to receive weekly sc darbepoetin alfa 30 µg or weekly sc epoetin beta 6000 IU for two weeks and were then crossed over to receive the alternative treatment for two weeks. Injection site pain was assessed using a 10cm ungraduated visual analogue scale (0=no pain, 10=worst pain) and a 6-point verbal rating score. Patient preference for treatment was also assessed.

Results:

29 chronic kidney disease patients (stage 3 or stage 4), 11 peritoneal dialysis, and 8 renal transplant patients completed the study. Patient characteristics were similar in each of the cross-over groups with regards to sex, age, and incidence of diabetes. Patients perceived significantly less pain with epoetin beta than darbepoetin alfa as measured on the visual analogue scale (relative pain score=2.75, darbepoetin alfa: epoetin beta, 95% CI: 1.85, 4.07; $p<0.0001$) and the verbal rating score (median 0.5, 95% CI: 0.5, 1.0 versus median 1.5, 95% CI: 1.0, 2.0; $p<0.0001$). 65% of patients reported a preference for epoetin beta, 25% reported no preference, and 10% reported a preference for darbepoetin alfa ($p<0.001$).

Conclusions:

These results confirm previous findings that epoetin beta is significantly less painful than darbepoetin alfa and patient preference for epoetin beta indicates the difference is clinically significant.

Needle-Free Administration of Epoetin Beta in Haemodialysis Patients: An Occupational Health and Safety Initiative: 208

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Objective:

Needle-stick injury (NSI) is a major occupational health and safety issue facing Australian healthcare professionals. The administration of erythropoiesis-stimulating agents (ESA) in haemodialysis patients represents a large source of injections in the dialysis unit. The purpose of this occupational health and safety initiative was to familiarise nursing staff with needle-free administration of an ESA in haemodialysis patients to reduce the risk of NSI.

Methods:

Ten haemodialysis patients were switched to epoetin beta to take advantage of the detached needle with the commercial presentation of epoetin beta. Epoetin beta was administered into one of the venous bubble trap short lines of the haemodialysis circuit. The venous bubble trap short line was then flushed with 10mls of normal saline. An audit was conducted:

- A retrospective assessment of NSI for the previous 6 months.
- A prospective assessment for eight weeks of the practicalities of needle-free administration in haemodialysis patients.

Results:

This protocol reduces the risk of NSI to nursing staff who administer ESA during haemodialysis. There was no report of needle-stick injury. Haemoglobin level was maintained. Nursing staff preference will be assessed to determine whether there is a preference for needle-free administration of ESA.

Conclusions:

NSI is a major occupational health and safety issue facing Australian healthcare professionals. The detached needle with the commercial presentation of epoetin beta presents an opportunity to use needle-free administration and reduce the potential for NSI in dialysis unit.

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Background:

Clinical practices are governed by policies. These policies require compliance from all staff working within the health service. In order to evaluate renal staffs' compliance to the clinical policies, audits were conducted on three current policies within the renal units.

Aim:

- To evaluate staff compliance on the three renal policies.
- To develop strategies in improving staff compliance to clinical policies

Methodology:

- A 30 days audit on percutaneous catheter exit site dressing and application of mupirocin ointment- A prospective follow-up of 13 haemodialysis patients who had a newly inserted or re-inserted percutaneous catheter.
- A 13 days audit on peritoneal equilibration test (PET), dialysis adequacy test (AT) - A retrospective audit on peritoneal dialysis patients between March 2005 to February 2007 (2 years).

Results:

Compliance rate for percutaneous catheter exit site dressing was 45.45%. The audit showed that 61.11% (n=11) had mupirocin ointment ordered in the medication charts. but only 6 charts were signed by the nurses.

Seventy-five percent (n=86) patients had their PET performed as per policy. 84.21% (n=96) patients had Adequacy Tests (AT) performed during the survey period.

Conclusion:

Continuous monitoring and audit of the compliance to clinical policies is vital in providing quality patient care. Regular departmental in-services were provided to staff to ensure compliance to clinical policies. To further promote compliance, Managers should facilitate and mandate all staff to read and made aware of current and new policies.

Evaluation of Trace Elements Status in Patients with End Stage Renal Disease Undergoing Long Term Hemodialysis: 210

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Aim and objective:

To determine the status of trace elements-copper, ceruloplasmin, zinc, Iron (Ferritin, TIBC, Transferrin) in patients with end stage renal disease undergoing long term hemodialysis in the Nephrology department of Stanley Medical College.

Method and materials:

This is an age and sex matched case control, double blinded study of 100 subjects with 50 End Stage Renal Disease patients on hemodialysis 2times/week between 10 years and 74 years as cases and with 50 normal subjects as controls. 10 ml of venous blood is taken from both subjects. Serum Zinc, Copper, Ceruloplasmin Iron, Ferritin, Transferrin, were measured.

Result:

Results were compared using students independent 't' test. And were found for the case and the control respectively, for Blood urea (mg/dl) 142.56±28.871 and 23.92±5.795 (p<0.001), serum creatinine (mg/dl) 7.97±3.184 and 0.98±0.195 (p<0.001), serum Iron (µg/dl) 90.59±32.821 and 103.38±20.565 (p<0.001), serum TIBC (µg/dl) 629.22±147.250 and 319.91±50.081 (p<0.001), serum Ferritin (ng/ml) 73.82±36.012 and 103.24±39.997 (p<0.001), serum transferrin saturation (%) 14.94 ±6.141 and 32.31 ±4.047(p< 0.001), serum transferrin (mg/dl) 439.92±102.906 and 224.19±35.575 (p<0.001), serum copper 77.65±37.438 and 103.22±27.226 (p< 0.001), serum ceruloplasmin (units) 234.46±80.952 and 332.14±52.915 (p<0.001), serum zinc 57.42±17.869 and 101.48±18.076(p< 0.001). There is significant positive correlation between serum Iron and Copper and serum Iron and Zinc.

Conclusion:

It is determined that there is significance deficiency of trace element- Iron, Zinc; Copper is the patient undergoing dialysis, these elements constituents of many enzymes of metabolism. Supplementation of these elements will improve the quality of life of these patients.

The Lived Experience of Treatment for End Stage Kidney Disease for Aboriginal People: A Qualitative Study: 211

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Aboriginal people are more likely to develop end stage renal failure than non-Aboriginals and are less likely to present in a timely manner for treatment. There is no qualitative literature regarding the experience of dialysis for Aboriginal people. This research study aimed to explore the experience of dialysis and renal failure for the Aboriginal person from a cultural and community perspective.

Six Indigenous individuals treated with dialysis consented to be interviewed for 1-2 hours using narrative grounded theory. Each participant was provided with a list of topics to form a framework. The six transcripts were then coded and themed, and verified by two independent researchers, one of whom is an Aboriginal.

The interviews revealed three main 'themes' of dislocation, disempowerment, and coping. The Aboriginal people interviewed expressed a profound loss at leaving their community for dialysis treatment. This has resulted in a lack of 'role models' in the community successfully living with renal failure and raising awareness of kidney disease. The participants reported a perceived lack of education and involvement in their own care, despite their sense of camaraderie with health professionals. Interviewees were identified as exhibiting stages of the grief process in achieving acceptance and reported a sense of resignation.

Further research exploring the cultural aspects of renal failure in Aboriginal people is recommended. Aboriginal cultural training for renal staff is vital. Providing renal care in rural and remote Aboriginal communities may demystify dialysis and promote early referral for treatment by reducing the fear of dislocation of renal failure.

A Collaborative Approach to Providing Pre-Dialysis Care for Aboriginal Patients: 212

Jane Ruane,
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Objective:

To provide a culturally appropriate pre-dialysis program for the local Aboriginal community. Patients with a GFR below 30ml/min are referred to the pre-dialysis program from the nephrologist. Unfortunately, Aboriginal and Torres Strait Islander patients often present acutely for urgent start haemodialysis (HD).

Method:

The pre-dialysis nurse initiated negotiations with the Aboriginal Medical Service (AMS) to develop a program. An established program for the primary disease was identified.

