

The International Society of Nephrology Nurse Working Group: Engaging Nephrology Nurses Globally



Paul N. Bennett^{1,2}, Rachael C Walker³, Michele Trask⁴, Stefaan Claus⁵, Valerie Luyckx⁶, Christine Castille⁷, Gloria Ashuntantang⁸ and Marie Richards^{9,10}

¹Satellite Healthcare, San Jose, California, USA; ²Deakin University, Victoria, Australia; ³Eastern Institute of Technology, Napier, New Zealand; ⁴St Paul's Hospital, Vancouver, British Columbia, Canada; ⁵Ghent University Hospital, Ghent, Belgium; ⁶Institute of Biomedical Ethics and History of Medicine, University of Zürich, Zürich, Switzerland; ⁷International Society of Nephrology (ISN), Brussels Belgium; ⁸Faculty of Medicine & Biomedical Sciences, University of Yaounde, Cameroon; ⁹SEHA Dialysis Services, Abu Dhabi, UAE; and ¹⁰De Montfort University, UK

Kidney Int Rep (2019) 4, 3–7; <https://doi.org/10.1016/j.ekir.2018.10.013>

© 2018 International Society of Nephrology. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Globally, nephrology nurses are the largest professional group responsible for the provision of care for acute kidney injury (AKI) and end-stage kidney disease (ESKD). However, with limited specialized nephrology nurse training and education in low and lower-middle income countries (LLMICs), nurses are challenged to provide safe, quality nursing care. This challenge is exacerbated by nephrology nurse shortages in over 80% of low income countries (LICs) and over 60% of lower-middle income countries (LMICs).¹ Global strategies are required to improve and support safe nephrology nursing care in LLMICs.

In 2017, the ISN recognized the gap in nonnephrologist workforce

support, and formed a separate task force to assess, plan, and deliver a range of educational materials for nurses and allied health professionals caring for patients with kidney disease in lower income settings. Following this, the ISN Global Nurses and Allied Health Taskforce was convened to undertake a number of activities to promote the inclusion of all nephrology disciplines and professionals in the ISN, and to ensure the availability of relevant educational materials appropriate for level of practice, resource availability, educational background, and language. Thus, the broader aim was to support interprofessional teams providing care for individuals with kidney disease, to build capacity within the broad nephrology workforce, and to enhance health outcomes for kidney patients globally.

The ISN's initial aim was to invite nurses and allied health

professionals (pharmacists, dietitians, social workers, technicians, psychologists, exercise professionals) to advance the mission for the entire team. The first group to take up this challenge were nurses who set out to focus on global nursing needs as an initial step, with the broader aim of supporting and including the broader allied health team. Thus, the ISN Nurse Working Group was endorsed.

Nurses in Kidney Disease Surveillance and Prevention Programs

The ISN Nurse Working Group's initial challenge was to address the scope of work that was achievable through the ISN. Nursing's involvement in the surveillance and prevention of kidney disease, access to, and delivery of treatment, varies greatly throughout LLMICs and is not well documented. Therefore, the ISN Nurse Working Group's first objective was to understand global nephrology nursing needs and to develop resources and tools relevant to nurses in LLMICs. To develop an understanding of existing gaps, the working group leaders met with regional ISN leaders in late 2017.

The Nurse Working Group highlighted the surveillance and prevention of acute and chronic kidney disease as a priority of the ISN's vision, where all people have equitable access to sustainable kidney health. The LLMIC regions shared the view that surveillance and prevention programs were priorities; however, these were large, multidisciplinary, and political undertakings requiring the collaboration of multiple funders, regional population health agencies, and primary health agencies. The Nurse Working Group advised the regions

Correspondence: Paul N. Bennett, Satellite Healthcare, 300 Santana Row, San Jose, California, USA. E-mail: bennett@satellitehealth.com; p.bennett@deakin.edu.au

of its enthusiasm to support local initiatives where possible. In saying this, the major outcome of these meetings was the identification by LLMICs of a rapid increase in government funding of dialysis services, in particular hemodialysis. Thus the LLMIC regions were unanimous in their request for the ISN Nurse Working Group to build capacity, and support nursing education and leadership in dialysis, with the highest priority being LLMICs in Africa, Asia, the Pacific Islands, and Latin America. This initial focus on dialysis will determine how best to collaborate with nurses globally to further understand how we can engage nurses in surveillance and prevention of kidney disease.

