

**PROVINCIAL LABORATORY SERVICES  
COMMUNIQUÉ**

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**TO:** Physicians and Nurse Practitioners  
**FROM:** Division of Clinical Chemistry and Provincial Renal Clinic  
**DATE:** January 12, 2021  
**RE:** **Estimated Glomerular Filtration Rate (eGFR) Equation Change**

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As of January 25, 2021, Health PEI laboratories will calculate and report estimated Glomerular Filtration Rate (eGFR) using the “CKD-EPI” equation; and the reporting of eGFR using the “MDRD” equation will be discontinued. The CKD-EPI equation was derived and validated in patients with and without chronic kidney disease, and thus it is acceptable to report numerical eGFR (CKD-EPI) values when eGFR is calculated to be greater than 60 mL/min/1.73 m<sup>2</sup>. Therefore, eGFR can be reported in most adults for earlier detection of chronic kidney disease. The CKD-EPI equation is endorsed by numerous professional bodies including the Kidney Disease: Improving Global Outcomes (KDIGO), the National Kidney Foundation, and the Canadian Society of Nephrology. Previous eGFR-MDRD results will remain in patient records, and at eGFR values <60 mL/min/1.73 m<sup>2</sup> the two equations generate similar values.

One notable change is that eGFR (CKD-EPI) will now be reported with every creatinine result in individuals >18 years of age. Current practice restricted eGFR reporting to intervals of 7 days.

**Interpretive Considerations:**

- Interpretation of eGFR equations assumes that the serum creatinine level is at steady state. Serum creatinine is superior to eGFR for acute patient management (e.g. acute kidney injury, dialysis).
- The CKD-EPI equation was validated for acceptable performance in different racial groups including indigenous Australians, Chinese, Hispanic, Europeans, Brazilian, and mixed Asian populations. Clinicians may consider a factor of 1.159 for patients of African descent, although race-based corrections are controversial and may lead to over or under-treatment in this population.
- eGFR may be inaccurate in the following conditions: significant muscle wasting, high muscle mass, bacterial overgrowth, renal insufficiency, certain drugs (eg cimetidine, trimethoprim), amputees, dialysis, and pregnancy.
- The CKD-EPI equation is not validated in pediatric patients (<18 years of age), and Clinicians may choose an alternative eGFR equation for these patients.
- eGFR is a component of many well established risk based equations used to assess the risk of Kidney failure and Chronic Kidney Disease in stable adults.

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**FOR MORE INFORMATION PLEASE CONTACT:**

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