Result:

The Diabetes Complications and Assessment Clinics (DCAC) are held in four remote communities rotated monthly. The clinics are coordinated from the AMS & AHS to provide a multidisciplinary team to assess for diabetes and complications of diabetes including Chronic Kidney Disease (CKD). The assessment phase, including a team of nurses, pathology scientists, podiatrist, dietitian, pharmacist, ophthalmologist, diabetes educators, medical officers and Aboriginal Health Education Officers, is followed by a case conference. The case Conference is held to discuss findings and recommend further management.

Conclusion:

This year a CKD nurse practitioner role has been established and direct referrals can be made from the clinics for patients with GFR<60ml/min. In addition, the NSW Department of health have allocated funding for this type of early identification and management of CKD in the Aboriginal & Torres Strait Islander Population for 2008.

“Keeping Kidneys Healthy”: Laying the Foundations for the Amgen Indigenous Kidney Health Mission: 213

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Amgen
Lee M Hayes,
Amgen
Lesley Salem,
Hunter New England Health
Barbara Harvie,
The Canberra Hospital

Kidney disease rates are far higher in remote indigenous communities than they are in Australia's major cities. Preventing and treating kidney disease in these areas is a major challenge facing the Australian community. As a result, Amgen Australia in conjunction with Regional Renal Medical teams hosted a series of Indigenous Health Expos in 2007 entitled 'Keep Kidneys Healthy'. These were held at the following dates and places: Townsville 27th & 28th June 2007; Kalgoorlie 20th & 21st July; Broome 27th & 28th July; Cairns 24th & 25th August, Darwin 31st August & 1st September, and Alice Springs 24th & 26th September.

The burden of kidney disease in remote Aboriginal communities is immense and tackling it represents a profound challenge. For these Aboriginal Australians, kidney disease doesn't just affect individuals but whole families and communities.

These workshops have used a novel approach, using activity-based learning to get the message across about preventing kidney disease and managing it. Evidence suggests activities, pictures and story telling are more successful ways to communicate with Aboriginal people about health, which is why the workshops are using these principles. Education topics have included Early Detection of Kidney Disease, Renal Health Promotion, Key Nutritional Messages, Renal Case Studies, and an outline of available resources and tools. The 'Keep Kidneys Healthy' Events attracted local media coverage and helped raise the profile of kidney disease in the local indigenous communities visited, and due to the success of this program, the number of sites will be further extended in 2008.

The Importance of Disaster Preparedness for Dialysis Centres: 214

Kelly A Adams,
Wansey Dialysis Unit - HNEAHS
Peter Sinclair,
Department of Nephrology John
Hunter Hospital - HNEAHS

Lying in bed at 6.55am on a Saturday morning listening to the rain on the roof and wondering what to do that day since outside plans would have to be cancelled. The decision was suddenly taken out of my hands when the phone rang... "there's a tree leaning on the roof of the dialysis unit, the only power is in the main treatment room and is from the generator and we have no idea how long the generator will last. What should we do?" It was the 9th of June 2007 the morning after the worst storm in the Hunter region for 30 years.

The long weekend in June 2007, brought the worst storm in 30 years to the Newcastle, Lake Macquarie and Hunter Regions. Living in the storm affected area included 107 home dialysis patients and 170 in-centre and satellite haemodialysis patients. We cannot eradicate the threat or incidence of disasters; however we can reduce their impact through the meticulous and systematic planning of our disaster preparedness protocols. Disaster management begins in its preparation, when the department is going about its day-to-day activities, seemingly oblivious to what could be around the corner. Apathy cannot afford to live here. Apathy in disaster preparedness is a disaster in itself... waiting to happen. Herein we describe our experience and lessons learned from the June long weekend floods, 2007 with the aim of challenging others to reflect and review their own facilities disaster preparedness.

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Southern Health
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Cranbourne Integrated Care Centre,
Southern Health
Lee Wiedermann,
Cranbourne Integrated Care Centre,
Southern Health

Cranbourne Haemodialysis Unit introduced the buttonhole technique of needling in October 2007. Initially five patients successfully participated in the buttonhole program. Progress of three of these patients demonstrates the benefits to staff and patient psychological and physical well-being.

Patient A: Sue (pseudonym) had a history of difficult needling requiring several admissions to the acute dialysis unit where needling could be guided by ultrasound. Sue cannot speak English and dreaded coming for dialysis. As a result of buttonholing, Sue now has minimal needling problems. Buttonholing has empowered Sue to feel more confident, evident by the smile on her face and her willingness to point to the sites where she is to be needed.

Patient B: Neil (pseudonym) is a gentleman who has a very low pain threshold and would present to dialysis very anxious. Buttonholing has greatly increased Neil's confidence and ability to cope with the needling procedure. He no longer yells during needling and reports that the procedure is far less painful.

Patient C: George (pseudonym) has been a keen advocate of the buttonholing technique. He reports a reduction in pain and his increased self-confidence enables him to advise nurses on the required position and angle of his needles.

Cranbourne Dialysis Unit has provided an option in needling technique which has enabled select patients to gain confidence through decreased pain and anxiety and opportunities for active input into their own care.

Vascular Access Flow Measurement Variations According to Arterial Needle Orientation in Haemodialysis Patients: 216

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Introduction:

While using the Transonic Qc machine to assess access flow in arteriovenous fistulae (AVF), we observed that when compared to antegrade arterial needle insertion, retrograde arterial needle insertion could produce significantly lower access flow measurements.

Aim:

To observe whether Transonic Qc access flow measurements are consistently lower when the arterial needle is in retrograde position.

Method:

Patient selection criteria included: functioning AVF and an adequate AVF length for retrograde insertion of arterial needle. 23 patients entered and 20 finished the study. After ensuring stable and similar blood pressure, 3 flow measurements were taken within the first 2 hours on the same dialysis day of 3 consecutive weeks using retrograde insertion then were similarly repeated using antegrade insertion.

Results:

When comparing antegrade and retrograde flows, in 15/20 access flows fell during retrograde by a mean of 172.8 ml/min (57-484 ml/min) while in 3/20 there was no significant difference and in 2/20 access flows increased in retrograde by 149.5 ml/min (98-201ml/min). The p value measured $p=0.0058$ indicating a significant difference between access flow antegrade compared to retrograde. No recirculation was observed during either antegrade or retrograde.

Conclusion:

We observed that access flow measurements were lower when arterial needle was retrograde in 15 of the 20 patients studied. However, due to the small sample size and limited number of measurements, a definite conclusion cannot be reached, therefore, it could only be recommended that the arterial needle be in the same direction for each measurement for each individual patient.

Buttonhole Cannulation: First Randomized Controlled Trial: 217

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Background:

Dialysis patients require a reliable vascular access in order to enable life-sustaining haemodialysis. The closest to a reliable access is the native arteriovenous fistula (AVF) and saphenous vein graft; however these tend to be subject to complications. Literature suggests that the buttonhole method of cannulation may prolong the life of AVF and saphenous vein graft access with fewer complications.

Objective:

To compare the buttonhole technique in new and established AVF and saphenous vein graft access in reducing complications and prolonging access life compared to current unit practice.

Methods:

This is the first randomized controlled trial comparing buttonhole cannulation and our current practice. Following ethics approval, subjects with a patent AVF or saphenous vein graft were consented and randomly allocated to the intervention or control group. Subjects randomised to the intervention group were allocated the same staff member to cannulate their access for two to four weeks at the same angle and direction with sharp needles. Once the tunnel was developed, blunt needles were used. The control group continued with current unit practice. The subjects were monitored for a six month period for adverse events.

Results:

To date, 21 subjects have been randomized into the study, 15 to the intervention (buttonhole) group and 6 to the control group. The preliminary study results will be discussed.

Conclusions:

This study identifies a method of cannulation for haemodialysis patients. By reducing complications in their access, quality of life for this population could be greatly improved and the health service financial burden reduced considerably.