Dialysis in LLMICs

The majority of people diagnosed with advanced kidney disease do not have access to dialysis due to the lack of availability of personal or institutional resources, nurses, general physicians, and nephrologists.² Other factors contributing to lack of dialysis access include the high costs, inequities, and inefficiencies in health care delivery, lack of knowledge, and lack of supplies.³ Outcomes for people with advanced kidney disease are suboptimal because of these limited treatment choices, resulting in increased morbidity and mortality borne by individual patients, families, and health care professionals.⁴ More recently, with the rapid development of health care resources in some LLMICs, dialysis is becoming increasingly available; however, dialysis nurses, nursing leadership, and educational resources are not consistently developed or available.

LLMICs offering dialysis provide people with lifesaving treatments; however, the burdens imposed by the provision of such therapies on

health systems highlight the challenges of providing lifelong costly chronic care. This is particularly challenging in the absence of universal health coverage and integrated horizontal approaches to care, common in many LLMICs. Ethical and social justice questions regarding who receives dialysis and who is refused dialysis result in human suffering and increased mortality in LLMICs where resources are limited.⁵ Low-cost treatments and more self-managed treatments such as peritoneal dialysis (PD) have been suggested as better options; however, lack of infrastructure and reliable cost-effective availability of PD solutions makes this option challenging.⁶ Nurses, including lay nurses and technicians, are on the front lines providing dialysis care, where the quality of knowledge, education, and leadership in nephrology nursing vary significantly throughout and within LLMICs.

Dialysis Nursing in LLMICs

Nurses can be pivotal in the prevention of kidney disease through primary health care models; however, in LLMICs, nurses are predominantly seen in the dialysis workforce, where the provision of hemodialysis (HD) and PD are largely dependent on the availability of trained nurses. Unfortunately, in all LLMIC regions, there exists a shortage of trained dialysis nurses.² This is true for LLMICs in Asia, Africa, and Latin America.⁷ In many LLMICs, nurses tend to be shifted between hospital departments; therefore, specialist skills obtained may be lost through such rotations, leaving inexperienced staff in dialysis units who may not be able to provide an optimal level of care. Furthermore, once nurses are trained, there may be limited career paths in LLMICs,

resulting in a “drain” of trained nurses to developed countries. Thus, nephrology nursing leadership to improve management, education, career structures, and ultimately the safety and quality of care, should be a priority in these countries.

Dialysis Nurse Education in LLMICs

Following discussions between the ISN Nurse Working Group and ISN regional representatives from LLMICs, the development and access to quality dialysis nurse education and resources tailored for LLMIC dialysis programs was requested. Ideally, nurses and technicians in LLMICs should be trained regionally, from better-resourced neighboring nations to develop the most appropriate skills⁸; however, this has not always been possible. The ISN Nurse Working Group will work with local nephrology nurses to address issues unique to LLMICs. This work will be facilitated through local LLMIC nurses, starting with nurses being members of ISN Regional Boards. Such building of local capacity and expertise can generate the momentum for LLMICs to develop and sustain their own nurse and technical training programs. Furthermore, advanced trained nurses and nurse practitioners can provide significant value where numbers of nephrologists are less than optimal through task substitution and job sharing to increase efficiency, quality, and accessibility of care.⁷ The challenge and resources required to support nephrology nurses in order to develop, maintain, and disseminate contextually relevant quality education tailored for LLMIC dialysis programs is more likely to be successful with local and global support through the ISN Nurse Working Group, particularly

through regional board nurse representation.

