extensive tubular and interstitial damage are more prone to maladaptive hyperfiltration secondary to surgical nephron reduction. It could also be postulated that these counterintuitive results are the consequence of small numbers, especially because there were substantially fewer patients with signs of advanced chronic damage. The complex relationship between histopathological markers of damage and GFR warrants further study.

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UNDERSTANDING THE ENVIRONMENTAL FOOTPRINTS OF NEPHROLOGY AND DIALYSIS

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Introduction: Several individual efforts have been made to encourage nephrologists and dialysis staff to explore the array of research opportunities and implementation practices possible in sustainable dialysis practice (SDP) and nephro-environmental care (NEC). Surveys in United Kingdom (UK) and Australia confirm a disappointing level of understanding of the extent of our past eco-culpability, and the future potential for eco-solutions. Best evidence suggests most dialysis services still discard their potable reverse osmosis reject water (RORW); few (if any) augment their service power consumption with solar or wind renewables; and most (or all) still appear confused by structured waste recycling and/or the possible on-use potential for most discards.

Methods: Two surveys, one from the UK (1) (2010), and a more recent 2017 Australian study in the State of Victoria (2), both revealed major gaps in SDP perceptions and NEC implementation, with minimal internal and external cross-service collaboration or coordination. The Victorian survey used SurveyMonkey—an online, cloud-based, software platform—to ask 107 SDP and NEC-directed questions. The response was remarkable: it captured completed returns from 86% of all state dialysis services, representing 628 of the 660 (95%) state dialysis chairs.

Results: While reported in detail elsewhere (2), in Victoria where dialysis RORW conservation was first pioneered and has since been widely publicized, still only 25% of facilities actively conserve and re-use RORW. Energy use—a currently topical issue in the Australian community—is rarely consciously minimized: few reported using low energy diode lighting, motion sensors, or thermostatic controls, while most took a haphazard approach to using hibernation modes for electronic equipment. Some effort at waste segregation was reported, but recycling was rarely carefully audited and remained poorly understood by the majority.

Conclusions: Concepts in SDP and NEC were uniformly ignored by 20th century medicine, and little has changed in the 21st. However, healthcare professionals should owe the same duty of care to the planet, its environment, and its ecosystems as they accord its human populations, particularly given the independence of planetary and human health. As nephrologists—and especially in the resource-heavy sub-specialty of dialysis—we must take greater care with the eco-impact of our profligate water and power consumption, and must better quantify and define waste generation and disposal. We must encourage macro-systems research into better ways to manage, reuse, and re-purpose the resources we have previously cast aside. Nephrology must urgently and cooperatively develop systems that reduce resource consumption and re-purpose disposable waste to secondary use. An essential first step must be the coordinated collection of audit information from multiple multi-national jurisdictions of both resource consumption and waste generation. The ISN is well placed to auspice this. Understanding local and global eco-potentials will then encourage greater awareness of SDP and NEC.

Clinical Engineer in Cambodia to Cambodian medical students and doctors. Furthermore, the outstanding attendees were selected to have a further intensive training in Japan for two weeks. This study will show the outcome of these training courses in Cambodia and Japan.

Methods: There are two groups of attendee were in the study. Group A is a total of 58 attendees who had joined the training course in Cambodia in 2018, and all of these attendees were selected for answering a set of designed questionnaires. Group B is a total of 13 attendees whose 2-week intensive training course were in Japan in 2013, 2016, 2017 and 2018, were all selected for phone call interview.

Results: Group A’s result. Among 58 attendees, 83% is medical student, 10% is a medical doctor, and 7% is medical resident. The average pre-test score 6.3 point about CKD while the average post-test is 8.3. After joining the training, there is 70.7% of attendee who interested in the field of nephrology, dialysis and/or clinical engineer. The benefits from attending the training are more understanding of nephrology lessons and dialysis, sharing knowledges gained from training, adding on clinical experiences, being able to educate patients about renal health and nutrition, being able to provide dialysis information to patients, and understanding about clinical engineer work. 91.4% of the attendees agree that the training should continue to conduct annually.

Group B’s result. Among 13 attendees, 77% were medical students when they got the intensive training in Japan and only 23% were clinicians. Currently, 77% are clinicians, 4 of whom are dialysis specialists, and the others are resident in family medicine, pediatric, internal medicine, pneumology, and psychiatry. Before the training in Japan, only 38% are interested in dialysis specialty or nephrology as their future carrier. After getting back from Japan, 77% is interested in dialysis specialty which 4 of them are currently working in Dialysis Centers, 2 of them promisingly want to be Pediatric Nephrologists, 3 of them want to be Nephrologists, and one is interested in launching dialysis center. Direct action taken after getting back from Japan, the clinicians have changed their organization infrastructure, upgraded their administration to follow Japan standard, and created education brochures for their patients.

Conclusions: The study has shown that the knowledge of Cambodian medical students and doctors in the area of CKD and clinical engineer have been improved. In addition, the number of doctors working in dialysis center or students interested in dialysis and nephrology are significant increased. The outcome of the training provided benefits for both Cambodian doctors and students to improve the dialysis therapy in Cambodia.

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LONG TERM OUTCOMES OF LOWERING DIALYSATE FLOW (QD) IN A POPULATION OF CHRONIC HEMODIALYSIS IN RTS COLOMBIA

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Introduction: Dialysate flow rates (Qd) are typically prescribed above 500 mL/min. This implies a large waste of water: 120 L per 4 hour session.

We have performed previous trials comparing Qd 400 to 500 mL/min and have found no differences in Kt/V urea, phosphate, and interdialytic gain, but, with significant differences in water consume. Nonetheless, there was lack of information about the long-term effects of lowering Qd in Chronic HD patients. We present therefore our 6 years of experience comparing two Qd prescriptions.

Methods: We performed an observational study comparing mortality and dialysis variables between two Qd prescriptions: 400 vs 500 mL/min in a population of adult chronic Hemodialysis (HD) patients. We present therefore our 6 years of experience comparing two Qd prescriptions.

Results: We included 71 patients, (mean age 62.5 y.o. SD 15.2). 33 women (46,4%) were included. There were no differences in eitiology of CKD: hypertension 29,5% followed by diabetes (26,7%).