



Environmental Sustainability Is Needed in Kidney Care – Patient, Donor, and Provider Perspectives

Canadian Journal of Kidney Health and Disease
Volume 12: 1–3
© The Author(s) 2025
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/20543581241308642
journals.sagepub.com/home/cjk



Nancy Verdin¹, Agnes Black², and Caroline Stigant³

Keywords

environmentally sustainable kidney care, green nephrology, chronic kidney disease

Received September 21, 2024. Accepted for publication November 21, 2024.

The 2023 report of the Lancet Countdown calls for “health-promoting climate change action,”¹ and our health care community has acknowledged that transition to a sustainable, healthier, fairer, and resilient world will necessarily involve change in established clinical practices.² Herein, two people—Ms Verdin, an experienced dialysis patient, and Ms Black, a kidney donor—describe the lack of environmentally sustainable processes in their respective care. To our knowledge, these patients’ calls to improve stewardship are the first published in the environmentally sustainable kidney care (ESKC) literature. Included are helpful insights as to where in the patient journey these improvements can be implemented.

Enacting environmental sustainability into everyday care starts with conversations, which can at the outset be difficult. Social tipping, the “contagious spread” of new social norms, has been proposed as a way for health care professionals to address the climate emergency.³ It is anticipated that Ms Verdin and Ms Black’s insights will meaningfully contribute to normalizing such conversations with patients and coworkers alike, so that kidney care resources—in all their forms—are purposefully stewarded.

Dr Caroline Stigant, Nephrologist

As a retired occupational therapist (OT) who has lived with kidney failure for 36 years, I have learned that being involved in my care helps me achieve better health. I began with an acute start on peritoneal dialysis in my late 20s, followed by 3 failed transplants within 10 years. I have since had a front row seat observing well-intentioned processes in numerous in-center, community, and most recently home dialysis (HHD) units in Canada. Regarding environmental consideration of this appreciated care, I score these programs a generous 3/10. As an OT, and as a person who is concerned about

climate change, I would like to share some improvement ideas.

First, we need to talk about how to reduce waste in kidney treatments—not once has my team raised this, which leads me to believe that it is not discussed with other patients who may share my guilt. I am painfully conscious that dialysis uses a lot of power, water, and supplies.⁴ Ask us where the waste is generated—we will tell you! Each week, as a HHD patient, I fill one full size garbage can (a majority of which is plastic—dialyzers, tubing, acid jugs, gloves, etc) and one recycling bin (mostly cardboard) with waste from my home hemodialysis therapy—it is embarrassing to put all of this at the curb.

Provider instruction (for home patients) and action (for in-center patients) in the appropriate reduction of materials (examples include reusable straps to secure needle lines, having only one label on central venous catheter with less sterile gauze use, using blue pads and gloves sparingly for putting on/taking off hemodialysis), and processing of waste will reduce consumption and cost. There is no assistance with what we order, and if any supplies are unused, they cannot be returned, so we are told to throw them out. I feel horrible doing this. When I dialyzed in-center, I observed significant variability in practice (up to 3 glove changes and 8 disinfectant swabs to put me on hemodialysis, and use of

¹The Canadian Society of Nephrology, Montreal, QC, Canada

²School of Nursing, The University of British Columbia, Vancouver, Canada

³Faculty of Medicine, The University of British Columbia, Vancouver, Canada

Corresponding Author:

Caroline Stigant, Faculty of Medicine, The University of British Columbia, Vancouver, BC, Canada.

Email: caroline.stigant@islandhealth.ca



multiple blue pads in a single treatment), can practice be standardized? When I ask why so many supplies are used, the usual response is that the procedures are to keep me safe, yet it is doing the procedures *carefully* that keeps me safe, even with “lean” and thoughtful supply use like I do at home. Laundry could be reduced (fresh blanket to cover treatment chairs for each run in a 24-bed unit, 3 shifts a day for 6 days is 1,728 blankets a month or 20,736 a year—I can bring my own blanket, even my own pillow—they are more comfortable anyway), and we could bring our own beverage cups. Medication waste could be reduced by prescribing small amounts of newly initiated medication in case of intolerance, and thoughtful deprescribing of medication I no longer need. Manufacturers have a role in reducing waste as well, examples being reusable boxes for supply distribution and use of more products that are recyclable.

