David Johnson

Short Bio/CV

Professor David Johnson PSM
MB BS (Hons, Univ Medal), PhD (Syd), DMed(Res), FASN, FAHMS, FRACP

David Johnson is inaugural Co-Chair of the ISN Global Kidney Health Atlas (ISN-GKHA, 2016 - current), the largest public health survey in the world, which aims to understand, compare and monitor how different countries around the world detect, treat, monitor, and advocate for people with kidney disease, and underpins all ISN's global advocacy activities. He is also an active member of ISN-ACT, ISN Research and ISN Monitor groups, and currently co-supervises 17 ISN-GKHA Fellows. He was ISN Councillor (2013-2019) and President of International Society for Peritoneal Dialysis (ISPD, 2018-2020), and is currently President of the Australian and New Zealand Society of Nephrology (ANZSN) (2021-Aug 2023).

His current leadership responsibilities that he will largely divest himself of to focus on ISN if he is elected President include: a) Local (full-time Director of Metro South Integrated Nephrology and Transplant Service and Medical Director of Queensland Kidney Transplant Service [QKTS] at Princess Alexandra Hospital, Professor of Medicine and Population Health at University of Queensland, and Director of the Centre for Kidney Disease Research at Translational Research Institute, Brisbane, Australia); b) National (Deputy Chair of BEAT-CKD program, Deputy Chair of Australasian Kidney Trials Network [AKTN], Chair of Primary Healthcare Education Advisory Committee to Kidney Health Australia, Co-Chair of Australasian Creatinine and eGFR Consensus Working Party, Co-Chair of Australasian Proteinuria Consensus Working Party, Member of ANZDATA Registry Steering Committee, Member of OrganMatch Strategic Governance Committee, College of Physicians Adult Medicine Division Councillor, Chair of 4 separate CARI Guidelines); and c) Global (Chair of SONG-PD, Co-Chair of ISPD Global PDOPPS Steering Committee, Member or Chair of 7 international guideline groups including Co-Chair of ISPD Peritonitis Guidelines).

Having published >1100 original peer-reviewed manuscripts and presented >600 abstracts at national/international scientific meetings, he brings critical expertise in designing and conducting international RCTs, developing registries, and using innovative research methodologies. In recent times, he has held lead roles in >40 clinical studies through his role in AKTN, including high-impact, large, multi-centre RCTs that have informed global clinical practice like CKD-FIX, IDEAL, balANZ, HONEYPOT, TESTING, HERO, and IMPENDIA. He is currently principal investigator of the TEACH-PD trial and chair of the PHOSPHATE Trial Global Steering Committee. He helped establish the Australian Peritonitis Registry and led the highly successful

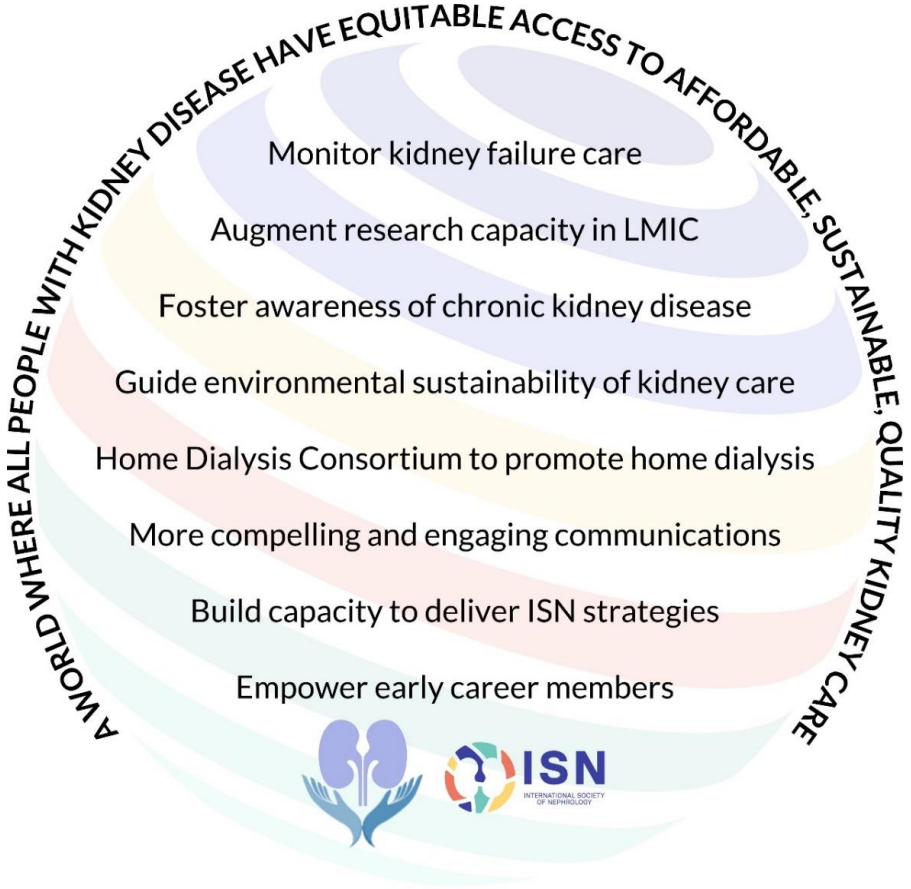
National PD Peritonitis Quality Improvement Project, which reduced national peritonitis rates by two-thirds. He also led the universal implementation of automated laboratory reporting of eGFR in ANZ.

