



DATE: November 16, 2015

TO: All Physicians, Residents, Clinical Managers, and Educators at HHS and SJH

FROM: Dr. V. Chetty, Discipline Director , Clinical Chemistry and Immunology
Dr. S. Hill, Clinical Chemistry and Immunology

RE: **Conversion of eGFR Calculation from MDRD to CKD-EPI**

Effective December 1, 2015, the HRLMP will be reporting eGFR based on the CKD-EPI calculation for patients greater than 18 years of age.

The CKD-EPI equation is more accurate than the MDRD calculation and is endorsed by KDIGO (Kidney Disease Improving Global Outcomes)¹. Ontario's community laboratories have also converted to the CKD-EPI equation as of May 4, 2015.

The order mnemonic (**EGFR**) will remain the same.

The CKD-EPI equation is as follows.

$$\text{GFR} = 141 \times \min(\text{Scr} / \kappa, 1)^\alpha \times \max(\text{Scr} / \kappa, 1)^{-1.209} \times 0.993^{\text{Age}} \times 1.018 \text{ [if female]}$$

Where:

| Scr = | Plasma (or Serum) Creatinine in µmol/L | |
|-------|--|--------|
| | Male | Female |
| K = | 79.6 | 61.9 |
| α = | -0.411 | -0.329 |

min indicates the minimum of Scr /k or 1,
max indicates the maximum of Scr /k or 1

The gender of the patient will automatically be accounted for (if provided) in the reported value. The eGFR calculation requires multiplication by **1.159** if the patient is of African American descent

The eGFR will be reported to the nearest whole number between 15-120 ml/min/1.73m². Values above this will be reported as >120 ml/min/1.73m².

1. Kidney Disease: Improving Global Outcomes (KDIGO) CKD Work Group. KDIGO 2012 Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease. Kidney inter., Suppl. 2013; 3: 1–150. Accessed July 6, 2015 from www.kidgo.org/home/guidelines