

KHA-CARI Guidelines



Annual Report 2013



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REPORT FROM THE CHAIR

KHA-CARI Guidelines is now in its 15th year of existence and in its third year into the new governance arrangements with Kidney Health Australia. It has been a very busy and productive year, with five guideline summaries and two commentaries published.

The KHA-CARI Guidelines Office and the Steering Committee have restructured the Guideline Development process to increase productivity, maximise resource efficiency and improve timeliness. We're pleased that this process has resulted in more rigorous Guideline Development, Adaptation and Commentary Processes. These new procedures have been included in the Manual of Operations which can be found on the KHA-CARI website (www.cari.org.au). The website is also undergoing an update and will be launched in early 2014.

Mindful of our aim to update guidelines every 3 years or sooner if needed, we have reviewed our out-of-date guidelines and identified those which need immediate attention. Our goal is annually to produce two guideline updates and two new guidelines. Consumer involvement and input will be a key aspect of the guideline development process in the years ahead. The Steering Committee and the KHA-CARI Office are developing a Work Plan with the aim of building upon the work of other renal guideline groups and leverage their efforts for the benefit of patients in our region.

During 2013, the KHA-CARI guidelines teams were successful in managing to complete: three new guidelines, four updates of existing guidelines and three commentaries. Guideline summaries and two of the commentaries were published in the journal *Nephrology* with the Anaemia in CKD commentary being published in the *Medical Journal of Australia*, as the target audience for this was GPs. The complete guidelines are available on the KHA-CARI website (www.cari.org.au). The new guideline on the Diagnosis and Treatment of Urinary Tract Infection in Children and the adaptation of the KDIGO guideline on Acute Kidney Injury are in the final stages of development. As part of the cooperative approach to international guideline development, KHA-CARI will continue to review the KDIGO guidelines as they are published and assess whether an adaptation or commentary is the best means of building upon their work.

Work outputs during 2013 include:

New Guidelines:

- Diagnosis and Treatment of Urinary Tract Infection in Children (Convenor: Steven McTaggart) – final stage
- Early Chronic Kidney Disease (Convenor: David Johnson) – published
- Recipient Assessment for Transplantation (Convenor: Scott Campbell) – published
- Cardiovascular Disease (Convenor: Helen Pilmore) – accepted for publication

Updates to existing Guidelines:

- Peritonitis Treatment & Prophylaxis (Convenor: Amanda Walker) – accepted for publication
- Vascular Access (Convenor: Kevan Polkinghorne) – published
- Dialysis Adequacy (Dialysis Membranes) (Writers: Peter Kerr, Nigel Toussaint) – published
- Haematological Targets: Iron (Writers: Rob MacGinley, Rowan Walker, Michelle Irving) – published

Adaptations and commentaries on KDIGO Guidelines:

- Acute Kidney Injury – adaptation (Convenor: Robyn Langham) – final stage
- Glomerulonephritis – commentary (Writer: Chen Au Peh) – published
- Blood Pressure Management in CKD – commentary (Writer: Matthew Roberts) – accepted for publication
- Anemia in CKD – commentary (Writers: Rob MacGinley, Rowan Walker) – published

KHA-CARI has continued to work in the area of implementation research. Current areas of focus include catheter-related infection rates and the use of antibiotic prophylaxis in PD patients. This project is coordinated by Denise Campbell and is now into its implementation phase. Results for the baseline phase will be published in 2014. The Iron guideline implementation project led by Michelle Irving has now finished with the final phase manuscript in preparation. This implementation work is a truly novel endeavour for a guideline development group, but we see it as the essential next step of guideline development and uptake.

KHA-CARI Guidelines is greatly appreciative of the significant support it currently receives from Roche, Amgen, Shire and Baxter, without which KHA-CARI Guidelines could not continue.

In addition, the voluntary contribution of many nephrologists, nurses and allied health staff is appreciated and recognised as underpinning the whole process. I would like to thank the KHA-CARI staff for their hard work in supporting the many writers in the guideline groups and welcome David Tunncliffe to the team. We also welcome Michael Garrett, Luke Toy, Nigel Toussaint, Balaji Hiremagalur and Suetonia Palmer who are new members of the KHA-CARI Steering Committee. Michael is a PD nurse consultant at Bendigo Health, Luke is KHA's Government Relations Manager, Nigel is a consultant nephrologist at The Royal Melbourne Hospital and Balaji is a consultant nephrologist at the Gold Coast Hospital. Finally, I would like to acknowledge and express my gratitude to Rowan Walker, Helen Pilmore, Pam Deans, Rob MacGinley and Nicholas Cross for their contribution to the KHA-CARI Guidelines during their time as KHA-CARI Steering Committee Members.

A handwritten signature in black ink, appearing to read 'M Gallagher', with a large, stylized initial 'M'.

Martin Gallagher

Chair

KHA-CARI Guidelines Steering Committee

GUIDELINE ACTIVITIES

The KHA-CARI Guidelines are divided into three disease stages: Chronic Kidney Disease, Dialysis, and Transplantation. A complete listing of guidelines and subtopics and their current status can be found under the Guidelines section on the KHA-CARI website (www.cari.org.au/guidelines.php)

Summary of KHA-CARI Guideline topics being developed and published in 2013

Guidelines	No. of subtopics	In development	Published
Chronic Kidney Disease			
Diagnosis and Treatment of Urinary Tract Infection in Children	5	✓	
Cardiovascular Disease	5	✓	accepted
Early Chronic Kidney Disease	18	✓	✓
Transplantation			
Recipient Assessment for Transplantation	7	✓	✓
Dialysis			
Dialysis Adequacy (Haemodialysis - Dialysis Membranes)	1	✓	✓
Peritonitis Treatment and Prophylaxis	10	✓	accepted
Vascular Access	10	✓	✓
Iron	1	✓	✓
Adaptation of KDIGO Guidelines			
Acute Kidney Injury	6	✓	
Commentary on KDIGO Guidelines			
Glomerulonephritis	1	✓	✓
Anaemia in Chronic Kidney Disease	1	✓	✓
Blood Pressure Management in Chronic Kidney Disease	1	✓	accepted
Lipid Management in Chronic Kidney Disease	6	✓	

Chronic Kidney Disease

Diagnosis and Treatment of Urinary Tract Infection in Children

The convenor of this guideline group is Dr Steven McTaggart, and its guideline group members include Dr Joshua Kausman, Dr Margie Danchin, Dr Peter Trnka, Dr Michael Ditchfield, Dr Sean Kennedy, Dr Ian Hewitt, and Dr Gabrielle Williams.