ISN Nurse Working Group

The ISN has been pivotal in supporting LLMIC renal replacement therapy (RRT) programs through many global pioneering partnership programs, such as the Educational Ambassadors Program, the Fellowship Program, the Sister Renal Centers Program, and the Mentorship Program. These programs have appropriately focused on the development of nephrologists who lead many LLMIC RRT programs, and in doing so have involved nurses in varying capacities. Given the predominance of nurses as the major workforce component of these rapidly developing dialysis programs, and given the need for a comprehensive and complementary nephrology workforce, the ISN recognized the value of adding a nursing focus to their outreach programs by supporting and promoting the ISN Nurse Working Group. In addition, nurses will be established on other ISN committees such as the ISN Continuing Medical Education Committee, the ISN Education Committee, and the ISN Educational Ambassadors Program (EAP) Committee.

The ISN Nurse Working Group is aware of the potential criticism of the current approach, as it has grown from high income country (HIC) nephrology nurses. In saying that, the ISN needs to start somewhere to provide a strategic approach to globally engage and support more nephrology nurses. The idea is for nurses to help nurses wherever they are from. The first example of this is to execute the initiative to ensure that the ISN has a nurse on each ISN Regional Board, rather than nephrologist-only boards. The second example has been learning needs

assessments completed by nurses from one African country that highlighted the need for infection control, access, and safety/quality improvement learning packages.

The major vision of the ISN Nurse Working Group is to build capacity among LLMIC nephrology nursing programs by supporting the creation of sustainable leadership and education programs. This vision aligns with the ISN goals of equitable access to sustainable kidney care, building capacity in health care professionals, and connecting community. The inclusion of nurses will assist the ISN to fulfill its mandate to engage the renal community around the globe.

Prior to developing a nursing strategy, a review of the existing educational materials in the ISN Academy online learning platform (<https://academy.theisn.org/isn>) was performed to determine the following: (i) what content could be used by nurses, and what gaps exist in online offerings; (ii) what could assist in producing a catalogue of educational resources; and (iii) whether the ISN Academy resources could assist in designing tools and materials that would be country, culture, and resource appropriate. The results of this process determined that ISN Academy educational materials had some relevance to nurses and allied health professionals; however, the offerings were not comprehensive for all levels of nursing expertise and were not consistently offered in multiple languages. In particular, many were not relevant to LLMICs. To develop and maintain a comprehensive resource library was beyond the scope and resources of this group, therefore, additional strategies needed to be developed. The specific issue of language translations is challenging; however, the long-term aim would be to lobby higher-resourced nursing organizations

from neighboring regions to support LLMIC nurses in facilitating language and context translations and revisions. Nurses represented on the ISN Regional Boards can act as facilitators for regional nurse leaders to support the access to, and the implementation of, ISN academy resources.

To develop these additional strategies, it was necessary to increase the nursing involvement in the ISN and to ensure that any strategies implemented would be achievable and sustainable. The activities planned to achieve increased nursing involvement are shown in [Table 1](#) and involve the following: (i) ISN Regional Board nurse representation; (ii) development and validation of a nephrology nursing-specific Learning Needs Assessment Tool (LNAT); (iii) an ISN-coordinated Nurse Partnership Program; (iv) Link Nurse programs for each major regional nephrology nurse organization; (v) dual ISN/regional nephrology nurse organization memberships; (vi) the development of LLMIC-relevant Nurse Learning Packages (Infection, Access, Safety/Quality Improvement); (vii) enhancement of nursing's participation in World Congress of Nephrology activities; and (viii) an ISN nursing Web presence. Through these strategies, the ISN Nurse Working Group can coordinate a sustainable global model within the structure of the ISN.