Viable Vascular Access in the Peritoneal Dialysis Patient Population: 218

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Hunter New England Area
Health Service, John Hunter Hospital

Patients with a functioning peritoneal dialysis catheter frequently underestimate the significance of a viable secondary vascular access. This supposition leads to a lack of planned vascular access creation and/or reduced observation of vascular access surveillance and maintenance.

Method:

The lower sector Hunter New England Area Health Service (HNEAHS) Nephrology Department has trialled a nurse-led peritoneal dialysis community health promotion clinic as a pilot project.

Objective:

One of the objectives of the clinic was to have a viable vascular access or access plan for all peritoneal dialysis patients. This is achieved by:

- Including the Vascular Access Coordinator in the peritoneal dialysis clinic
- Developing a vascular access assessment tool for this dialysis subgroup
- Developing assessment, management and prioritised referral pathways for vascular access creation, surveillance and timely intervention based on the evaluation and outcomes of the clinics
- Increasing ongoing support and education of the peritoneal dialysis patient in vascular access evaluation and monitoring which is critical in preventing the decline of a functioning access.

Conclusion:

Multifarious problems have been identified. The management strategies have avoided unnecessary loss of existing vascular accesses and have resulted in an increase in vascular access placement and surveillance plans. Proactive management and organisation of vascular surveillance in this escalating patient population has enabled us to achieve clinical improvements in patient outcomes and identify advantages of formalised vascular access surveillance.

We are now considering expanding the programme to include the haemodialysis outpatient population.

The Buttonhole Technique: Some Hurdles to Conquer: 219

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Yanella Martinez,
St George Hospital

Cannulation technique is an important aspect in maintaining an effectively functioning haemodialysis AV fistula. The buttonhole technique involves cannulating the same sites each dialysis treatment and the literature indicates this cannulation style prevents aneurysm formation, promotes easier cannulation, minimises infiltrations, decreases haematoma formation and is less painful for the patient. Due to the benefits of the buttonhole technique, more and more haemodialysis units are implementing this cannulation technique.

The purpose of this paper is to highlight and share the challenges and problems our hospital based haemodialysis unit encountered through the implementation of the buttonhole technique.

The buttonhole program commenced at St George Hospital Haemodialysis Unit in September 2006 and 49 patients have been recruited. Thirty eight patients had successful buttonholes developed and 35 patients continue on the program resulting in a technique failure rate of 22%. Problems faced with the buttonhole technique were nurses' resistance to change, failure to establish suitable buttonholes and nurses having difficulty inserting the dull needles causing delays to dialysis starting times. Infected buttonhole sites occurred in two patients and two patients developed dermatitis through using the dull needles but have continued in the program. Additionally, buttonhole tunnels can become obstructed and hence development of a new buttonhole is then required.

Our unit's experience with buttonhole is positive for the majority of patients and staff but it is important to illustrate the challenges faced in introducing a new cannulation technique in a busy hospital haemodialysis unit.

Diabetes and Obesity... Do we have enough Dialysis Machines?: 303

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Princess Alexandra Hospital,
Woolloongabba, Brisbane,
Queensland

With obesity on the rise as well as a growing and aging population, we are faced with an increase of diabetes resulting in more patients on or requiring to be on dialysis. Realistically the renal nurse faces... a world of single and bilateral amputees, visually impaired, elderly, diabetic and obese renal patients. How will we cope?

Ward 4BR, the Renal Inpatient Unit at the Princess Alexandra Hospital, Brisbane, Queensland, manages diabetes by focusing on patient and family education, controlling and stabilising our renal patient's diabetes and educating the patient and family to manage their own diabetes. Our goal is to maintain normal blood sugar levels by adjusting medications as well as altering dietary habits.

Our ward nurses manage the patients overall diabetes and blood sugar levels with alot of time being spent on education focusing on diet, medications, foot care and eye care.

Ward 4BR also specialises in the complications of diabetes. Amputation a direct complication results in altered body image, stump care, management of phantom pain, prosthetics and learning to mobilize again.

Our renal consultant's manage the patients diabetes, the endocrinologists manage our difficult renal diabetics. We utilise the renal pharmacists, the renal dietitians, the diabetic educators and the physiotherapists.

Prophalactically, society must decrease obesity in order to decrease diabetes thus ultimately decreasing the number of patients requiring dialysis, whilst striving to preserve patients renal function. We aim for best renal patient outcome which is a better quality of life for as long as possible.

The Nephrology Nurse Practitioner's Role in Promoting Medication Safety for Patients with Chronic Kidney Disease: 304

Bettina Douglas,
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Nurse Practitioners (NPs) function in both an advanced and extended clinical role in which they can refer patients to other health care professionals, prescribe medications and order diagnostic investigations. There are increasing numbers of NPs working within the speciality area of nephrology.

Objective:

This study sought to obtain a profile of patients being seen at an NP supported multidisciplinary chronic kidney disease (CKD) clinic, to describe their current medication regimen, and identify barriers to safe medication use.

Method:

A retrospective chart audit of all patients seen by the NP at their first CKD clinic appointment at a Queensland hospital between January and December 2007.

Results:

27 patients (11 female, 16 male) were seen for the first time with a mean age of 64.7 years. Patients presented in CKD stage 2 (3), stage 3 (11), and stage 4 (13). 16 patients had Diabetes Mellitus Type 2; 9 required insulin and 4 oral agents. The patients were on a mean total of 9.4 different medications. The data analysis revealed three levels which assisted the NP to categorise a patient's risk for experiencing a medication adverse event. These levels were "safe" (14 patients), "at risk" (6) and "high risk" (7).

Conclusion:

Patients with CKD are treated with complex medication regimens. The NP's comprehensive and holistic assessment provides important information in relation to an individual's medication use. This can inform teaching and other strategies to ensure patient safety.

Medicine Self-Management in Consumers with Diabetic Kidney Disease and Associated Comorbidities: 305

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Elizabeth Manias,
The University of Melbourne
Rowan G Walker,
Nephrology Department,
The Royal Melbourne Hospital

The prevalence of diabetes is rapidly escalating and is now the leading cause of chronic kidney disease in Australia and other western countries. Consumers with diabetic kidney disease commonly have comorbidities that require the consumer to take multiple daily medicines and have frequent consultations with various health professionals. Long-term clinical outcomes may depend on the effectiveness of the choices consumers make for themselves on a daily basis and raise key quality use of medicine issues. This paper presents perceptions of medicine management as reported by consumers with diabetic kidney disease and health professionals. Individual interviews with 23 consumers and two focus groups with 16 health professionals were conducted to gain an understanding of the consumers' medicine use from the time of prescription to the time they took their medicines. All transcripts were analyzed individually using a 'framework' method of qualitative analysis applied to a medication adherence model. Consumers were less confident of the need, effectiveness and safety of their medicines than health professionals. Pill burden, medicine side effects, inadequate knowledge and support systems, and conflicting information were key difficulties affecting consumers' medicine self-management. Health professionals were aware of the difficulties that consumers faced taking multiple medicines, but continued to rely on pharmacology in the management of diabetic kidney disease. Acknowledging the consumer as 'expert' and awareness of the barriers as perceived by consumers can facilitate effective communication, promote medicine self-management, general wellbeing and contribute to medicine safety.

The Bariatric Renal Patient... Greater than 180kgs: 306

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Woolloongabba, Brisbane,
Queensland

Obesity is on the rise and so are our numbers of Bariatric Renal Patients, that is patients greater than 180kgs. With the increase of Bariatric Renal patients comes an increase in the number of Bariatric Renal Patients requiring admission to hospital and inpatient care.

This highlights the problems associated with nursing the hugely obese such as equipment, furniture and mobility. Ward 4BR, the Renal Inpatient Unit at the Princess Alexandra Hospital, Brisbane, Queensland provides specialised care in the management of the Bariatric Renal Patient.

Our nursing staff have had to become competent in the operation of hoists (with scales) which have a maximum capacity of 350kgs and the "Hover mattresses" which are used when turning and providing pressure area care when nursing the bedridden Bariatric Renal Patient. Patients greater than 350kgs must use the industrial hospital scales. Ward 4BR nurses the Bariatric Renal Patient in special Beds that have a maximum capacity of 350kgs. We utilise oversized shower chairs, lounge chairs and furniture.