This guideline has progressed during 2013, with peer review completed and final drafts prepared. The guideline will be published in early 2014

The following subtopics will be published:

1. Diagnosis of UTI
2. Acute management
3. Radiological investigation following UTI
4. Management and investigation of recurrent UTI/VUR

Cardiovascular Disease

The convenor of this guideline group is A/Prof. Helen Pilmore. The guideline group members include Dr Sharan Dogra, Dr Hiddo Lambers Heerspink, Dr Toshiharu Ninomiya, Dr Rachel Huxley, Prof Rob Walker, Dr Matthew Roberts and Prof Vlado Perkovic.

The guideline was completed and published in 2013. Due to the publication of the KDIGO lipid guideline in 2013 a lipid subtopic is no longer necessary. Instead a commentary on the KDIGO guideline will be prepared in 2014.

The following subtopics are covered:

1. Cardiovascular disease: revascularisation

2. Medical management of coronary artery disease
3. Cardiovascular effects of blood pressure lowering in patients with chronic kidney disease
4. Heart failure
5. Lipid management (now obsolete due to KDIGO guideline)

Early Chronic Kidney Disease

The convenor of this guideline group is Prof. David Johnson and its guideline group members include Ms Emelia Atai, Ms Maria Chan, Dr Richard Phoon, A/Prof. Nigel Toussaint, Mr Graeme Turner, Prof Tim Usherwood and Dr Kate Wiggins.

The guideline summary was accepted for publication in Nephrology in March 2013. The complete guideline is now available on the CARI website (www.cari.org.au)

The following subtopics are covered:

1. Symptoms, natural history and outcomes of early chronic kidney disease
2. Risk factors for early chronic kidney disease
 - 3.1 Primary prevention of chronic kidney disease: modification of lifestyle factors
 - 3.2 Primary prevention of chronic kidney disease: blood pressure targets
 - 3.3 Primary prevention of chronic kidney disease: managing diabetes mellitus to reduce the risk of progression to CKD
4. Screening for early chronic kidney disease
5. Diagnosis, classification and staging of chronic kidney disease
6. When to refer for specialist renal care
7. Education strategies
8. Modification of lifestyle and nutrition interventions for management of early chronic kidney disease
 - 9.1 Medical therapies to reduce chronic kidney disease progression and cardiovascular risk: anti-hypertensive agents
 - 9.2 Medical therapies to reduce chronic kidney disease progression and cardiovascular risk: lipid lowering therapy
 - 9.3 Medical therapies to reduce chronic kidney disease progression and cardiovascular risk: glycaemic control
 - 9.4 Medical therapies to reduce chronic kidney disease progression and cardiovascular risk: anti-platelet therapy
 - 9.5 Medical therapies to reduce chronic kidney disease progression and cardiovascular risk: uric acid-lowering agents
10. Vitamin D therapy (supplementation) in early chronic kidney disease
11. Pregnancy and early chronic kidney disease
12. Multidisciplinary or multifaceted renal care in early chronic kidney disease

Transplantation

Recipient Assessment for Transplantation

The convenor of this guideline group is Dr Scott Campbell and its guideline group members include A/Prof. Helen Pilmore, A/Prof. Steven McTaggart, Dr Bill Mulley, Dr Christine Russell, Prof Frank Ierino and Dr David Gracey.

The guideline summary was accepted for publication in Nephrology in March 2013. The complete guideline is available on the CARI website (www.cari.org.au)

The following subtopics are covered:

1. Cardiovascular disease
2. Diabetes mellitus
3. Paediatric recipients
4. Malignancy
5. Obesity in renal transplantation
6. HIV, HBV and HCV infection

Dialysis

Dialysis Adequacy (Haemodialysis) - Dialysis Membranes

The two writers of this update are Prof Peter Kerr and A/Prof Nigel Toussaint. The guideline was accepted for publication in Nephrology in May 2013. The full version of the guideline can be accessed at www.cari.org.au.

Peritonitis Treatment and Prophylaxis

The convenor for this group is Dr Amanda Walker and its guideline group members include A/Prof. Kym Bannister, A/Prof. Charles George, A/Prof David Mudge, Dr Maha Yehia, Dr Maureen Lonergan and A/Prof Josephine Chow.

The guideline summary was accepted for publication in Nephrology in August 2013. Print publication will take place in early 2014.

The following subtopics are included:

1. The influence of peritoneal dialysis systems and solutions on the incidence of peritonitis and catheter-related infections
2. Management of PD-associated peritonitis in adults and children
3. Catheter removal, adjunct therapies and timing of reinsertion of PD catheter after peritonitis
4. Type of PD catheter
5. Technique of insertion of PD catheter
6. Prophylactic antibiotics for insertion of PD catheters
7. Timing of commencement of peritoneal dialysis following catheter insertion
8. Treatment of PD-associated fungal peritonitis
9. PD catheter-related infection: exit site and tunnel
10. Prophylaxis for exit site/ tunnel infections using mupirocin.