He has won numerous awards for his clinical service and research, including ANZSN TJ Neale Award for "outstanding contributions to nephrologic science" (2005), US National Kidney Foundation International Distinguished Medal (2014), Canadian Society of Nephrology Dimitrios Oreopoulos Award (2017) and Asia-Pacific Society of Nephrology Priscilla Kincaid-Smith Medal (2021). He was a Queensland finalist in the Australian of the Year Awards in 2009 and was awarded a Public Service Medal by the Australian Governor-General in 2011 for outstanding public service, particularly research into early detection and management of kidney disease.

Candidate's Statement

My vision for ISN is ***a world where all people with kidney disease have equitable access to affordable, sustainable, quality kidney care***.

This will underpin ISN's vision of equitable access to sustainable kidney health and will be achieved by building on ISN's successful suite of advocacy, education/mentoring and research initiatives, focusing on low and middle income countries (LMIC).



The actions and deliverables for my vision for ISN will be:

1. Better global monitoring of kidney failure care for improved outcomes

A key aspect to managing a problem is being able to measure it. I would therefore like to strengthen ISN's development of sustainable infrastructure for monitoring and reporting of priority clinical, patient-reported and process outcomes, many of which have already been identified through the Standardised Outcomes in Nephrology (SONG) initiative and Kidney Health Initiative (KHI). This would be achieved by collaborating with existing registries (e.g. ANZDATA, USRDS, ERA-EDTA, etc.) as well as using ISN's resources for monitoring, including the Sharing Expertise in establishing Renal Registries (SharE-RR) project and the ISN Global Kidney Health Atlas (ISN-GKHA, which I co-chair with my colleague Professor Aminu Bello), to reinvigorate and empower the ISN Monitoring Group. The intended objective is to improve the ability of the global kidney community to generate data that can be used for monitoring, audit, and quality assurance, and to inform ethical decision-making, resource allocations and practice. The deliverables would include how-to-guides, toolkits and periodic reports to facilitate advocacy efforts, establish quality clinical registries, inform health service planning and foster quality improvement initiatives and benchmarking activities. This is key to implementing the 2020 ISN Strategic Plan for Integrated Care of Patients with Kidney Failure, which has been stalled over the last few years by the global COVID response. It is now time to reinvigorate the strategic plan and regularly report against its KPIs. My various ISN leadership roles and, in particular, my central role in ISN-GKHA and prior involvement in ISN strategic plan development, place me in an ideal position to facilitate this action.