A dietitian review is organised and the patient is placed on a strict weight reduction diet. A physiotherapy assessment is undertaken and the patient is placed on an intense physiotherapy regime. A psychology review is attended to deal with the patients altered body image and improve their motivation to lose weight, eat healthy and exercise more.

Ward 4BR has to constantly adapt and alter the way we nurse in order to provide best renal patient outcome and accommodate the needs of the ever changing renal population.

Happy Birthday Kidney Health Australia - A Celebration of 40 years of Sharing the Caring: 307

Julie L Edmonds,
Kidney Health Australia
Shelley A Harwood,
Kidney Health Australia

This year Kidney Health Australia celebrates a 40 year journey of striving to stem the growing burden of chronic kidney disease and working towards a vision of 'an Australia free of kidney disease'. Committed to continuing to fund cutting edge medical research, and raising awareness for the need to focus on early detection, prevention and support for individuals with chronic kidney disease, Kidney Health Australia recognises the significant contribution renal health workers make and the many achievements gained from working with them to deliver support solutions and services to the Australian community affected with chronic kidney disease.

From the early Australian Kidney Foundation's beginnings in 1968 to today, where Kidney Health Australia now provide funding for research and nurses grants, conduct GP education, produce professional and consumer resources, and deliver services and support that strengthen the community's ability to manage their kidney disease - through a toll free information line, education, forums, publications, holiday dialysis, transplant housing, kids capers and camps, the Kidney Health Australia of today can educate, listen, shelter, play and holiday, but most importantly, strives to support renal health professionals meet the daily challenge of fighting kidney disease.

Join us for a celebration of Kidney Health Australia 40 years on .. working with renal health professionals to deliver our services and resources to the Australian community affected with kidney disease .. sharing the caring.

Allison F Williams,
The University of Melbourne
Elizabeth Manias,
The University of Melbourne

Background:

People with chronic kidney disease (CKD) often experience pain. Analgesic medicines must be used carefully in CKD because of their potential to accumulate in the body and nephrotoxic risk.

Aims:

The purpose of the study was to investigate the pain control practices of consumers with CKD. Specifically, the perceptions and knowledge of consumers with CKD in relation to their pain control, the barriers and enablers to effective pain control in consumers with CKD and their decision-making in relation to their pain control were investigated.

Methods:

In-depth interviews were conducted with 20 consumers with CKD recruited from two metropolitan nephrology outpatients' units to gain an understanding of their analgesic use and the facilitators and barriers to effective pain control. Themes were extracted from the data.

Results:

Most interviewees had chronic pain from multiple sources which led to diminished mobility and activity levels. Consumers preferred to tolerate pain that to take pain relieving medication or increase the dose of their analgesics. Some consumers avoided taking pain relievers as they believed these caused kidney damage. The local doctor or renal specialist was the main resource to discuss pain issues, and complementary therapies such as relaxation methods, massage, acupuncture, and herbal remedies, were commonly used.

Conclusion:

This research has illuminated some of the difficulties relating to effective pain control in consumers with chronic kidney disease. Strategies to improve pain control in this cohort are suggested. Improved consumer comfort will enhance satisfaction of care and reduce health care utilisation.

Measuring Activity Levels in Pre-Dialysis, Peritoneal Dialysis, Haemodialysis and Transplant Patients: 309

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University of Ballarat
Marie Caltabiano,
James Cook University

There is a reduced capacity to engage in regular activity experienced by people with end stage kidney disease (ESKD) which has an impact on the ability to perform routine living chores. It has been argued that the promotion of activity is an integral component of rehabilitation programs towards the optimisation of health, yet there has been little adoption of these interventions into routine nursing care. This study used the Human Activity Profile (HAP) to measure the levels of activity in people with ESKD. The HAP measures daily living activities ranging from simple activities associated with hygiene, household duties through to high levels of physical exercise. Following ethics approval, 112 people who attended the renal services at a regional hospital and associated satellite centres agreed to complete the HAP; patients were either pre-dialysis or were receiving renal replacement therapy (RRT). Comparisons were performed between activity levels, and different renal disorders, genders, ethnicity, and RRT. Participants in this study were less active than the general population with women, older or indigenous patients significantly less active. A significant difference between mean activity scores was found for type of RRT [$F=8.15$, $df(3,108)$, $p<.001$], with participants receiving haemodialysis being the least active. Additionally, lower levels of albumin were significantly correlated with fewer activities. People with ESKD undertake considerably less activities than normal healthy people. These findings clearly support the need to develop routine nursing practice assessment skills and timely interventions to improve the management of activity in all people regardless of the type of RRT.

Keeping Up Project – An Exercise-Based Falls Prevention Program Managed by Exercise Physiologists for Patients Receiving In-Centre Haemodialysis: 310

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Introduction:

Patients with end stage renal failure (ESRF) can be predisposed to factors that increase their risk of having an injurious fall. Reduced functional ability as a result of muscle wasting, bone disease, uraemia, cardiomyopathy, secondary anaemia, social emotional problems and fatigue all contribute to falls risk. The aim of the study was to assess the effectiveness of an exercise based falls prevention program in the dialysis population on falls risk.

Method:

Thirty-four patients aged 54-83 yrs and receiving in-centre haemodialysis at Shoalhaven and Wollongong Renal Units participated in the Keeping Up Project funded by the Department of Health and Ageing. Participants' falls risk was assessed prior to entry into the exercise program, at 12 and 24 weeks using the Prince of Wales Medical Research Institute, Physiological Falls Screen. Participants exercised in the Shoalhaven and Wollongong renal units three times a week prior to and during dialysis, for 24 weeks. Participants completed progressive balance and strength training individually tailored by the renal unit exercise physiologists and under their supervision.

Results & Conclusion:

Results showed significant improvements in strength, reaction time, balance and falls risk, the project is expected to conclude 1 April 2008.

A falls prevention exercise programme of 12 weeks has shown to significantly decrease falls risk by 57% at 12 and 109% at 24 weeks. This exercise programme is a positive intervention for patients on dialysis. This project supports other research on the positive impact of the exercise physiologist, as a valued health professional in the dialysis setting.

Kidney Evaluation for You (KEY): 311

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Kidney Health Australia

KHA developed Kidney Evaluation for You (KEY), a free targeted early detection program with the aims of testing a cost effective means of finding early asymptomatic CKD in high risk individuals and referring them to a primary care for appropriate management.

KEY was piloted in three geographically diverse locations (Townsville, Roxby Downs, and Perth) in February/March 2008. The KEY health assessment was an evaluation of kidney, cardiovascular and diabetes status. Only people ascertained to be at high risk of CKD were recruited. Health profession education and community awareness programs preceded the screening events.

All blood and urine analysis were preformed at point-of-care. Participants were provided with standardised guidance regarding their results, and encouraged to visit their local doctor (particularly if abnormal results were obtained). Three-month telephone follow-ups assessed changes in management following KEY participation, and improvement in CKD awareness.

Project outcomes will be presented including the proportion of people;

- who tested positive for CKD,
- who consulted a doctor regarding their test values,
- whose management was changed following consultation with their doctor,
- whose level of CKD awareness was changed.

Conclusions:

The early identification of CKD in asymptomatic high risk people of CKD will allow optimal care to be accessed and may lead to a reduction in cardiovascular risk and a delay in the progression from early CKD to end-stage kidney disease. Risk reduction and early detection of CKD and other related chronic diseases has the potential to result in considerable social, economic and quality of life benefits.

Tandem Plasma Exchange and Haemodialysis for Patients Receiving ABO Incompatible or Highly Sensitised Renal Transplants: 312

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Jo-Anne M Moodie,
North West Dialysis Service

The North West Dialysis Service (NWDS) protocol for ABO incompatible and highly sensitised renal transplants require treatment with plasma exchange prior to transplantation to reduce antibody titer levels, and improve graft survival. The majority of these patients also require haemodialysis pre-operatively. Generally this requires the patient to be in the dialysis unit for approximately 6 hours. Tandem haemodialysis and plasma exchange (tandem) has the potential to save time.