Vascular Access

The convenor is A/Prof Kevan Polkinghorne and its guideline group members include Ms Pamela Lopez-Vargas, Dr Christine Russell, Ms Edwina Vale, Dr Girish Talaulikar, Dr George Chin and A/Prof Rob MacGinley.

The guideline summary was accepted for publication in Nephrology in July 2013. The full version can be accessed from the CARI website (www.cari.org.au).

The following subtopics are included:

Placement of permanent vascular access

1. Selection of appropriate vascular access
2. Pre-operative examination of the vessels
3. Preparation and placement of vascular access
4. Nursing care of the arteriovenous fistula/ arteriovenous graft

Treatment of dysfunctional AV access

5. Treatment of the thrombosed AVF/AVG: surgical vs radiological therapy
6. Treatment of vascular steal syndrome

Central venous catheters

7. Insertion of central venous catheters
8. Nursing care of catheters
9. Prevention of dialysis catheter infection
10. Treatment of dialysis catheter infection.

Biochemical and Haematological Targets: Iron

The guideline group members include A/Prof Rob MacGinley, Prof Rowan Walker and Dr Michelle Irving.

The guideline summary was accepted for publication in Nephrology in July 2013. The full version of the guideline can be accessed from the CARI website (www.cari.org.au).

Adaptation of KDIGO Guidelines

Adaptation of the KDIGO Guideline for Acute Kidney Injury

The convenor of the guideline group is A/Prof. Robyn Langham and the guideline group members include Dr Vince D'Intini, Prof Zoltan Endre, A/Prof. Martin Gallagher, Dr Bernadette Hickey, Dr Richard Phoon, Prof Rinaldo Bellomo, Dr Shay McGuinness, Ms Karen Salomon and Ms Julie Woods.

The guideline group was formed in 2012 to adapt the KDIGO guideline for acute kidney injury which was published in March 2012. The adaptation process includes an update of the literature search, review of the consistency of the recommendations with the available evidence, applicability of the recommendations to practice in Australia and New Zealand and preparation of the adapted guideline document. The group has finalised drafts for each section of the guideline; external peer review has been completed and reviewers' comments incorporated into the guideline. A guideline summary has been completed and is ready for submission to Nephrology in early 2014.

The following KDIGO sections were reviewed and adapted:

Section 2: Acute kidney injury definition

Section 3: Prevention of acute kidney injury

Section 3: Treatment of acute kidney injury

Section 4: Contrast-induced acute kidney injury

Section 5: Dialysis interventions for treatment of acute kidney injury

Section 6: New non-dialytic treatments for acute kidney injury

Commentary on KDIGO Guidelines

Ideally, commentaries are to be completed and ready for publication within six months of publication of the KDIGO guideline. The commentary writers will be appointed by the KHA-CARI Steering Committee and the format of an editorial will be followed. Draft commentaries will be reviewed by the Steering Committee and edited by the KHA-CARI Office prior to publication in the journal Nephrology.

Commentary on the KDIGO Guideline for Glomerulonephritis

The writer of this commentary is Dr Chen Au Peh.

In June 2012, the KDIGO guideline on Glomerulonephritis was published. The KHA-CARI Steering Committee decided that a commentary would be necessary. This commentary was published in Nephrology in July 2013.

Commentary on the KDIGO Guideline for Anaemia in Chronic Kidney Disease

The writers of this commentary are A/Prof Rob MacGinley and Prof Rowan Walker.

In August 2012, the KDIGO guideline on Anaemia in chronic kidney disease was published. The writers have reviewed the guideline and written a commentary. The commentary was sent to the KHA-CARI Steering Committee for review and was published in the Medical Journal of Australia in July 2013.

Commentary on the KDIGO Guideline for Blood Pressure Management in CKD

The writers of this commentary are Dr Matthew Roberts and Dr Elisabeth Hodson (paediatric section).

The KDIGO guideline for Blood Pressure Management in Chronic Kidney Disease was published in December 2012. The writers have drafted a commentary which has been reviewed by the KHA-CARI Steering Committee and sent for publication. The commentary was accepted for publication in Nephrology in late 2013.

Commentary on the KDIGO Guideline for Lipid Management in CKD

The writer of this commentary is Dr Suetonia Palmer.

The KDIGO guideline for Lipid Management in Chronic Kidney Disease was published in November 2013. The KHA-CARI office has sent the KDIGO guideline to the writer as well as an outline on how to write a commentary. Dr Palmer will review the guideline which contains six subtopics and will then write the commentary.

IMPLEMENTATION OF GUIDELINES

Improving the quality of nephrology care in rural Australia: Implementation of the KHA-CARI iron guideline into clinical practice in rural or remote nephrology practices

Michelle Irving was the recipient of an NHMRC Translating Research into Practice (TRIP) fellowship from January 2010 to December 2012. During this time she undertook an evidence translation project, implementing the KHA-CARI iron guideline in three rural dialysis units. Below is an abstract taken from the final evaluation of the project.

Background and objectives:

Anaemia management for CKD patients remains challenging despite evidence-based guidelines. The variation in practice that results is often compounded for health professionals in rural communities. This study aims to identify the barriers to patients attaining national guideline targets for iron in rural renal centres by implementing the KHA-CARI guideline.

Methods:

Three Australian rural dialysis centres were chosen through consensus approach. An intervention was designed to implement the KHA-CARI iron guideline which included a multi-faceted strategy based on a barrier analysis using theoretical domains for psychological theory for implementation and included; educational outreach, audit and feedback, multi-disciplinary teams, opinion leaders and institution of a clinical practice guideline. Analysis of the outcomes of implementation was undertaken by a mixed methods approach.