I am told that plastics are not recyclable in my region; could recyclable plastics be returned to the manufacturer, or to my program, or to the closest city with a plastics recycling program? Would my program even pay for the expenses necessary to deliver those plastics?

Third, we need to talk about climate change and its possible effects on safety—extreme weather could be life-threatening.⁵ My primary concern is not being able to dialyze at home—would there be capacity in the regional system to accommodate my treatments? A second concern is interruption of supply of energy, water, and/or consumables, at home and the dialysis unit.

I think most patients would accept conversations on resource stewardship and climate resilience (especially those receiving home dialysis) with constructive focus on good processes. This would be best introduced to incoming patients at treatment orientation, and to established patients once they are more settled in their treatments, lending well to the agenda at periodic clinic visits.

Nancy Verdin, Home Hemodialysis Patient, Occupational Therapist, Self-Described Environmentalist

As a registered nurse, I am committed to improving the health and well-being of patients and families. When I learned about kidney donation, I was intrigued with this gift to improve the quality of another’s life. In the past few years, I have become increasingly interested in planetary health, and have used my nursing voice and privilege to address the climate crisis. As a climate change activist, I know that donating a kidney means someone would be able to stop dialysis, which not only improves their life but can also reduce the environmental impact of the health care system. As a health care provider, and as a patient, I have witnessed the huge carbon footprint of the health care system, including examples when this impact could have been reduced: plastic “patient belongings” bags, excessive glove use when the use of gloves is not required, and single-use plastic blood pressure cuffs. I donated my kidney in August 2023; almost

every day I think about the person who received my left kidney and I wish them a long and healthy life. I want my children and grandchildren to know I did what I could to promote the health of the planet for future generations.

At no point in my donation journey did any member of my transplant team, either in person or via brochure, video, or website, mention environmental benefit as a possible reason for kidney donation, and I think this is a missed opportunity. I think this information would fit well in some of the pre-transplant counseling sessions, and I would like to see transplant programs promote the environmental benefits of kidney donation: “You’ve described that your primary reason for donating a kidney is to help another person and improve their life. Did you also know that there are important environmental benefits to donating a kidney?,” then add a sentence or two explaining why this is the case.

Agnes Black, Live Anonymous Kidney Donor, Registered Nurse, Planetary Health Activist

Ethics Approval and Consent to Participate

Ethics review was not undertaken for this opinion piece. All authors provided their voluntary and informed consent to participate.

Consent for Publication

All authors have provided their consent for this publication.

Availability of Data and Materials

All data are available for sharing by the corresponding author upon request.

Author Contributions

Each author conceptualized and wrote the original draft of their portions of the manuscript. Dr Caroline Stigant conceptualized the unification and presentation of co-authors’ complementary perspectives. Dr Stigant performed the literature search and provided pertinent references, and assisted with review and editing. All authors have approved this final version.

Declaration of Conflicting Interests

The author(s) declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: Dr Stigant is a Guest Editor for the CJKHD special collection ‘Sustainable Nephrology – Introduction, Perspectives, and Pathways to Low Carbon Quality Kidney Care’ that this article is being submitted to.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Caroline Stigant  <https://orcid.org/0000-0003-2578-0966>

References

1. Romanello M, Di Napoli C, Green C, et al. The 2023 report of the Lancet countdown on health and climate change: the imperative for a health-centred response in a world facing irreversible harms. *Lancet*. 2023;402(10419):2346-2394.
2. Wise J. Climate crisis: over 200 health journals urge world leaders to tackle “catastrophic harm.” *BMJ*. 2021;374:n2177.
3. Howard C, MacNeill AJ, Hughes F, et al. Learning to treat the climate emergency together: social tipping interventions by the health community. *Lancet Planet Health*. 2023;7(3):e251-e264.
4. Barraclough KA, Agar JWM. Green nephrology. *Nat Rev Nephrol*. 2020;16:257-268.
5. Blum MF, Feng Y, Anderson GB, Segev DL, McAdams-DeMarco M, Grams ME. Hurricanes and mortality among patients receiving dialysis. *J Am Soc Nephrol*. 2022;33(9):1757-1766.