




Response to “Assessment of Renal Function in Transgender Patients With Kidney Disease”

David Collister^{1,2} , Nathalie Saad³,
Emily Christie⁴, and Sofia Ahmed^{5,6}

We thank Jue et al for their comments regarding the assessment of renal function in transgender patients with kidney disease. We agree that any evaluation should include consideration of a patient’s anatomy, medical history, medications, and laboratory values. We also agree that the measured glomerular filtration rate (mGFR) by either 24-hour urine for creatinine clearance or an alternative method is necessary if an accurate and precise measure of GFR is needed for clinical decision-making. However, mGFR has its own limitations and may not be feasible to be assessed or repeated at all clinical encounters. Similarly, 24-hour urine collections are often inaccurate even in tertiary care settings.¹ Thus, we recommended using the range of estimated GFR (eGFR) using both sex at birth and current gender identity for all transgender patients, including those treated with long-term gender affirmation hormone therapy (GAHT). Ideally, this value could be confirmed by mGFR with eGFR used longitudinally. These ranges must be taken with consideration of the patient’s estimated muscle mass, which may be evolving over time with the use of GAHT and other interventions.

We understand their concerns about extrapolating data from small case series and cohort studies with heterogeneous populations and interventions. Our review only included 9 studies, whereas that of Webb et al² included only 4 studies, 2 of which are cited in our review. However, their review also highlights other pharmacokinetic differences between sexes and genders including absorption, volume of distribution, protein binding, and hepatic metabolism which are relevant to transgender persons and their clinicians. There is clearly a need for large population-based cohort studies and a systematic review addressing the assessment of kidney function and the impact of GAHT on kidney function in transgender persons.³ Finally, the development and validation of eGFR equations,^{4,5} specific to transgender persons, should be a research priority, but this will require collaboration across institutions given at present, the relative rarity of the intersection of transgender persons, and chronic kidney disease.

Consent for Publication

All authors have provided consent for publication.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

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

ORCID iD

David Collister  <https://orcid.org/0000-0002-2323-6521>

References

1. Boyd C, et al. *Rev Urol*. 2018;20(3):119-124.
2. Webb AJ, et al. *Am J Heal Pharm*. 2020;77:427-433.
3. Collister D, Curtis S, Krupka E. Change in Kidney Function Biomarkers in Transgender Persons on Gender Affirmation Hormone Therapy- a systematic review and meta-analysis. PROSPERO 2020 CRD42020214248. https://www.crd.york.ac.uk/prospéro/display_record.php?ID=CRD42020214248. Accessed May 18, 2021.
4. Levey AS, et al. *Ann Intern Med*. 2006;145(4):247-254.
5. Levey AS, et al. *Ann Intern Med*. 2009;150(9):604-612.

¹Department of Medicine, Division of Nephrology, University of Manitoba, Winnipeg, Canada

²Chronic Disease Innovation Center, Seven Oaks General Hospital, Winnipeg, MB, Canada

³Department of Medicine, Division of Endocrinology, University of Calgary, AB, Canada

⁴Department of Medicine, Division of Nephrology, University of Alberta, Edmonton, Canada

⁵Department of Medicine, Division of Nephrology, University of Calgary, AB, Canada

⁶Libin Cardiovascular Institute, University of Calgary, AB, Canada

Corresponding Author:

David Collister, Department of Medicine, Division of Nephrology, University of Manitoba, 2LB19, Seven Oaks General Hospital, 2300 McPhillips Street, Winnipeg, MB, R2V 3M3, Winnipeg, Canada.
Email: dtcollister@gmail.com