Results:

There were a total of 103 patients at baseline. The dialysis units served small rural communities of about 100,000 persons each. More patients were treated within guideline recommendations at follow-up than at baseline and the proportion of in-centre haemodialysis patients, currently on an erythropoietin stimulating agent (ESA), below the national guideline target for ferritin, reduced significantly during the 12-month study period. Qualitative analysis of post-intervention interviews found that there were changes in cognitive processes, participants valued the internal and external collaboration, and there were the advantages of protocol-based practices.

Conclusion:

Evidence-based intervention strategies to implement the national iron guidelines in three Australian rural dialysis centres have proved to be successful. The number of iron-deficient patients reduced over time, there was an improvement in the cognitive approaches to iron management by clinicians and nurses as well as a high degree of satisfaction with the intervention process. Implementation in rural clinical practice can be relatively less complex due to the limited numbers of clinicians involved, once geographical barriers have been overcome.

The Steering Committee for this project consisted of: Dr Rob MacGinley, Dr Martin Gallagher, Prof Jonathan Craig, Dr Deirdre Fetherstonhaugh, Dr Nick Cross and Dr Germaine Wong.

The final manuscript is currently being finalised and reviewed and will be ready for publication in 2014.

Peritoneal Dialysis Implementation Project: Prevention of infection in incident PD patients

The Peritoneal Dialysis implementation project is focussed on the implementation of KHA-CARI and ISPD guidelines regarding the prophylactic use of antibiotics and antifungals in PD patients. Essentially, these are: use of prophylactic antibiotics at insertion of PD catheter; use of prophylactic antibiotics at the exit site or nasally; and use of antifungal prophylaxis whenever a PD patient is given a course of antibiotics. The project commenced in August 2010 when a call for Expressions of Interest was sent out to ANZSN members. The first steering committee meeting was held in December 2010 and decided upon the number and location of Renal Units to include in the project. The first face to face meeting with the 8 participating units (7 from Australia, 1 from New Zealand) was held in Sydney in April 2011.

The first phase of the project involved the collection of baseline data for each unit using a case report form developed specifically for the project. Data collected included PD-related infection rates (exit site/tunnel infections, peritonitis), and unit practices, policies and protocols regarding antibiotic and antifungal prophylaxis. Data collection ran for 6 months, starting in mid-December 2011 and finishing on 30 June 2012. A key part of this phase was to identify at each unit the barriers and enablers to the uptake of the guideline recommendations. The units and the project's 8-member steering committee both contributed to this process. The findings of the barrier-enabler analysis were presented at the 2nd Annual NHMRC Research Translation Faculty Symposium in Sydney on 2 October 2013.

The second, or implementation, phase of the project is aimed at overcoming the common barriers encountered in day to day practice to the application of guideline evidence. A number of tools have been developed for the units to use and the main one (a preventing infection checklist) was recently piloted at one of the units over a 2-month period. All of the units were visited in July-August of 2013 to obtain feedback on the draft tools. A steering committee teleconference was held on Friday 22 November 2013 to discuss queries raised by the units, feedback from the nurses who piloted the checklist and to decide upon the data that will be fed back to each unit every 3 months, once the implementation phase is running. The implementation phase will run for 12 months and commenced in early December 2013. The units will have a face to face meeting with the steering committee after 6 and 12 months so that they can report back on any issues they have encountered with using the tools, discuss any changes made, or barriers to change encountered at their unit during this active phase and suggest improvements applicable to future implementation programs. A post-intervention phase will run for another 6 months after November 2014 in which units will be asked to continue to collect and forward their infection data to the KHA-CARI project coordinator and to continue to use the implementation tools. The data from this period will be compared with the data obtained at baseline and during the 12-month implementation phase. The results from these elements of the program will be summarised in scientific papers for presentation at local and international scientific meetings and submitted to relevant journals. Regular steering committee meetings are held throughout the year (approx. every 2 months).

The Steering Committee for this project consists of Assoc Prof David Mudge (Convenor), Assoc Prof Martin Gallagher, Prof Jonathan Craig, Dr Dwarakanathan Ranganathan, Dr Wai Hon Lim, Dr Walaa Saweirs, Dr Michelle Irving and Dr Geoffrey Playford. Denise Campbell is the Project Officer responsible for the day-to-day running of the project.

The manuscript for the baseline phase has been written and will be sent for publication in 2014.

DISSEMINATION STRATEGIES

Dissemination and promotion of the KHA-CARI guidelines continues to be a prime focus during 2013. Communications to all members of the ANZSN, TSANZ and the RSA are an integral part of this process.

KHA-CARI Guidelines had an exhibition stand at the ANZSN ASM in Brisbane and at the TSANZ meeting in Canberra. Many members visited the stands and were given the KHA-CARI guidelines USB memory card containing all KHA-CARI published and accepted guidelines to date, as well as the KHA publication on Chronic Kidney Disease Management in General Practice (2nd edition, 2012). KHA-CARI staff developed and presented promotional material on guideline development, expressions of interest, and new guideline proposals. Visitors to our stand were encouraged to express their interest to participate in guideline development or in being peer reviewers. Some members expressed interest in assisting as guideline writers and or reviewers but there is a continuing need, particularly for reviewers.



A new KHA-CARI website was developed during 2013 and will be launched early in 2014. The website incorporates a range of tools to enhance dissemination of guideline content, promote awareness of the KHA-CARI Guidelines and to encourage feedback and involvement.

GRADE EVIDENCE RATING SYSTEM

KHA-CARI has successfully implemented the GRADE evidence rating system and all new guidelines completed in 2013 were developed in accordance with GRADE. The office will continue to train writers in the application of GRADE in the Critical Appraisal Training Day Workshops and continue to assist with the evaluation and grading of both evidence and guideline recommendations.