The Nurse Working Group's initial measures of success will be the following: (i) the number of nurses on ISN regional board representation; (ii) the number of ISN/Regional Nurse Link Representatives; and (iii) the number of ISN nurse memberships, nurse partnership program uptake, dual membership package uptake, learning needs completions, learning package completions, and website hits

Table 1. International Society of Nephrology Nurse Working Group Strategy Overview

Strategy	Strategy details	Strategy metric	Review period
ISN regional board nurse representation	<ul style="list-style-type: none"> Promote the inclusion of nursing representation on each ISN regional board Develop a nursing structure as a part of ISN activities 	<ul style="list-style-type: none"> Number of nurses on ISN regional boards 	<ul style="list-style-type: none"> Q4 2019
Nursing symposium at ISN World Congress of Nephrology	<ul style="list-style-type: none"> Support a nursing forum to bring global nephrology nurse leaders together 	<ul style="list-style-type: none"> Nursing attendance at the World Congress of Nephrology 	<ul style="list-style-type: none"> Q2 2019
Learning needs assessment program	<ul style="list-style-type: none"> Develop and validate an LNA tool specific to LLMIC nephrology nursing Perform LNA with LLMIC nurses 	<ul style="list-style-type: none"> LNA tool completions 	<ul style="list-style-type: none"> Q1 2019 – Q4 2020
Nurse learning packages	<ul style="list-style-type: none"> Develop generic learning packages applicable to both HICs and LLMICs Topics to include infection, access, leadership, quality improvement, and research 	<ul style="list-style-type: none"> ISN Nurse learning package development 	<ul style="list-style-type: none"> Q1 2019 to Q4 2020
Nurse partnership program	<ul style="list-style-type: none"> Link HIC nephrology nurses with LLMIC nephrology nurses 	<ul style="list-style-type: none"> Number of nurse partnership uptakes 	<ul style="list-style-type: none"> Q1 2019 to Q4 2020
Link nurse program	<ul style="list-style-type: none"> Develop a link nurse for each regional nephrology nursing society Link nurses to liaise with ISN Nurse Working Group to strengthen ISN and regional network 	<ul style="list-style-type: none"> Number of link nurses 	<ul style="list-style-type: none"> Q4 2019
ISN/regional dual membership package	<ul style="list-style-type: none"> Develop a package that would offer local regional membership together with ISN membership 	<ul style="list-style-type: none"> ISN nursing membership 	<ul style="list-style-type: none"> Q1 2019 to Q4 2020
ISN nursing Web presence	<ul style="list-style-type: none"> Develop an ISN nursing Web page Provide a focal communication point for ISN nursing activities 	<ul style="list-style-type: none"> Website hits and downloads 	<ul style="list-style-type: none"> Q1 2019 to Q4 2020

HIC, high-income country; ISN, International Society of Nephrology; LLMIC, low and lower-middle income country; LNA, learning needs assessment.

(Table 1). Historically, the ISN has supported LLMIC/HIC partnerships in which both HIC and LLMIC nephrology programs can benefit from their interactions with each other. Similarly, nephrology nurses from both LLMICs and HICs can benefit from exposure to the challenges and successes of each other.

Nursing has been an important element in the development of strengthening health care systems in HICs through leadership in quality improvement, research, and policy development. Through the ISN working group, nurses from HICs can support and mentor less-resourced LLMIC nurses to contribute to strengthening their health systems. For example, the principles of quality improvement, such as plan, do, study, act (PDSA), a common process in HIC nursing practice, could be taught and supported to strengthen the safety of LLMIC dialysis provision.

Nephrology Nursing Leadership in LLMICs

The sustainability of quality dialysis programs in LLMICs is likely to be influenced by the

nephrology nursing leaders driving dialysis safety and standards of care. Each dialysis program in LLMICs has unique contextual challenges; however, quality education supported by nursing leaders is required by all. Existing in these countries are unique contextual and cultural challenges whereby nurses are often unable to join nephrology societies and whereby the predominantly female dialysis nurses may be discriminated against, minimizing leadership opportunities.⁹ The ISN Nurse Working Group acknowledges these challenges for nephrology nurses, leaders, and educators and will work together with the local dialysis nursing leaders in LLMICs to create sustainable plans to overcome these. Early exemplars of HIC and LLMIC collaboration have been in Palestine and Kenya.

