

Decarbonisation of Kidney Care in the United Arab Emirates: A Roadmap to an Environmentally Sustainable Care [Letter]

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Dear editor

We have read a research article entitled “Comparative Life Cycle Assessment Between Single-Use and Reprocessed IPC Sleeves” by Holt et al,¹ recently published in International Journal of Nephrology and Renovascular Disease. We congratulate the authors on this successful article and make some contributions. There are five strengths of this study: 1) Utilizing the life cycle assessment (LCA) method, the research provides a detailed estimation of greenhouse gas emissions from various CKD treatments in the UAE, offering valuable data for future policy and practice, 2) The research introduces a structured framework aimed at reducing the carbon footprint of CKD care, focusing on three main pillars: delaying CKD progression, reducing emissions from treatments, and enhancing access to kidney transplantation, 3) While centered on the UAE, the findings and proposed strategies have implications for healthcare systems worldwide, contributing to global efforts toward achieving net-zero emissions, 4) The study addresses the growing public health challenge posed by CKD in the UAE, advocating for early detection and management to mitigate both health and environmental impacts, 5) The study emphasizes the importance of raising awareness about CKD and its environmental impact, which can lead to better screening and management practices in the community.

However, we have also discovered several limitations that need to be corrected in the future, namely: 1) This study relies on limited data from national reports and inventory sources, which may not cover all relevant variables in assessing the carbon footprint of CKD care in the UAE, 2) The study notes that there is variability in the components included or excluded from other studies on carbon footprint. However, there is no in-depth explanation of how the methodology used in this study might affect the results and comparisons with other studies, 3) The study emphasizes hemodialysis as the main modality in CKD care, while the environmental impact of other modalities such as peritoneal dialysis or conservative care is not explored in depth, 4) The study may not adequately consider social and economic factors that can influence access to and implementation of decarbonization strategies in CKD care, such as differences in income and education levels among populations.

To obtain better results, we recommend that further research be carried out by 1) Develop a more in-depth cost-benefit analysis for various CKD care modalities, including kidney transplantation, to assess cost efficiency and environmental impact comprehensively,² 2) Conduct research focused on the impact of more environmentally friendly CKD care on patients' quality of life, including psychological and social aspects,³ 3) Develop and test integrated care models that incorporate telemedicine and remote management to reduce patient travel needs and related emissions.⁴

In conclusion, this study makes a significant contribution by proposing a framework for decarbonizing chronic kidney disease (CKD) care in the United Arab Emirates, focusing on delaying CKD progression, reducing emissions from care and dialysis, and improving access to kidney transplantation, thus supporting efforts toward a more sustainable and environmentally friendly healthcare system.

Disclosure

There is no conflict of interest related to this communication.

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