PUBLICATIONS

1. Johnson, D. W., E. Ataj, M. Chan, R. K. S. Phoon, C. Scott, N. D. Toussaint, G. L. Turner, T. Usherwood and K. J. Wiggins. KHA-CARI Guideline: Early chronic kidney disease: Detection, prevention and management. *Nephrology*, 2013. **18**(5): p. 340-350.
2. Campbell, S., H. Pilmore, D. Gracey, W. Mulley, C. Russell and S. McTaggart. KHA-CARI Guideline: Recipient Assessment for Transplantation. *Nephrology*, 2013. **18**(6): p. 455-462.
3. Kerr, P.G. and N.D. Toussaint, KHA-CARI guideline: Dialysis adequacy (haemodialysis): Dialysis membranes. *Nephrology*, 2013. **18**(7): p. 485-488.
4. Peh, C.A., Commentary on the KDIGO Clinical Practice Guideline for Glomerulonephritis. *Nephrology*, 2013. **18**(7): p. 483-484
5. MacGinley, R.J. and R.G. Walker, International treatment guidelines for anaemia in chronic kidney disease - what has changed? *Medical Journal of Australia*, 2013. **199**(2): p. 84-5.
6. Polkinghorne, K. R., G. K. Chin, R. J. MacGinley, A. R. Owen, C. Russell, G. S. Talaulikar, E. Vale and P. A. Lopez-Vargas. KHA-CARI Guideline: Vascular access – central venous catheters, arteriovenous fistulae and arteriovenous grafts. *Nephrology*, 2013. **18**(11): p. 701-705.
7. MacGinley, R., R. Walker, and M. Irving, Use of Iron in Chronic Kidney Disease Patients. *Nephrology*, 2013.**18**(12):p. 747-749.
8. Pilmore, H., G. Dogra, M. Roberts, H. J. Lambers Heerspink, T. Ninomiya, R. Huxley and V. Perkovic. Cardiovascular Disease in Patients with Chronic Kidney Disease. *Nephrology*, accepted August 2013.
9. Walker, A., K. Bannister, C. George, D. Mudge, M. Yehia, M. Lonergan and J. Chow. KHA-CARI Guideline: Peritonitis Treatment and Prophylaxis. *Nephrology*, accepted August 2013.
10. Roberts, M., Commentary on the KDIGO Clinical Practice Guideline for the Management of Blood Pressure in Chronic Kidney Disease. *Nephrology*, accepted October 2013.

MEETINGS AND CONFERENCES

49th Annual Scientific Meeting - Australian and New Zealand Society of Nephrology

Martin Howell, Pamela Lopez-Vargas and Allison Tong attended the 49th Annual Scientific Meeting of the ANZSN in Brisbane, Australia. They also manned the KHA-CARI exhibition stand at the meeting.

All members had oral and some poster presentations. Allison presented her work on kidney transplantation; organ donation; patient preferences for organ allocation and clinician's beliefs about home haemodialysis. Martin presented his work on quality of life and immunosuppressants in kidney transplantation and Pamela presented her work on education needs of patients with early chronic kidney disease.

The following are the abstract titles for the individual presenters:

029. "I DON'T LIKE WHAT I READ ABOUT CHRONIC KIDNEY DISEASE, I MIGHT AS WELL JUST GO GET A GUN AND SHOOT MYSELF": FOCUS GROUP STUDY OF PATIENTS WITH EARLY STAGE CHRONIC KIDNEY DISEASE. PA Lopez-Vargas, A Tong, RKS Phoon, SJ Chadban, Y Shen, JC Craig

134. PREFERRED OUTCOMES FOLLOWING IMMUNOSUPPRESSION AMONG KIDNEY TRANSPLANT RECIPIENTS. M Howell, G Wong, A Tong, J Rose, K Howard.

113. LIVING KIDNEY DONOR ASSESSMENT: THE CHALLENGES, UNCERTAINTIES AND CONTROVERSIES AMONG 110 TRANSPLANT NEPHROLOGISTS AND SURGEONS FROM 12 COUNTRIES. A Tong, J Chapman, G Wong, J Craig.

130. PATIENTS' ATTITUDES TOWARDS LIVING KIDNEY DONATION: SYSTEMATIC REVIEW AND THEMATIC SYNTHESIS OF QUALITATIVE RESEARCH. C Hanson, S Chadban, J Chapman, G Wong, J Craig, A Tong.

132. PUBLIC AWARENESS AND ATTITUDES TO LIVING ORGAN DONATION: SYSTEMATIC REVIEW AND INTEGRATIVE SYNTHESIS. A Tong, J Chapman, G Wong, M Josephson, J Craig.

The Transplantation Society of Australia and New Zealand – 2013 Annual Scientific Meeting, Canberra, Australia

Martin Howell and Allison Tong attended the TSANZ Annual Scientific Meeting in Canberra in June.

Martin presented his work on patient preferences for outcomes associated with immunosuppression and a review on sun-protection behaviour in solid organ transplant recipients.

Allison presented numerous research projects relating to: community preferences for organ allocation; organ donation and living kidney donor assessment.

American Society of Nephrology – Kidney Week, 2013, Atlanta, Georgia.

Allison Tong attended the ASN Kidney Week in October/November in Atlanta, USA.

She presented her work on organ allocation, organ donation and living kidney donor assessment.

National Health and Medical Research Council Symposium on Research Translation – Sydney, Australia.

Denise Campbell and Michelle Irving had their abstracts accepted for oral presentations.

Denise presented some of the results of the baseline phase of the KHA-CARI Guidelines PD project.

'Improving infection rates in peritoneal dialysis: barrier and enabler analysis'. D. Campbell, M. Gallagher, J. Craig, R. Walker, D. Ranganathan, W-H. Lim, W. Saweirs, D. Johnson, N. Toussaint, F. Brown, K. Kumar, K. Sud, G. Kirkland, M. Yehia and D. Mudge on behalf of the KHA-CARI Guidelines PD Implementation Project Steering Committee.