Next Steps

The current ISN Nurse Working Group is now reaching out to LLMIC nephrologists and nephrology nurses to support, mentor, and facilitate improved leadership and

educational resources worldwide. The next steps for the working group are as follows:

- At the 2018 ASN Meeting, assist each ISN region to appoint a nephrology nurse to each regional board
- Facilitate a Nursing, Nutrition, and Allied Health Symposium at the World Congress of Nephrology in 2019
- Facilitate the completion of needs assessments from nephrology nurses in LLMICs
- Match LLMIC needs assessments with learning ISN Learning Packages (Infection, Access, Safety/Quality Improvement) and ISN Academy resources.
- Develop a link nurse for each regional nephrology nursing society to liaise with the ISN Nurse Working Group to strengthen ISN and regional networks
- Lobby HIC nephrology nurse organizations to join the ISN Nurse Partnership Program linking HIC nephrology nurses with LLMIC nephrology nurses
- Develop a package that would offer local regional nephrology nursing membership together with ISN membership

- Develop and maintain an ISN nursing Web page that will provide a focal communication point for ISN global nursing activities

The Nurse Working Group will continue to meet with LLMIC nephrology nurses and collaboratively execute these next steps. Specifically, the group will meet with ISN regional board nephrologists and nephrology nurses, attending ISN and regional nephrology nursing groups to understand the unique requirements of each developing dialysis program. This model may then be used with other nephrology nursing cohorts (surveillance, prevention, primary care, peritoneal dialysis, transplantation, supportive nondialysis care) and allied health professional groups such as dietitians, social workers, and pharmacists. With the backing and resources of the ISN to support the goals of LLMIC nurse leaders, the ISN Nurse Working Group will aim to

support LLMIC dialysis nurses to advance kidney care in regions of the world with the most need.

REFERENCES

1. Bello A, Levin A, Tonelli M, et al. *Global Kidney Health Atlas: a report by the International Society of Nephrology on the current state of organization and structures for kidney care across the globe*. Brussels, Belgium: International Society of Nephrology; 2017.
2. Jha V, Arici M, Collins AJ, et al. Understanding kidney care needs and implementation strategies in low- and middle-income countries: conclusions from a "Kidney Disease: Improving Global Outcomes" (KDIGO) Controversies Conference. *Kidney Int*. 2016;90:1164–1174.
3. Ashuntantang G, Osafo C, Olowu WA, et al. Outcomes in adults and children with end-stage kidney disease requiring dialysis in sub-Saharan Africa: a systematic review. *Lancet Global Health*. 2017;5:e408–e417.
4. Luyckx VA, Miljeteig I, Ejigu AM, Moosa MR. Ethical challenges in the provision of dialysis in resource-constrained environments. *Semin Nephrol*. 2017;37:273–286.
5. Obrador GT, Rubilar X, Agazzi E, Estefan J. The challenge of providing renal replacement therapy in developing countries: the Latin American perspective. *Am J Kidney Dis*. 2016;67:499–506.
6. Liyanage T, Ninomiya T, Jha V, et al. Worldwide access to treatment for end-stage kidney disease: a systematic review. *Lancet*. 2015;385:1975–1982.
7. Osman MA, Alrukhaimi M, Ashuntantang GE, et al. Global nephrology workforce: gaps and opportunities toward a sustainable kidney care system. *Kidney Int Suppl*. 2018;8:52–63.
8. Neil N, Walker DR, Sesso R, et al. Gaining efficiencies: resources and demand for dialysis around the globe. *Value Health*. 2009;12:73–79.
9. Barsoum RS, Khalil SS, Arogundade FA. Fifty years of dialysis in Africa: challenges and progress. *Am J Kidney Dis*. 2015;65:502–512.