

NHMRC Chronic Kidney Disease Centre of Research Excellence



NHMRC CKD.CRE
Final report summary 2015-2020



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Health



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Background

A CRE is an NHMRC funded program to support research which aims to improve health outcomes and promote translation of research into policy and/or practice. Its specified purposes are to

- Support conduct and development of innovative, high quality, collaborative research;
- Provide opportunities to expand and improve collaborations among research teams;
- Promote effective translation of research into health policy and/or practice; and
- Foster and build capacity in the health and medical research workforce.

The NHMRC Chronic Kidney Disease Centre of Research Excellence (CKD.CRE) was funded as a 5 year public health and health services program, starting in late 2015, and in 2019, granted a one-year extension.

The CRE had four key research themes, informed by the earlier work of the CKD.QLD program, namely CKD surveillance, CKD practice Improvement, CKD Biomarker Research and CKD Health Economics.

This report summarises the CRE's achievements through 2020, as follows:

Research Stream 1. CKD Surveillance

This theme supported mapping of pre-dialysis CKD patients in public renal specialty practices in Queensland, and the associations, progression and outcomes of their CKD. More than 9,000 patients were recruited to the CKD.QLD Registry, from eleven major practice sites. A data linkage collaboration with the Queensland Health Statistical Services Branch to access data on all admissions, dialysis starts and deaths of Registry patients to any Queensland public hospital, between May 2011 and June 2018, along with those of two parallel cohorts, gave a whole of trajectory view of patient's use of public health facilities.

The CRE also scoped and funded development of a data abstraction tool for Audit4, a commonly used program in renal speciality practices, and demonstrated its use in describing a metropolitan Sydney practice with over 3,900 unique patients with CKD. This tool is now free to all Australian Audit4 users.

Research Stream 2. Practice Improvement

This theme supported improvement in understanding and management of complex and frail patients with CKD, with particular focus on kidney supportive care, primary health care, nursing models of care, and CKD self-management. Expanded use of telehealth in nephrology was another important component.

Research Stream 3. Biomarker research

A CKD Biobank has been established. It is intended as a repository of plasma, serum, blood, urine, DNA (isolated from saliva), kidney biopsies, and clinical data from CKD patients and healthy controls. Potential predictors of progression have been studied among routine biomarkers and a panel of novel biomarkers of progression has been defined. These will have legacies beyond the CRE.

Research Stream 4. Health economics and CKD

Individual site reports for the CKD registry patients include analyses of hospitalisations. Special attention has been given to high costs users, impact of acute kidney injury, hospital readmissions, costs in the last year of life, and gaps and opportunities in meeting needs of remote-living Indigenous people with CKD.

Education, training and capacity building

The Centre mentored 16 research higher degree students; directly funded 1, supported 8 who had alternative funding, and 7 who were self-funded. The CRE also assisted 17 clinicians with tailored projects and facilitated future scholarships, in some cases using datasets accumulated over the life of the CRE.

In addition, the Centre either hosted or sponsored 12 events, including two national NHMRC CKD.CRE Colloquia, and three national symposia conducted by St George Hospital, NSW, in Kidney Supportive Care.

Budget and Funding

The NHMRC CKD.CRE was awarded a total of \$2,469,981. This allocation was used predominantly to support post-doctoral and research higher degree salaries across the four research themes.

Of the 91% (\$2,276,981) allocated for salaries, 73% (\$1,662,196) went to support post-doctoral and research higher degree students, and 27% (\$614,785) for centre management. 9% (\$220,000) was allocated for direct research costs within the Biomarker Research program.

The CRE attracted further project funding in the amount of \$1,963,351 with a further \$475,000 pending legacy project endorsements. The Centre also supported additional successful grant applications by affiliated institutions, totalling \$12,720,858.

Consumer Engagement

The Statement on Consumer and Community Participation in Health and Medical Research Participation was developed by the Consumers Health Forum of Australia Inc. (CHF) and the NHMRC, in recognition of the contribution that consumers can make to research, as well as their right to participate in research.

With the early support of Dr Tim Matthews, Medical Director of Kidney Health Australia (KHA), Mikaela Stafrace, CEO of KHA, and the Manager of Queensland's Kidney Support Network (KSN), delegates from both KHA and KSN accepted consumer engagement roles within the CRE, and were active in bespoke research opportunities in addition to the CRE National Colloquiums in 2015 and 2017.

Peripheral Programs

In addition to the central CRE program, 8 state, national and international peripheral programs have been supported. These include the aCQuiRE (Ckd.Qld fabRy Epidemiology) Study, the Queensland Renal Biopsy Registry (QRBR), Safe Water, iNET.CKD, Tiwi Islands Health Research program, and Chronic Kidney Disease of Unknown origin (CKDu).

Publications and Presentations

The work of the CRE and affiliates was presented at local, state, national and international forums, with 91 published manuscripts, 8 book chapters, 3 published reports, 19 CKD.QLD tailored reports and more than 128 conference presentations.

Website

The University of Queensland hosts the NHMRC CKD.CRE Website: <https://cre-ckd.centre.uq.edu.au/>

Full report

A copy of the full report is available on request.

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The CKD.CRE was funded by the National Health and Medical Research Council (NHMRC), Grant ID # APP1079502

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In the spirit of respect, the Chronic Kidney Disease Centre of Research Excellence acknowledges the Traditional Custodians of the land on which we live and work. We pay our respect to the Aboriginal and Torres Strait Islander elders past, present and emerging.