Martin Gallagher presented Michelle's work on the implementation of the KHA-CARI Iron Guideline.

'Implementation of national iron guideline in rural nephrology practices using audit and feedback and peer support: a mixed methods evaluation study'. M.J. Irving, R. MacGinley, G. Wong, M. Gallagher, R. Walker, N. Cross, D. Fetherstonhaugh, J. Richmond, J. Fiore-Chapman, C. Holmes, K. Fair, C. Thomas, G. O'Brien and J. Craig.

WEBSITE STATISTICS

KHA-CARI Guidelines Website

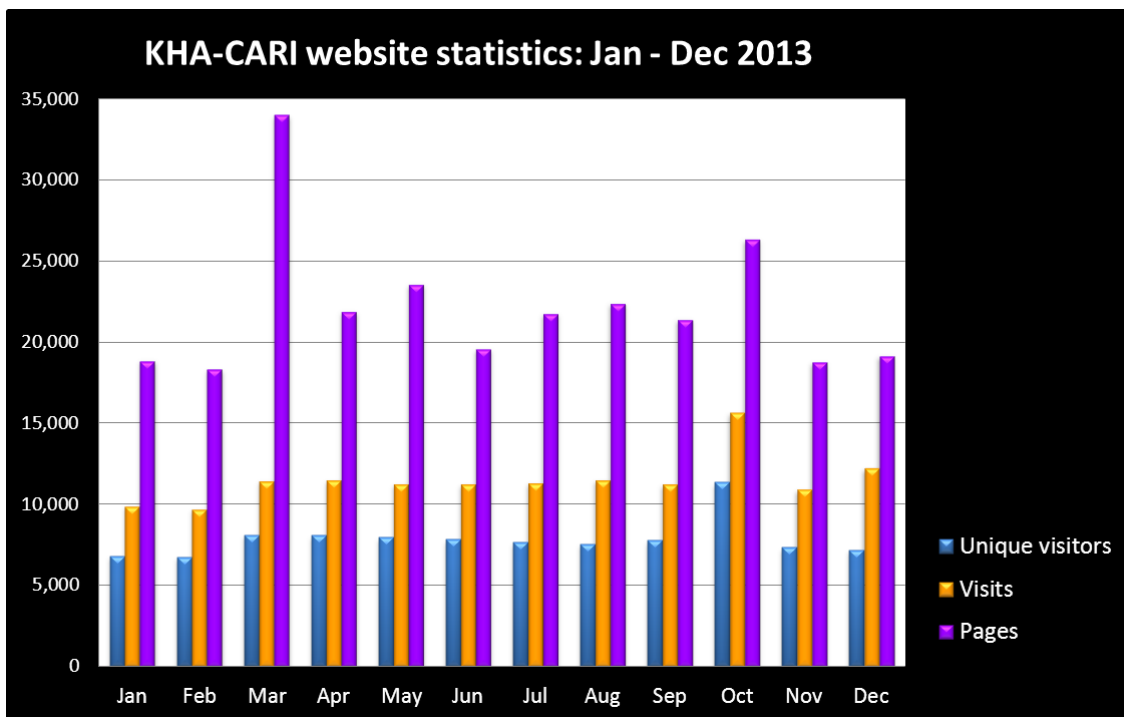
Definitions:

Unique visitors: a person or computer (host) who has made at least 1 hit on 1 page on your website within a specified period of time. Unique visitors are counted only once no matter how many times they visit the site during this period. Visitors are tracked by IP address, so if multiple users are accessing the site from the same IP address, they will be counted as a single unique visitor.

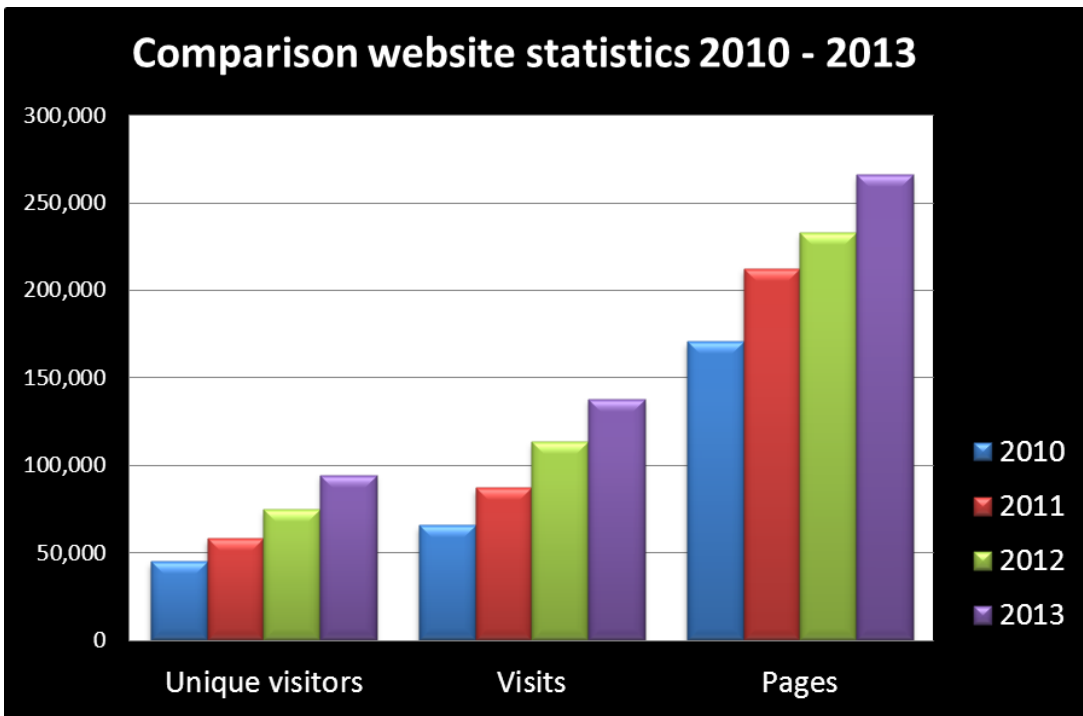
Visits: represents the number of visits made by all visitors. All of the pages accessed within a single session, are included in the site visit. Therefore there will be multiple pages per visit and multiple visits per unique visitor.