Our unit has performed tandem treatments on 4 patients- Three of which were to undergo live donor transplants and one who was experiencing antibody mediated rejection and required dialysis. The tandem treatment was performed by attaching a 3-way tap to the arterial access of the patient and connecting both the dialysis and plasma exchange arterial lines to the tap. The machines were then run at the same time. To measure effectiveness, urea reduction ratio (URR) and antibody titer levels were measured.

An average URR of 63% was achieved across the patient population. Titer levels for ABO antibodies reduced by 1 dilution during treatment. Other treatments undertaken without tandem recorded titer reductions by the same amount.

Although the average URR result was below the CARI guideline recommendation, the treatments were still achieving a reasonable reduction. The antibody removal rate was comparable with non-tandem treatments. Treatment times were 4 hours in length, and the patients experienced no ill effects. The ongoing use of tandem treatments has the potential to reduce treatment times, without a corresponding loss of treatment efficiency.

Making a Difference - Primary Nursing: 401

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Kelly A Adams,
Wansey Dialysis Unit - HNEAHS
Sally Milson-Hawke,
HNEAHS
Peter Sinclair,
HNEAHS

The Wansey Satellite Dialysis Unit is participating in the statewide Haemodialysis Models of Care project through the Nursing and Midwifery Office and the NSW Renal Services Network. The project's goal is to support participating renal units in NSW to identify opportunities and develop strategies to change the delivery of care in order to provide optimal patient care while simultaneously rationalising available resources.

In conjunction with the project leaders the nursing team at the Wansey Centre developed a project primarily focused on primary nursing. The aim of the project was to more evenly share the workload amongst the staff which in turn would help to achieve improved outcomes for patient care and staff satisfaction. The model would also ensure that all patients receive the same standard of care across the unit and allows for timely referrals and involvement of the nephrologists, allied health, anaemia coordinators and the vascular access nurse. The team also set sixteen key performance indicators to monitor improvements over the course of the project.

The majority of the projects sixteen key performance indicators showed marked improvement over the seven months that the new model of care has been implemented. It is anticipated that once the project has been fully evaluated at the Wansey Satellite Unit, other satellite dialysis units within the John Hunter Nephrology Department will role out the model.

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John Hunter Hospital HNEAHS
Kelly A Adams,
Wansey Centre HNEAHS
Petra Salna,
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In 2005 the Division of Medicine at the John Hunter Hospital conducted a documentation audit which showed that the Nephrology ward had to improve in a number of areas for documentation including nursing admissions. Before the project began, nursing admissions commonly were only 1-2 sentences long and stated admission observations and the arrival time of the patient to the ward. It was therefore difficult to commence discharge planning without knowing the key issues as well as investigating admission related incidents.

In 2006 the ward Clinical Nurse Specialist (CNS) group took on the project with the aim to significantly improve the admission documentation. The CNS employed the quality concept of the Plan, Do, Study, Act cycle to ensure the project met its goals. The group decided on the acronym SOMBER to prompt nurses on the information required and an education program was developed and rolled out by the group.

To assess the success of the project the baseline data from the 2005 documentation audit was compared against the data from the 2006 and 2007 documentation audits. The results showed significant improvement in all areas of admission documentation for the Nephrology ward.

Due to the success and adaptability of SOMBER it has now been incorporated into the documentation resource manual and the documentation audit for the Division of Medicine at the John Hunter Hospital.

Cognitive Testing to Identify Training Needs in CAPD: 403

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Joann Spiteri,
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North West Dialysis Service

Adequate training in peritoneal dialysis is essential for successful patient outcomes. In 2006, the North West Dialysis Service (NWDS) introduced cognitive testing to assist with identifying patients who may require extended training time and/or modification of current training materials/methods.

The Rey Auditory-Visual Learning Tool (RAVLT) uses written lists to assess memory and retention, estimating (a) a person's capacity for retention in learning, with and without interference, (b) the potential value of printed materials to the learning process and (c) estimate of training time required. Testing identifies up to 6 issues (i-vi) which may complicate training. Of 28 patients tested, no issues were identified in 3. Issues identified included (i) not being suitable for self care (n=4), (ii) requirement for extended training times (n=3), (iii) need for memory cues/ written materials to back up learning (n=5), need for repetition of previous material (n=6), requirement for short concise sessions with limited volume (n=7) and (iv) possible poor long term retention (n=5). To date, 16/28 patients tested have commenced PD training, while 12 remain pre dialysis/ other modality/ no treatment undertaken. Limitations of testing identified include the requirement for written and verbal English and difficulties in standardising the point of testing.

Early indicators suggest that the tool offers support in the adaptation of our training program to suit individual needs. In addition, the use of RAVLT has allowed us to streamline our PD training calendar to better manage limited resources.

Reducing Exit Site Infections In New PD Catheters: 404

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In 2001 we identified a high rate of exit site infection for new peritoneal dialysis (PD) catheters within their first month. For the years 2000 - 2001 this amounted to infection rates of 25% and 20% respectively. This highlighted a need to examine and review the current post PD catheter insertion exit site care policy.

Upon review a number of changes were made, including: decreasing frequency of dressing changes; introduction of an occlusive waterproof dressing; and the introduction in 2005 of an antimicrobial impregnated drain sponge. Through these changes we have seen a significant improvement in our infection rates, being 0% for the past 3 years(45 catheters). This poster will describe in more detail the changes that were made, current policy, and the use of the antimicrobial drain sponge.

The Effectiveness of BVS (Blood Volume Sensor) in Assessing the Ideal Body Weight of Patients Receiving Haemodialysis: 405

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An important skill for haemodialysis nurses is the ability to assess patients' weight gains as accurately as possible. Weight gains can be attributed to fluid, muscle or adipose tissue. Majority of patients have fluid gains between dialysis days. Not all gains can be assumed to be fluid only.

Causes of weight gain are not always obvious. Nurses use several assessment skills, palpating limbs to assess for oedema, listening to lungs sounds for evidence fluid overload, observing patients' face for swelling, taking blood pressure, assessing signs of shortness of breath and measuring JVP.

These are some of the skills carried out by the nurse. Additional method of assessment is using BVS lines in place of conventional blood lines.

BVS lines were introduced to the satellite unit along with the purchase of a new model of dialysis machine in 2006. The unit had 2 models of dialysis machine, the BVS lines were compatible with only one model of machine. Staff utilised this new technology as an adjunct to their other assessment skills.

The first patients chosen for assessment were those whose fluid gains had previously been the most challenging to assess each dialysis day. Staff explained the purpose of the BVS to patients before use; patients welcomed the new technology and the opportunity to have their fluid gains assessed. Data was collected each dialysis day for one week, *then assessed to see if the patient was continuing to carry fluid post dialysis or if the BVS indicated the patient was dehydrated post dialysis.

Virginia Ocampo,
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Sunshine Dialysis Unit; North West
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The use of art therapy in the management of chronic kidney disease and dialysis is not a new application. Studies have shown its usefulness in encouraging patients to communicate and develop an identity within their dialysis community, separate from their medical needs. In the case of Sunshine Dialysis, the purpose of the Quilt project was inspired by the unique diversity found in its community of patients, staff and carers. The Quilt project aimed to enhance unity within the unit, while celebrating its diversity. An invitation was extended to the unit to participate in the creation of the 'Quilt of Happiness' by decorating a piece of cloth with their own artwork. Their designs were to be centred on the question of "What makes you happy?" and encouraged creativity and fostered a sense of belongingness amongst all involved. The project was embraced by all and the wonderful artwork submitted serves as a testament to the companionship and special community in the dialysis unit, building on the respect and mutual appreciation all members share with one another. This commitment to enhance the relationships within the unit is the same effort that helps all of us manage the challenges faced by patients with renal failure.

