

Intent versus impact in clinical algorithms



Background

- The original eGFR equation included race based on the [mistaken assumption](#) that Black patients inherently have higher muscle mass, leading to higher creatinine levels—**a race essentialist belief not grounded in scientific evidence**.
- The researchers' **intent** was to improve kidney function estimates by accounting for population-level differences, not to cause harm. However, the **impact** of including race in the equation **systematically overestimated kidney function in Black patients**, delaying diagnosis, nephrology referrals, and [transplant eligibility](#)—[ultimately reinforcing inequities in kidney care](#).
- This case underscores a critical truth: **even well-intentioned clinical tools can perpetuate harm when built on flawed assumptions**. While the intent was to enhance accuracy, [the impact contributed to structural racism in healthcare](#), demonstrating why **race-based clinical algorithms must be critically examined and revised**.



Findings

- In response to growing concerns from clinicians, patient advocates, and community voices, the CKD-EPI research team—including the original equation's developers—was [called into an open dialogue rather than called out with blame](#), creating space for meaningful discussion about the unintended harms of the race-based eGFR equation. By focusing on the difference between intent and impact, researchers engaged in collaborative problem-solving to correct the equation and advance equity. In 2021, they released a [race-neutral eGFR equation](#) to better reflect patient care needs and promote equitable kidney disease management.
- The updated equation removed race and incorporated alternative biomarkers, such as cystatin C alongside creatinine, for a more precise and equitable assessment. The National Kidney Foundation (NKF) and American Society of Nephrology (ASN) Task Force [formally endorsed the new equation](#), reinforcing the need for race-conscious, evidence-based kidney care.



Lessons learned

- ✓ By calling in researchers—engaging them in dialogue rather than calling out their prior approach—advocates, clinicians, and community voices leveraged collective action and created an opportunity for collaborative problem-solving. Instead of assigning blame, this approach focused on addressing the real-world harm caused by race-based eGFR calculations and [working toward a solution that advances equity in kidney care](#).
- ✓ This success demonstrates the power of collaborative change in medicine—when research, clinical practice, and community advocacy align, longstanding inequities can be corrected. The shift to a race-neutral eGFR equation not only [improved kidney disease assessment for Black patients](#) but also set a critical precedent for re-evaluating other race-based clinical algorithms. It serves as a [model for critically examining the role of race in medical decision-making](#), ensuring that tools meant to guide care do not reinforce systemic racism but instead promote equity, accuracy, and patient-centered care for all.

“They were motivated to create the new science and try to identify what would a new algorithm look like without the race variable. So the collective action part is absolutely critical. It happened both from inside and outside of nephrology and included both clinicians who were direct care providers, statisticians and the scientists, but also non medical people: social scientists, anthropologists.”

— **Sophia Kostelanetz, MD, MPH**

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Citations

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