IMPACT CKD – All Roads Must not Lead to Dialysis

To the Editor: We reflect on the chronic kidney disease projections made by Brown *et al.*[1] in Kidney International Reports. Applying contemporary kidney replacement therapy uptake rates, they forecast a 75% increase in UK dialysis recipients by 2032 (from 33,098 to 58,022). These estimates far surpass the expansion of kidney failure services, modelled at 3%/yr. The authors advocate for expansion in specialized care, enhanced chronic kidney disease prevention, detection, and management.

We share Brown *et al.*'s enthusiasm to prepare for escalating long-term health conditions and do not dispute their findings. However, we contest the assumption that rising rates of kidney failure must be matched by dialysis initiation rates. Although the authors accounted for those not receiving dialysis, it was not explicit how. They did not report exploration of scenarios in which new evidence, therapies, or treatment pathways might influence dialysis uptake.

The survival and quality-of-life benefits of dialysis are reduced for older people and those living with multiple long-term conditions or frailty.[2] A substantial proportion of the expanding population with kidney failure are likely to gain comparable quality and quantity of life outcomes from conservative kidney management (CKM). Many whose lives may be extended by dialysis may choose CKM to preserve independence and prevent hospital time.[3] "Specialized" kidney care does not just mean that it is aimed at kidney replacement therapy preparation and delivery; we must also provide for the high and often unmet supportive care needs of our patients.[4]

Rather than heralding insurmountable future dialysis needs, we make the following recommendations: (i) CKM must be expanded alongside kidney replacement therapy services to meet future demand, (ii) practitioners must develop expertise in offering and providing kidney supportive care and CKM, (iii) better evidence is needed of the comparative effectiveness and cost-effectiveness of CKM and dialysis to deliver patient-important outcomes, and (iv) we must address the between-country variation in provision of CKM.[5] If we allow all roads to lead to dialysis, the kidney failure population will experience unmet needs unseen for decades. We should also recognize the potential harms of health care systems built for the delivery of treatments, rather than shaped around the needs and preferences of patients.

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Barnaby Hole[1,2], Fergus J. Caskey[1,2] and Lucy E. Selman[1]

[1]Population Health, University of Bristol, Bristol, UK; and [2]Renal Department, North Bristol NHS Trust, Westbury-on-Trym, Bristol, UK

Correspondence: Barnaby Hole, Renal Department, North Bristol NHS Trust, Westbury-on-Trym, Bristol, BS10 5NB, UK. E-mail: barnaby.hole@bristol.ac.uk

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Response to the Letter to the Editor Entitled "IMPACT CKD – All Roads Must Not Lead to Dialysis"

The Author Replies: We appreciate the insightful editorial letter by Hole *et al.*,[1] regarding future dialysis needs and the importance of conservative care, in response to our original article outlining the methodology and validation of

the IMPACT CKD model—an individual microsimulation model designed to project the holistic burden of chronic kidney disease, using the UK population as a case study.[2]

With an aging UK population, chronic kidney disease cases are expected to increase with progression to end-stage kidney disease (ESKD), placing significant strain on kidney transplant and dialysis services.[3] Although our model projects an increase in ESKD patients in the UK,[2] we acknowledge that not all patients with ESKD initiate dialysis.[4,5] Accordingly, our model incorporates ESKD management options that were validated by clinical experts. These include remaining in stage 5 while awaiting initiation of kidney replacement therapy, starting dialysis, receiving a kidney transplant, or opting for conservative care instead.[2] As detailed in the Supplementary Material of our manuscript, these proportions are determined by estimated glomerular filtration rate and patient age.[2] In addition, as described in the Methods section, our model includes a cap on incident dialysis and a 3% annual growth rate on this cap for the UK, reflecting historical trends and considering health care system constraints.[2] Of note, the 75% projected growth in patients on dialysis from 2022 to 2032 refers to prevalent patients, not incident cases, with validation outlined in our manuscript.[2]

We share Hole *et al.*'s perspective that conservative care should be used where appropriate either because of limited kidney replacement therapy supply or patient choice, given that it could play a critical role in patient comfort and well-being. Supportive care may be a preferable alternative to dialysis for frail, multimorbid patients because it can alleviate the risks associated with kidney replacement therapy in elderly individuals.[4,5] Although supportive care may improve quality of life, it does not extend life expectancy.[4,5]

We advocate for health policies that prioritize early chronic kidney disease detection and treatment, aiming to reduce the expected increase in progression to ESKD, improve patient survival and quality of life, decrease productivity losses, and minimize the burden on health care systems by mitigating demand for conservative care, transplant, and dialysis.[4,5]

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Juan J. Garcia Sanchez[1], Stacey Priest[2], Hannah Guiang[2], Anthony Zara[2], David C. Wheeler[3], Ana F. Moura[4,5], Charlotte Johnston-Webber[6] and Jieling Chen[7]

[1]Global Market Access & Pricing, AstraZeneca, Barcelona, Spain; [2]Value & Evidence, EEVERSANA, Burlington, Ontario, Canada; [3]University College London, London, UK; [4]Sociedade Brasileira de Nefrologia, São Paulo, Brazil; [5]Escola Bahiana de Medicina e Saúde Pública, Salvador, Brazil; [6]London School of Economics, London, UK; and [7]Global Market Access & Pricing, AstraZeneca, Gaithersburg, Maryland, USA

Correspondence: Juan Jose Garcia Sanchez, Portal de l'Angel 40, Barcelona, Spain. E-mail: juanjose.garciasanchez@astrazeneca.com

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