Multidisciplinary Collaboration in Providing Hand and Foot Massage to Patients in a Hospital Renal Dialysis Setting: 407

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Kidney Health

Margarite Barlow,
Launceton General Hospital
Margarite James,
Launceston General Hospital

The objective of this service is the improvement of the general health and wellbeing of patients receiving dialysis in a hospital setting through the implementation of a volunteer massage service. It was initiated when patients in the renal unit identified the need for such a service to improve patient comfort and relief from the physical side-effects of their medical condition.

The method of service implementation has been multi-faceted and required a multi-disciplinary approach utilizing hospital resources, the training expertise of a physiotherapist and the establishment of a group of hospital-based volunteers, supported by the unit's social worker and chaplain. In the first twelve months of this project the volunteers received training sessions in basic and non-intrusive massage techniques conducted by a physiotherapist and applied their training to provide voluntary service to patients in the renal unit. The service was evaluated by a social worker who implemented a consumer satisfaction survey.

The results of this survey indicated overwhelming support for the service and demonstrated capacity for sustainability. The majority of patients found three or more benefits to their quality of life including improved relaxation, social contact and support, pain relief, improved energy levels and improved use of time while receiving treatment.

In conclusion, it has been established that the provision of this service within the hospital setting has extensive positive outcomes for patients. Ongoing evaluation of outcomes for patients and volunteers has been planned.

Management of Dialysis Patients with Cardiac Related Illness in the Ballarat Dialysis Unit with the Introduction of Telemetry: 408

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Leila M Higham,
Ballarat Health Services
Rachel B White

Cardiovascular disease in Chronic Renal Failure a leading cause of death, and is highly prevalent in the existing haemodialysis patient population.

An increasing number of renal patients requiring haemodialysis are being admitted to Ballarat Health Services with cardiac related illness. Patients could only be dialysed off-site in the intensive care unit or ward 4 North. The absence of appropriate facilities in the dialysis unit was therefore placing a significant strain on the available staff resources to provide haemodialysis treatment for patients with cardiac complications. This presentation describes the design and implementation of a cardiac monitoring process for these patients.

The introduction of a cardiac Telemetry monitoring service within the Ballarat Health Services Dialysis Unit took place in 2007. Since its implementation, a significant number of patients with cardiac related illness requiring cardiac monitoring can be dialysed safely within the Dialysis Unit. In addition, we have achieved a more efficient utilization of trained staff, without the extra costs of dialysing patients in an off-site environment with cardiac monitoring facilities.

MAK-RLL: A Recombinant *Lactococcus Lacti* Expressing Creatinine and Urea Degrading Enzymes as an Alternate, Cheap, Safe and Easy to use Strategy for Dialysis in Resource Poor Settings: 409

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Objective:

Renal disease is becoming a common occurrence in the developing world setting. Within sub-Saharan Africa, this can mainly be attributed to changing lifestyles promotive of chronic disease like hypertension and Diabetes, high burden of infectious nephropathy and immune derived renal pathology. The high cost of renal replacement therapy here complicates the issue; emphasizing the need to either build RRT capacity to match the increasing prevalence of renal disease or develop alternate strategies. In the past, we have employed a Lactulose induced osmotic diarrhea to achieve reduced blood urea and creatinine. *Lactococcus lactis* (*L. lactis*), known from cheese production, can be genetically engineered to constantly secrete satisfactory amounts of bioactive agents. We aimed to develop a recombinant model of a *Lactococcus lacti* that degrades creatinine and urea for use as a cheap, easy to use, and safe "Yoghurt" alternative to conventional RRT.

Methods:

Genome-Wide Protein database search of the Swiss-Prot TrEMBL (Europe), NCBI (USA), and DDJJ (Japan) for naturally existing enzymes that could degrade Urea and creatinine and recombinant modeling.

Results:

Three bacteria derived enzymes were found: creatinine hydrolase (EC 3.5.2.10 Catalyses the conversion of creatinine and water to creatine), creatinase (creatinase amidinohydrolase EC3:5:3:3; catalyses the degradation of creatine to urea and sarcosine) and Urease (Urea amidinohydrolase EC 3.5.1.5 catalyses the conversion of urea and water to ammonia and carbon dioxide) were found: and respective genes obtained.

Conclusion:

We have modeled the first ever such recombinant *Lactococcus Lacti*-dubbed the Makerere-Recombinant *L.lacti* (MAK-RLL) following the strategy of thyA gene substitution.

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Hunter New England Area
Health Service
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Employing online methods to determine dialysis dose 'real time' complements the nursing process. This prospective pilot study of 30 established in-centre haemodialysis patients aimed to compare the use of URR with online Kt/V. Patients were dialysed using Gambro AK200 dialysis machines equipped with diascan modules to measure online Kt/V. Kt/V was recorded at the conclusion of treatment and URR was measured using the slow/stop flow pump sampling technique and converted to Kt/V using the Basile formulae. Bland Altman plots demonstrate degree of agreement between diascan Kt/V results and the calculated Kt/V results. Relationship between the diascan Kt/V results and the calculated Kt/V was assessed by Pearson correlation coefficient and the paired results were significantly correlated ($r=0.6825$ and $P<0.001$). The t test compared the groups for differences. The mean difference was 0.18 (95% confidence intervals 0.12 to 0.23), $P<0.0001$. Results support previous studies and show a close agreement between the formula Kt/V and diascan Kt/V. However, the median bias is clinically significant and has implications for units who use online adequacy measurements as their sole tool for assessing dialysis adequacy. We conclude that Kt/V is a constraining methodology of adequacy that has several formulae's and potentiates the quantification of patient care to a mathematical equation rather than a holistic and individualised approach to patient management. Our findings suggest that diascan is a beneficial quality assurance tool but should not be used as a solitary means of assessing dialysis adequacy.

The Grass is Always Greener! The Search for Better Central Venous Catheters: 411

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A number of new catheters have been introduced that may potentially reduce the need for anti-thrombolytic therapy. The NWDS examined the ease of insertion and complications of 3 different types of tunnelled central venous catheter. Patients were randomly allocated Permcath (Quinton) Split-Cath, (MedComp) and Haemosplit (Bard) catheters. The three surgeons involved in inserting the catheters were asked to complete evaluation at time of surgery. Subsequent follow up at dialysis centres to evaluate patency, venous pressure, need for anti-thrombolytic therapy or signs of infection.

For 13 months from September 2006, 48 catheters were inserted into 44 patients (16 Split-Cath III, 13 HemoSplit & 19 Permcaths). There were no immediate peri-operative complications. Catheter flow rates at initial dialysis, 1 month and 3 months were similar. The rate of blockage requiring replacement was similar for HemoSplits (3/13; 23%) and Permcaths (4/19; 21%), but lower for the Split-Cath III (1/16; 6%). The incidence of diabetes was similar in each group.

Infection requiring catheter removal only occurred with Permcaths (3/19; 16%). Permcaths had the highest number of catheter days. Surgeon feedback indicated that Permcaths were easiest to insert and least likely to kink.

Although Permcaths were the easiest catheter to insert, they had the highest rates of infection, thrombolysis and blockage. Permcaths were more likely to require replacement compared with Split-Cath III and HemoSplit catheters. This study, however, only reflects a trend as numbers were small. The search continues for the ideal long-term dialysis catheter.

Factors Influencing Client Selection Between Satellite, Home and Nocturnal-Satellite Haemodialysis Treatment Options: 412

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Casey Dialysis Unit

Introduction:

The client population with chronic renal failure (CRF) is increasing rapidly every year in Australia. In 2005 there was an increase of 13% commencing treatment from 2004 (ANZDATA 2006) causing increase demand for services. Approximately 13% of the Australian dialysis population dialyses in the home environment (Kidney Health Australia). Home and nocturnal dialysis provide minimal restrictions to lifestyle and decrease the physical effects of CRF on overall health with increased dialysis hours.

Objective:

To determine what factors influence selection of haemodialysis service for the CRF client.

Method:

A survey was distributed to 30 haemodialysis clients comprising of 8 questions. 14 surveys were returned.