Pages: represents the number of pages viewed by visitors. Pages are usually HTML, PHP or ASP files only.

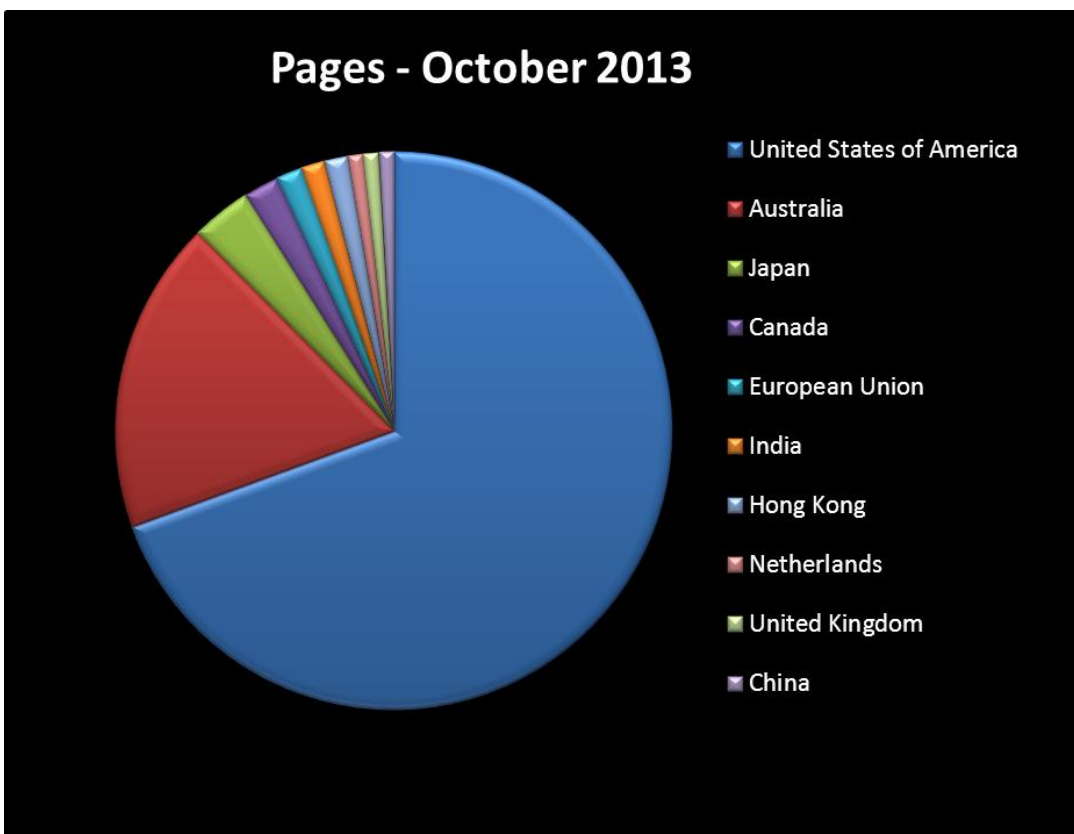
The graph below shows the number of unique visitors, visits, and pages viewed by month for the period January to December 2013. The highest number of site visits was recorded in October with 15,652 visits. All other months, with the exception of January and February had site visits above 10,000.



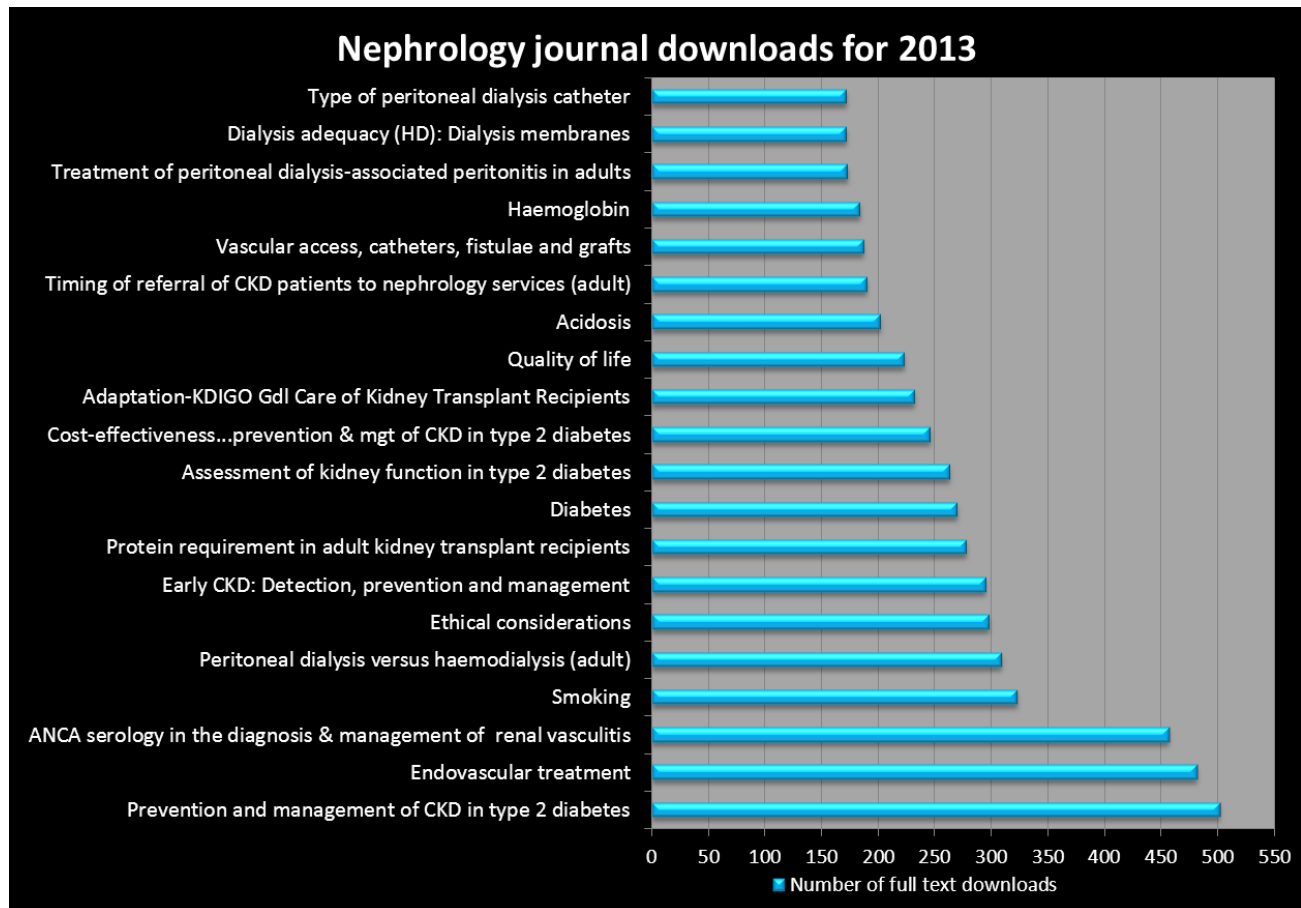
The graph below shows the number of unique visitors, visits and pages viewed in 2010 through to 2013. There has been a consistent increase in the pages viewed, visits made and number of unique visitors accessing the KHA-CARI website.



