

Reassess Race in eGFR Calculation

Request for Feedback

OPTN Minority Affairs and Kidney Transplantation Committees
Name of Presenter

Project Background

- The Minority Affairs Committee, Kidney Transplantation Committee, and subject matter experts formed the Reassess Race in eGFR Calculation Workgroup
- The Sponsoring Committees issue the request to:
 - Evaluate the use of the Black race coefficient in the eGFR calculation as it relates to wait time criteria in kidney allocation
 - Use OPTN community feedback to help determine what future policy should be developed

Project Timeline



Background: eGFR

- The estimated glomerular filtration rate (eGFR) is commonly used as a surrogate to measure kidney function
- To attain the eGFR, various formulas are utilized, some utilizing race as one of the coefficients
 - Black race coefficient was developed with considerable limitations and is currently used in some eGFR formulas
- Recent research suggests that use of the Black race coefficient disadvantages Black patients being treated for Chronic Kidney Disease

Current OPTN Policy

8.4.A Waiting Time for Candidates Registered at Age 18 Years or Older

If a kidney candidate is 18 years or older on the date the candidate is registered for a kidney, then the candidate's waiting time is based on the earliest of the following:

1. The candidate's registration date with a measured or calculated creatinine clearance or glomerular filtration rate (GFR) less than or equal to 20 mL/min.
2. The date after registration that a candidate's measured or calculated creatinine clearance or GFR becomes less than or equal to 20 mL/min.
3. The date that the candidate began regularly administered dialysis as an End Stage Renal Disease (ESRD) patient in a hospital based, independent non-hospital based, or home setting.

- OPTN policy is not prescriptive of what, if any, eGFR formula transplant program must use
- Formulas that include and exclude race are permitted to qualify for initiation of waiting time accrual

Rationale for Reassessing Race in eGFR Calculation

Potential Consequences of using the Black race coefficient:

- Studies have shown that the Black race variable in the CKD- EPI formula increases Black patients' eGFR by as much as 16%, despite having all other variables in the formula remain equal
- Delayed referral for transplant
- Delayed initiation for qualified waiting time for non-dialysis patients
- Impede timely CKD management and contribute to worst outcomes
- Exacerbate existing disparities in transplantation

Rationale for Reassessing Race in eGFR Calculation

- Due to the Black race coefficient, these two patients with identical variables other than race will have different eGFRs
- The White patient will qualify to begin accruing waiting time, while the Black patient will not

Glomerular Filtration Rate (GFR) Estimate by MDRD 4-Variable Equation

Share

Sex:

Female Male

Age (years):

60

Black Race:

No Yes

Serum Creatinine (mg/dL):

3.3

GFR: 19.2 mL/min/1.73m²

Glomerular Filtration Rate (GFR) Estimate by MDRD 4-Variable Equation

Share

Sex:

Female Male

Age (years):

60

Black Race:

No Yes

Serum Creatinine (mg/dL):

3.3

GFR: 23.3 mL/min/1.73m²

Rationale for Reassessing Race in eGFR Calculation

Binary Distinction on Race:

- Race is a social construct and an unreliable proxy for genetic differences
- eGFR calculators only offer Black/Not Black as response options
- No distinction for mixed race or multi-racial individuals
- Does not account for the existing genetic diversity within the Black population

Rationale for Reassessing Race in eGFR Calculation

Recent studies suggest removing the Black race coefficient could result in:

- 16% increase in the total number of Black patients classified as having CKD in this study's registry
- 3.1% or 64 Black participants reclassified to an eGFR equal or less than 20mL/min
- 35% higher occurrence of having GFR eligible for transplant referral
- Black patients reaching the transplant referral threshold 1.9 years earlier

Community Efforts

- In July 2020, the National Kidney Foundation (NKF) and the American Society of Nephrology (ASN) collaborated to form a task force to reassess the inclusion of race in diagnosing kidney diseases
- In March 2021, the task force released a statement asserting that:
 - “Race modifiers should not be included in equations to estimate kidney function and current race-based equations should be replaced by a suitable approach that is accurate, inclusive, and standardized in every laboratory in the United States. Any such approach must not differentially introduce bias, inaccuracy, or inequalities”

Potential policy changes

- Workgroup currently discussing potential change to OPTN policy regarding:
 - Potential positive impacts including timely assessment, referral, and initiation of qualified waiting time for Black patients with CKD
 - Eliminating the binary nature of the current use of race in some eGFR formulas
- The impact of any policy change on Members
 - Considerations for how transplant programs will transition to a race neutral eGFR calculation

What do you think?

- Which method of estimating or measuring GFR is your transplant program currently using? Why?
- How would the use of a race neutral eGFR impact your program?
- What implementation challenges could use of a race- neutral eGFR formula present for your transplant program?
- What resources could assist in facilitating a smooth transition for your program?
- Do patients support the use of a race neutral formula? Why or why not?
- What potential consequences should be considered during this proposal's development?