Results:

72% surveyed choose routine satellite dialysis for various reasons ranging from – environmental, nursing support, location and fear of self cannulation.

One client considered home dialysis an option due to lifestyle, flexibility and improved dialysis with increased time.

The majority wouldn't consider this form of dialysis due to lack of self confidence, carer responsibilities, technical support, age, rental accommodation and previous unsuccessful home dialysis.

Nocturnal satellite dialysis was not acceptable to most, due to inability to sleep, environment, confidence and length of time.

28% recognised nocturnal satellite dialysis enables full-time work, longer dialysis time and improved clearances with professional supervision with limited lifestyle disruption.

Conclusion:

A larger sample population is needed for improved representation of the haemodialysis community. Haemodialysis options need to be discussed early. One client has since commenced home dialysis successfully.

Arterial Compliance: A More Reliable Predictor of Outcome? 413

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The "predialysis epidemic" of elderly and diabetic patients has meant establishing reliable arteriovenous fistula access is becoming more of a challenge. Appropriate assessment prior to surgery increases the likelihood of a successful outcome. All patients at Wellington Hospital, New Zealand assessed for fistula placement have Duplex vein mapping prior to clinical assessment with a vascular surgeon. The vein map measures venous and arterial diameters, flow velocity and arterial compliance measured as a resistance index (RI). It is well recognised that venous diameters are indicative of outcome. With arterial disease prevalent in the elderly and the diabetic patient group the role of arterial compliance (RI) in fistula outcomes was explored.

Objective:

A retrospective/prospective study was designed to identify whether a preoperative RI of >0.7 in the radial artery is predictive for primary radio-cephalic fistula (RCF) failure.

Method:

57 predialysis patients were vein mapped resulting in 44 RCF formations; 27 had an RI > 0.7 and 17 had an RI < 0.7.

Results:

A successful outcome is defined as a RCF used successfully at initiation of dialysis with a blood pump speed of 300mls/minute for six of the first thirteen treatments. Of the group where RI > 0.7, 55.5% had a successful outcome, and for the group where RI < 0.7, 64.8% had a successful outcome.

Conclusions:

The role of arterial compliance in outcomes for RCF formations warrants further study with larger patient numbers.

Haemodialysis: Management of Diabetes Still Matters!: 501

Bernadette Mullen,
Southern Health
Jennifer McPhee,
Southern Health

Diabetes is the primary cause of stage 5 chronic kidney disease (CKD5). Factors leading to the development of complications in this patient group are poor control of blood glucose levels, inappropriate lifestyle choices, inadequate diet and exercise, and a lack of knowledge and understanding regarding the management of diabetes.

It is essential that diabetics undergoing renal replacement therapy manage their diabetes to prevent further damage to their health. The National Health Survey of 2004-2005 showed that when diabetics were compared with non-diabetics, they were 2.2 times more likely to develop a cardiac condition, and four times more likely to undergo amputation of a limb due to vascular and nerve damage.

During the past six months, Southern Health satellite haemodialysis staff noticed several diabetic patients undergoing haemodialysis were not vigilant in the management of their diabetes, and that they lacked understanding of the complications that could arise as a result.

This poster presents results of a study designed to establish the level of understanding that diabetic haemodialysis patients had regarding the management of their disease, particularly the consequences of poor blood sugar control.

A questionnaire and blood results will provide baseline data about individual patient's knowledge of diabetes management. Patients will then receive a diabetes education booklet and after one month, a follow up questionnaire and repeat blood collection will determine the outcome.

It is anticipated that the use of this educational tool will help empower these diabetic patients to take control of their illness.

Prevalence of High Serum Creatinine and Its Relationship with the Diabetes, Metabolic Syndrome, Hypertension, and their related variables: Results from Macao Health Survey (MHS) 2006: 502

Ken Q Gu,
Macao Polytechnic Institute, China

Introduction:

It is known that diabetes (DM) and hypertension (HBP) could affect renal function. This report is based on the data from a random household health survey (MHS2006). Prevalence will be presented for high serum creatinine (Src), DM, metabolic syndrome and HBP. The relationship between high Src to these diseases and their related variables would be explored.

Methods:

A total of 3119 Macao residents aged 18 and above were recruited. Data was collected in three ways: health assessment, questionnaire and lab tests. High Src was defined by ≥ 90 $\mu\text{mol/l}$ for females and ≥ 110 $\mu\text{mol/l}$ for males. Standard criteria were used to define DM, MS and HBP. The data analysis was done by SPSS.

Results:

The prevalence was 3.5% for high Src, 5% for DM, 9.9% for MS and 27.9% for HBP. The risk of high Src was 1.54 for DM (95%CI:0.76-3.10), 3.12 for MS (95%CI:2.05-4.75) and 4.18 for HBP (95%CI:2.85-6.12). A further analysis found that people with high Src had significant higher values in Age, SBP, DBP, BMI, Triglyceride, Cholesterol and waist circumference. However, no significance was found in glucose. In a logistic regression with all numeric variables listed above plus the Sex in the original model, we found Age, Sex and DBP were significant related to Src status.

Conclusion:

Although other studies indicated that HBP and DM could affect renal function eventually, our study suggests age, sex and blood pressure were important predictors for high Src. No relationship was found between Src level and Diabetes or glucose.

Extra Curricular Education for Renal patients: 503

Kelly Adams,
Hunter Renal Resource Centre
Lee Walter,
John Hunter Hospital

In response to the expressed need of renal patients and their supporters to receive further encouragement and assistance regarding managing the challenges of a renal diet, a renal cooking class was offered by the Nephrology Services of John Hunter Hospital on Wednesday July 31st 2007 at Glendale Tafe Campus.

The class was developed, coordinated and conducted by renal dietitians Catherine Ryan and Shaye Ludlow, Hunter Renal Resource Centre (HRRC) Representatives Jennifer Niddrie and Angela Green, and Glendale Tafe Staff Annette Brooker and Jayne Wilson.

The program was delivered as an interactive session using recipes provided by the renal dietitians. The participants comprised renal patients and their families. They were divided into teams to prepare the varied menu items, that included entree, main, dessert and condiment dishes. The session finishing with the sharing of the prepared food for lunch.

Participant satisfaction was overwhelmingly positive and due to this response it is anticipated that the renal cooking class will become an annual feature of the HRRC's education calendar

Phosphate and Potassium Client Education and Evaluation: 504

Fiona R Trimble,
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Mildura Base Hospital

A poster presentation that illustrates the effectiveness of education given on modifications for dietary potassium and phosphate intake for haemodialysis clients. 15 clients were involved in the project that were regularly hyperkalaemic and/or hyperphosphataemic. A combination of pictorial and written text education tools were used. Pre and post education surveys were conducted to ascertain the clients' level of knowledge. Pre and post education blood results have been graphed to illustrate actual outcomes.

Hyperkalaemia and hyperphosphataemia are an ongoing problem for many haemodialysis clients. Client education is provided on a regular basis with varying degrees of success highlighted in the biochemistry results. The aim was to determine if our education was delivered in an appropriate format for our clients, resulting in an improvement in abnormal biochemistry results.

We measured the effectiveness of our education by comparing biochemistry results and client survey results from before and after the education was provided.

The results of post education surveys showed an improvement in patient knowledge of dietary modifications. Biochemistry results taken eight weeks after the education showed a small general improvement in levels measured. Biochemistry results taken another month later revealed that 2/3 of our clients levels had deteriorated and were almost back to base line levels taken pre education.

In conclusion, our project revealed that our education tools were effective in the short term but compliance was eroded by the 10 week mark. This suggests that education must be performed on a frequent regular basis to optimise client dietary compliance.

Deakin University and Amgen Australia - A Partnership Ensuring Postgraduate Renal Education is now Accessible for all Nephrology Health Care Professionals: 505

Lee M Hayes,
Amgen
Christine Smith,
Deakin University

Challenges facing tertiary and professional education in the current workplace, including the impact of globalization and the continuing development of new technologies have created a need to rethink and challenge traditional teaching and learning methods. The most recent ABS Working Arrangements Survey indicated that in 2003, 67% of nursing workers worked shift work in the previous four weeks compared to 16% for the general population, and in 2001, 49% of nursing workers worked part-time, compared with 37% in 1986.

