



eGFR changing to CKD-EPI equation

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Background Information:

- Estimated Glomerular Filtration Rate (eGFR) equation is a useful marker of renal function for identifying individuals with chronic renal disease.
- eGFR has been performed by Diagnostic Services Manitoba using the Modification of Diet in Renal Disease (MDRD) equation since 2010. The MDRD equation underestimates eGFR in some healthy individuals with serum creatinine at the upper limit of normal.
- The Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) improves the accuracy of estimating eGFR, especially in young adults and women.
- The CKD-EPI equation uses the same parameters (age, gender and serum creatinine) as the MDRD, no additional information is required. For individuals with African American ethnicity, eGFR should be multiplied by 1.159; this information is not collected by the laboratory.
- The CKD-EPI equation has the same limitations as the MDRD equation for eGFR. These equations rely on serum creatinine which is effected both by muscle mass and nutritional status. These equations do not work in patients with rapidly changing creatinine levels.
- These equations are not validated for use in individuals who are pregnant or < 18 years of age.
- eGFR is reported automatically with all creatinine results for outpatients (excludes Emergency) or referred-in specimens. For hospital inpatients or Emergency patients, eGFR will not be reported unless specifically requested by ordering test code EGFR.

Change in or New Test Procedure:

- Effective February 5, 2018, eGFR will be reported using the CKD-EPI equation, all other aspects of eGFR reporting will remain the same.
- Results ≥ 60 ml/min/1.73m² will continue to be reported as “ ≥ 60 ”. There is no change in interpretation.
- This change has been made in collaboration with the Manitoba Renal Program.

References/Resources:

- Levey AS, Stevens LA, Schmid CH, Zhang YL, Castro AF, 3rd, Feldman HI, et al. A new equation to estimate glomerular filtration rate. *Ann Intern Med.* 2009;150(9):604-12.

Patient Impact:

- Changing to the CKD-EPI equation will improve the accuracy of estimating eGFR, especially in young adults and women.

More information:

- <http://www.kidneyhealth.ca/wp/healthcare-professionals/egfr-referral-pathways/>

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