The figure below shows the top 10 countries which accessed the KHA-CARI website the most during October, the month with the highest number of visits.



The figure below shows the top 20 articles accessed via the Nephrology website in 2013.



FINANCES AND FUNDING

The following is a summary of the income and expenditure associated with KHA-CARI Guidelines for the 2013 calendar year.

Financial Activities: 1 January to 31 December 2013

TOTAL INCOME	\$ 250,000
TOTAL EXPENDITURE	\$ 250,000
Salaries (including 18% oncost)	\$ 234,800
Goods & Services	\$ 1600
Guideline Implementation – PD Project	\$ 5,000
Guideline Implementation – Rural Project	\$ 5,000
(Guideline Dissemination	\$ 3875)
Guideline Writer Training Workshop	nil
Guideline Publication	nil
Teleconferences – Steering Committee & Guideline Groups	\$ 2400
Face to Face meetings – Steering Committee & Guideline Groups	\$ 1200
KDIGO Meetings	nil
BALANCE OF FUNDS	\$ nil

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Guideline Group Members

Chronic Kidney Disease	
Early Chronic Kidney Disease Prof David Johnson (Convenor) Dr Kate Wiggins Assoc Prof Nigel Toussaint Dr Richard Phoon Dr Maria Chan Prof Tim Usherwood Ms Emeilia Atai Mr Graeme Turner Ms Clodagh Scott	Cardiovascular Disease Assoc Prof Helen Pilmore (Convenor) Dr Vlado Perkovic Prof Rob Walker Dr Matthew Roberts Dr Toshiharu Ninomiya Dr Gursharan Dogra Dr Hiddo Lambers Heerspink Dr Rachel Huxley
Diagnosis and Treatment of UTI in Children Assoc Prof Steve McTaggart Dr Ian Hewitt Dr Sean Kennedy Dr Gabrielle Williams Dr Joshua Kausman Dr Michael Ditchfield Dr Peter Trnka Dr Margie Danchin	
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Assoc Prof Steve McTaggart Dr David Gracey Dr Christine Russell Assoc Prof Frank Ierino	
Dialysis	
Peritonitis Treatment and Prophylaxis Dr Amanda Walker (Convenor) Assoc Prof Kym Bannister Assoc Prof Charles George Assoc Prof Josephine Chow Dr Maureen Lonergan Dr Maha Yehia Assoc Prof David Mudge	Vascular Access Assoc Prof Kevan Polkinghorne (Convenor) Dr Christine Russell Dr Girish Talaulikar Dr George Chin Ms Pamela Lopez-Vargas Mrs Edwina Vale Assoc Prof Rob MacGinley Dr Andrew Owen
Dialysis Membranes (Haemodialysis) Assoc Prof Peter Kerr Assoc Prof Nigel Toussaint	Biochemical and Haematological Targets: Iron Assoc Prof Rob MacGinley Prof Rowan Walker Dr Michelle Irving
Adapted Guideline	
Adaptation of the KDIGO guideline on Acute Kidney Injury Assoc Prof Robyn Langham Dr Vince D'Intini Prof Zoltan Endre Assoc Prof Martin Gallagher Dr Bernadette Hickey Dr Richard Phoon Prof Rinaldo Bellomo Dr Shay McGuinness Ms Karen Salomon Ms Julie Woods	
Commentaries	
Commentary on the KDIGO guideline on Glomerulonephritis Dr Chen Au Peh	Commentary on the KDIGO guideline on Anaemia in Chronic Kidney Disease Assoc Prof Rob MacGinley Prof Rowan Walker
Commentary on the KDIGO guideline on Blood Pressure Management in Chronic Kidney Disease Dr Matthew Roberts	Commentary on the KDIGO guideline on Lipid Management in Chronic Kidney Disease Dr Suetonia Palmer