2. Augmented research capacity in LMIC

Having been a part of the ISN Research Working Group for 8 years, it is apparent that LMIC are considerably under-represented. The ISN-GKHA has also demonstrated that research capacity is extremely limited in LMIC. For example, the capacity to participate in phase 3 and 4 clinical trials drops from 87% in HIC to 63-67% in UMIC to 23-29% in LMIC to 0% in LIC. Whilst ISN-ACT has completed important work developing toolkits and helping to standardise high-quality trial conduct, more work should be done to connect existing clinical trial networks with novice researchers in LMIC to build much-needed research capacity in those jurisdictions, leading to generation of high quality, generalisable evidence. As an example, in my capacity as Deputy Chair of the Australasian Kidney Trials Network (AKTN), we have mentored new investigators in a number of countries (e.g. Thailand, China) which has allowed them to be able to successfully design, conduct, publish and implement impactful, high-quality, practice-changing, investigator-initiated, randomised controlled clinical

trials. This successful model is scalable and implementable by ISN across all world regions.

Research capacity development could also be enhanced by ISN through providing greater publication support to researchers from LMIC. Specifically, I would like to see ISN journals (KI and KI Reports) enable LMIC researchers attempting to disseminate their research via a number of strategies including dedicating a proportion of publication space to LMIC research, providing mentorship, expanding editorial board fellowships/internships, and offering additional editorial support to borderline LMIC publications to help get them over the line.

3. Better awareness, prevention, early detection and treatment of acute and chronic kidney disease

Whilst much of the focus of ISN activities to date has been on kidney failure, this represents a small percentage (<0.5%) of the over 850 million patients with kidney disease globally. Focusing on prevention is associated with at least 10-fold greater cost-effectiveness than strategies targeting kidney failure, and represents a better return on investment for sustainable kidney care in LMIC. The ISN-GKHA has identified that lack of kidney community awareness is a key barrier to CKD prevention strategies, particularly in LMIC. This could potentially be partially addressed by the patient leaflet project recently initiated by the Young Nephrology Committee. ISN could further support this project by translating the forms into multiple languages, ensuring they are culturally appropriate and piloting them through regional boards in LMICs. ISN should also be playing a more active role in supporting and providing educational materials for a skilled kidney workforce to implement acute and chronic kidney disease prevention strategies, particularly focusing on targeted opportunistic screening of individuals with kidney disease risk factors (especially diabetes and hypertension) in community-based settings (primary care). The ISN-GKHA has demonstrated poor implementation of risk factor-based screening, particularly in LIC where eGFR measurements and qualitative urinalysis in primary care settings were only available in 0% and 18%, respectively. My vision is for ISN to seek synergies with affiliated nephrology societies, the Global Coalition for Circulatory Health, Non-Communicable Disease Alliance (NCDA), WHO and the United Nations Interagency Taskforce on the Prevention and Control of Non-communicable Diseases (NCDs) to support implementation of sustainable chronic disease preventative health care. Their extensive networks could be leveraged to empower patient voice and amplify advocacy messages to influence national and regional policies, as well as public awareness programs.

4. Enhanced environmental sustainability of kidney care

Kidney care, particularly haemodialysis, has a high environmental impact. Treating one patient with haemodialysis for a year typically requires 78,000 litres of water, generates 390 kg of potentially infectious waste, and produces a carbon footprint of 10.2 tonnes CO_2-equivalents. These impacts in turn engender climate change-related adverse impacts on kidney health, including increased rates of acute kidney injury, kidney stones and CKD of unknown aetiology (CKDu). My vision is for ISN to show greater leadership on this issue by providing guidance on, and developing resources for environmentally sustainable practices in kidney care units and for raising awareness about the impacts of environmental change on kidney health.

5. Establishment of a Home Dialysis Consortium to promote more affordable, sustainable and equitable home-based dialysis

Home-based dialysis is a key strategy for delivering more equitable and affordable kidney failure care for more patients. Peritoneal dialysis (PD), the predominant form of home dialysis, offers well-described benefits such as technical simplicity, facilitation of rural and remote kidney failure care, reduced trained workforce requirements, easier patient management in natural and man-made disasters, cheaper cost in most countries, etc. However, whilst PD is available in 96% of high income countries (HIC), this drops dramatically to 32% in low income countries (LIC), particularly in Africa, followed by Oceania and South-East Asia. Key barriers identified by the ISN-GKHA include economic factors, physician knowledge/training/experience and geography.