Of 412 surveys collected at the 2007 RSA Conference that were submitted, some 122 respondents replied that 'Modular Style Distance Learning' was the preferred method of seeking renal postgraduate education.

This has given more credence to the creation of a corporate partnership between Deakin University and Amgen Australia to facilitate a suite of 4 Professional Development Modules on the Assessment and Management of Kidney Disorders, covering the basics of Chronic Kidney Disease, Haemodialysis, which are open for enrollments in Semester 1 2008, and Peritoneal Dialysis and Renal Transplantation which are open for enrollments in Semester 2 2008. Deakin University's reputation for excellent teaching and innovative course delivery has been recognised twice previously – in 1995/1996 for clever use of technology in education and in 1999/2000 for our partnerships with industry.

With the flexible delivery of this education and the availability of a scholarship program, it is anticipated that the Renal Professional Development modules can bridge the geographic and scheduling difficulties that part-time and shift work can lead to.

The Home Haemodialysis Calendar - Empowerment Through Celebrity: 506

Keri Equinox
Carins Base Hospital

Benefits of home dialysis are well recognized, and are often measured by improvements in biochemical parameters as well as quality of life scales.

To coincide with the opening of our new off-site home training centre, our home haemodialysis patients were photographed at their homes or work to produce a calendar that celebrates their achievements. The dedicated efforts of patients and their families to transform their situation of despair and disease, to wellness and independence is captured in pictures, and presents them as community and family members of society and not as 'dialysis patients'.

The calendar has not only bought them celebrity status, but has provided them with recognition, respect and a sense of identity that had been lost with end-stage renal disease.

Reaction/responses to the calendar from patients and families, health care providers and community are presented, and provide insight into how people can lose identity and self esteem when they become part of the health care system. This simple tool is but one way of empowerment, and reminds us that as health care providers we must maintain focus on the person and not the dialysis.

Kidney Transplantation Across the great Divide: 508

Siew Eng Foo,
Monash Medical Centre,
Southern Health
Maryanne Quinn,
Monash Medical Centre,
Southern Health

Plasma exchange is a treatment that is becoming increasingly common in our acute haemodialysis unit and is used in the treatment of a variety of medical conditions such as Guillain Barre syndrome, thrombotic thrombocytopenic purpura, haemolytic uraemic syndrome and multiple myeloma. However, in recent years, plasma exchange has been performed as a pre and post organ transplant prophylactic procedure in our unit. Pre organ transplant plasma exchange is the optimal treatment in two main groups, the sensitized patient who is at risk of antibody mediated rejection and recently, patients receiving ABO incompatible organ transplantation.

The introduction of ABO incompatible organ transplantation to our renal replacement program has afforded us the opportunity to develop an educational package for our potential organ recipients. As nephrology nurses, we play an important role in educating our potential transplant recipients and donors on recent medical advancements. Empowering patients with knowledge about plasma exchange will lead to confidence in their treatment and a reduction in anxiety which enables both parties to proceed to surgery with a positive attitude. Knowledge leads to empowerment.

This poster will present the educational process designed to help patients, their family and potential donors, understand the role of plasma exchange treatment in organ transplantation.

Empowering Staff to Care for Difficult Patients: One Unit's Experience: 509

Barb L Cottell,
Southern Health - Dandenong

The Dandenong dialysis unit is a nine station satellite unit located within a building previously used as a domestic dwelling. During the five years that we have been operational, a number of our patients, some with diagnosed personality disorders, have presented staff with a variety of challenging behavioural problems. These disorders include delusional and paranoid tendencies, inappropriate social behaviours and anger management issues. In common with other units, we also face the daily difficulties associated with caring for a group of people struggling to cope with one, and sometimes more, chronic illness/s.

This poster will present strategies developed by staff to assist in overcoming these behavioural outbursts. Some of the strategies employed focus on preventative measures as well as recognising the subtle signs of a potentially volatile situation.

It will include our experiences with staff debriefing by a renal social worker, attendance at workshops and seminars specifically designed to address difficult patient behaviours, the use of a single room to help contain inappropriate behaviours and the beneficial support that pastoral care can provide for both staff and patients.

We hope that by sharing our experiences and the strategies utilised, other units may feel empowered to deal with similar situations.

Rosemary Simmonds,
The Geelong Hospital
Raelene Hungerford,
The Geelong Hospital
Janeane Boddington,
The Geelong Hospital
Leanne Basham,
The Geelong Hospital
Rosemary Heintz,
The Geelong Hospital
Richard Knight
Jenita Savell

A nocturnal haemodialysis on-call service, staffed by Registered Nurses, is available to all home haemodialysis patients. This mobile phone service operates from 2000hrs to 0800hrs, M-F, 24hrs Sat & Sun.

Method:

A diary was kept for 40 weeks. Data collected included: time and reason for call and outcome. A survey evaluating the service was sent to twenty-four current patients.

Results:

A total of 117 calls were recorded, averaging 2.93 calls / week. 20(77%) out of 26 patients used the service. 91 of 117 calls (78%) were received before 2400hrs. 54 of 117(46%) were from patients >60 yrs. Patients dialysing at home < 6 months, averaged 5.25 calls per patient, at home >3 years averaged 5.33 calls. Issues were resolved in 71 of 117 calls (61%) allowing haemodialysis to proceed. Technical machine issues accounted for the largest number of calls (31/117{27%}). 71% of technical calls were unresolved and dialysis was discontinued.

13/17(76%) of Evaluation Surveys rated the on call service as "very important" and 13/17(76%) "very reassuring". 16(94%) indicated that an after hour service is necessary.

Conclusion:

The nocturnal on call service provides home patients with valuable support and reassurance. The majority of patients feel it is a necessity. In this study calls were made predominantly before midnight, regardless of dialysis experience or age. It does appear that the older patient maybe more reliant on the service. Two-thirds of problems were resolved over the phone resulting in secure and successful dialysis treatments at home rather than in a dialysis unit.

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Rotorua New Zealand

26 - 28 March 2009

IMPORTANT DATES

Abstract Submission Deadline
Submission Notification
Accommodation Booking Deadline
Early Registration Deadline

Friday, 31 October 2008
Friday, 12 December 2008
Friday, 13 February 2009
Friday, 20 February 2009

KEYNOTE SPEAKERS

A/Prof Robert Montgomery
Prof Joanne Bargman
Dr Ken Farrington

USA
CANADA
UK



Ka ki te puku, Ka ora te tangata.
"When the stomach is full, a person is satisfied and well."

The name of this design is *Whatukuhu*, (*Kidney*) and I've used the above *Pepeha*, (*proverb*) to assist with the explanation or meaning of it. The *Pepeha* implies to the joys in life, in particular eating. It's natural for us to forget about the consequences of what we consume and instead we tend to think of how satisfied we are for that small moment in time. The joys of life are sweet and so are the consequences if we indulge too much.

The *Whatukuhu* design attempts to convey the message of caution and brings to our attention the importance health and well being. It represents a unique part of our body that assists with filtering food and liquid, and refers to three important aspects of Maori belief, *Mauri* (*life principle*), *Ihi* (*essential force*), and *Mana* (*spiritual power*). These become threatened when proper care of our mind, body and spirit are compromised. The *Kowhaiwhai* patterns within it represent new and healthy beginnings for mankind and the surrounding environment that we live in.

The *Whatukuhu* design was created for the 2009 RSA conference to be held in Rotorua, Aotearoa. I hope it reflects the environment, setting and people who are hosting the conference and trust that the sharing of knowledge will full our minds and satisfy our hunger in providing solutions for enhanced quality of life.

Name of Design: *Whatukuhu*

Artist: *Eugene Kara*
Ko Maungatautari te Maunga
Ko Waikato te Awa
Ko Ngati Kahukura, Koroki nga Hapu
Ko Waikato te Iwi
Ko Tainui te Waka