Having recently served on the International Society for Peritoneal Dialysis (ISPD) Council for 14 years (including 2 years as President), I would draw on my PD community relationships to foster and support development of a Home Dialysis Consortium as a partnership between ISN and ISPD. This consortium would help to promote greater PD utilisation in LMIC with key focuses on supporting demonstrated effective strategies such as incremental dialysis, PD catheter insertion techniques, remote monitoring of patients, assisted PD, and providing country-specific training curricula, modules and materials (culturally sensitive and in different languages). There are a number of clear and effective strategies that the Consortium could undertake to increase PD utilisation in LMICs, including working with industry to reduce PD fluid costs, supporting local fluid manufacture, and working with local jurisdictions to develop funding programs and reduce tariffs. Reimbursement strategies favouring PD have been shown to dramatically increase PD utilisation in LMIC, as demonstrated by the highly successful PD First policy in Thailand. Strengthening training initiatives, such as the highly successful ISN Saving Young Lives program in Africa with which I have been involved, continues to be an

important method for promoting PD use in LMICs and acting as a springboard from acute PD to chronic PD therapy. This initiative should be expanded into Asia and Latin America. ISN sister centre relationships are also an important strategy for establishing PD in LMIC, as has been demonstrated with efforts in the Pacific Islands (Fiji), where PD therapy was previously non-existent. Centres of home dialysis excellence should be established in LMIC to act as beacon models that foster home-based dialysis in the region. ISN's highly successful education program should be expanded to educate clinicians about home dialysis including dialysis access procedures. Patients and caregivers would be engaged through local community networks, consumer organisations (where they exist) and ISN's newly created Patient Liaison Advisory Group to bolster advocacy and educational efforts through sharing their lived experiences.

The Home Dialysis Consortium would also include champions of home-haemodialysis to additionally promote expansion of home-based haemodialysis programs using the same principles and strategies outlined for PD. Fostering the development of innovative, sustainable and affordable home-based dialysis modalities, such as the Affordable Dialysis Project and wearable dialysis devices, would also be an important objective of the Home Dialysis Consortium.

6. More compelling and engaging communications

Whilst ISN has some effective communications in relation to educational offerings, ISN-ACT Global Trials Focus and ISN Insights, my vision is for more frequent, pithy communications in which different members of ISN (Executive, Council, Regional Boards, Committees, Young Nephrology Network, active members at large) update the ISN Community regarding current ISN activities. This would greatly help to engage and return value to ISN members, raise the profiles and showcase the good work of individual ISN members, and identify opportunities for general ISN members to become more involved in ISN. We need to engage more of ISN's 10,000 members to build capacity and more effectively implement global change at a local level.

7. Empowering early career members and capacity building for leadership

Nurturing the future leaders of our society, particularly in LMIC, is a key strategy for building clinical and research capacity in nephrology. Key stakeholders in this respect are the young (<45 years) nephrologists and other clinicians who account for 43% of ISN members and are growing. The ISN Young Nephrologist Committee is currently trying to build capacity by developing a how-to-kit to establish young nephrologist societies and by connecting with existing young nephrologist societies like UK sPr Club and yANZSN (which was formed under my ANZSN Presidency). My vision is to facilitate the setting up of "YNC sub-committees" within different countries with the

aid of YNC guidance kits and the development of well-defined pathways into various ISN advocacy, research and education committees/working groups. One way in which this could happen is by effectively developing a clinical, research and advocacy university through streamlining ISN Academy educational content into themes which then guide members of the Young Nephrology Network towards participation opportunities in ISN Committees as observers where they could couple with HIC colleagues/mentors. Directing them to grant and sponsorship opportunities would also be helpful. Providing YNC with a greater voice within ISN leadership is additionally critical to achieving this important goal.

Regional training centres and sister kidney centres should be expanded to enhance the fellowship program. For example, there is only 1 regional training centre in Africa, located in Cape Town. More are needed to serve English and French speaking countries in the region. The Pacific Islands are another important area of unmet need. Facilitating the professional development of kidney nurses, healthcare workers and other health professionals is also important, particularly in LMICs where the main kidney workforce may not be driven by nephrologists.

Now is an exciting time for ISN to pursue its mission to advance kidney health worldwide through education, grants, research and advocacy, as we transition to recovery from the pandemic. My vision for global equity in access to affordable, sustainable, quality kidney care is achievable with help from the ISN Community. I have shown through my track record as a previous ISN Councillor and through my work with the ISN-GKHA project, that I am up to taking on ambitious programs and delivering on time.