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News and Issues for Washington's Clinical Laboratories

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Inside This Issue

Chronic Kidney Disease

Early chronic kidney disease (CKD) detection is essential to improving patient outcomes. Laboratories play a vital role in this process by identifying individuals at-risk for CKD through routine testing, biomarker assessments, and provision of accurate results. Active participation in laboratory stewardship supports delivery of the right test for the right patient at the right time, contributing to actionable insights that inform patient care. The role of laboratory stewardship in the delivery of quality healthcare is amplified by the general recognition that approximately 70% of healthcare decisions are based on laboratory tests.

The Right Test

Testing consistency is an integral part of laboratory stewardship. For example, calculated results like those for estimated glomerular filtration rate (eGFR) or low-density lipoprotein cholesterol (LDL-C) can differ based on the equation used, potentially impacting results comparison across laboratories, healthcare delivery settings, and patient populations. Standardization to the 2021 CKD-EPI race-free eGFR equation supports consistent, accurate testing as well as improved CKD recognition and management, particularly among populations adversely affected by older equations such as MDRD, 2009 CKD-EPI, and 2012 CKD-EPI. Note: removal of the race variable from these equations and/or deletion of "African American" and "non-African American" from test results reports does not confer test standardization.

Recently, the pharmacy community arrived at a similar conclusion regarding the need for a consistent, unifying approach for kidney function assessment, and has begun to transition from the Cockcroft-Gault estimated creatinine clearance (C-G eCrCL) equation to the 2021 CKD-EPI race-free eGFR equation for medication-related decisions.

The Right Patient

Those with hypertension and diabetes are at greatest risk for CKD; however a large study demonstrated approximately 80% of these individuals do ***not*** receive guideline-concordant testing: eGFR and albumin-to-creatinine ratio, urine (uACR). CKD data mining parameters can be applied to readily available laboratory data to identify those at risk for CKD and associated rates of guideline testing among the at-risk populations as well as individuals with evidence of CKD in their medical records but no CKD diagnosis.

The Right Time

Earlier identification and management of CKD provide opportunities to prevent or slow CKD progression and improve patient outcomes. CKD is a disease multiplier, often leading to heart failure, coronary artery disease, and premature cardiovascular death. While albuminuria is well known as a biomarker of kidney damage, its recognition as an independent and significant biomarker for cardiovascular disease and death is frequently overlooked. Establishing eGFR and uACR as a single orderable unit can help eliminate the possibility of overlooking one of these tests, thus facilitating earlier CKD recognition and intervention. In addition, standardizing uACR reporting units to mg/g can help streamline evaluation of albuminuria by busy clinicians who employ CKD and CVD calculators for patient assessments.

5 More Things Laboratorians Need to Know About the 2021 CKD-EPI race-agnostic eGFR

1. ***The LOINC code 98979-8 is the only criterion by which standardization to the 2021 CKD-EPI race-agnostic eGFR can be confirmed***. Informatics can query appropriate systems to identify the LOINC code associated with the eGFR provided by the laboratory.
2. Low volume chemistry analyzers and point-of-care (POC) instruments (as might be found in emergency departments to capture critical laboratory values for rapid patient triage or oncology practices to determine the safety/dosage of certain therapeutics) usually have older eGFR equations like MDRD embedded in their software.
3. As part of the pharmacy community's transition from the C-G eCrCL to the 2021 CKD-EPI race-agnostic eGFR, eGFR will be adjusted for an individual's body surface area. This is done to address the average body weight increase in the U.S. population and the variable parameters historically used with C-G eCrCL.
4. "Standardized eGFR" or "eGFR" - expressed as mL/min/1.73m^2 - is also referred to as "Indexed eGFR" or "Normalized eGFR". "eGFR adjusted for body surface area" or "eGFR BSA_{adj}" – expressed as mL/min – is also referred to as "Nonindexed eGFR", "De-indexed eGFR", and "eGFR without indexing".
5. Laboratorians can support pharmacy colleagues in this transition by ensuring their laboratories have standardized to the 2021 CKD-EPI race-agnostic eGFR (see 1. Above).

SOURCES

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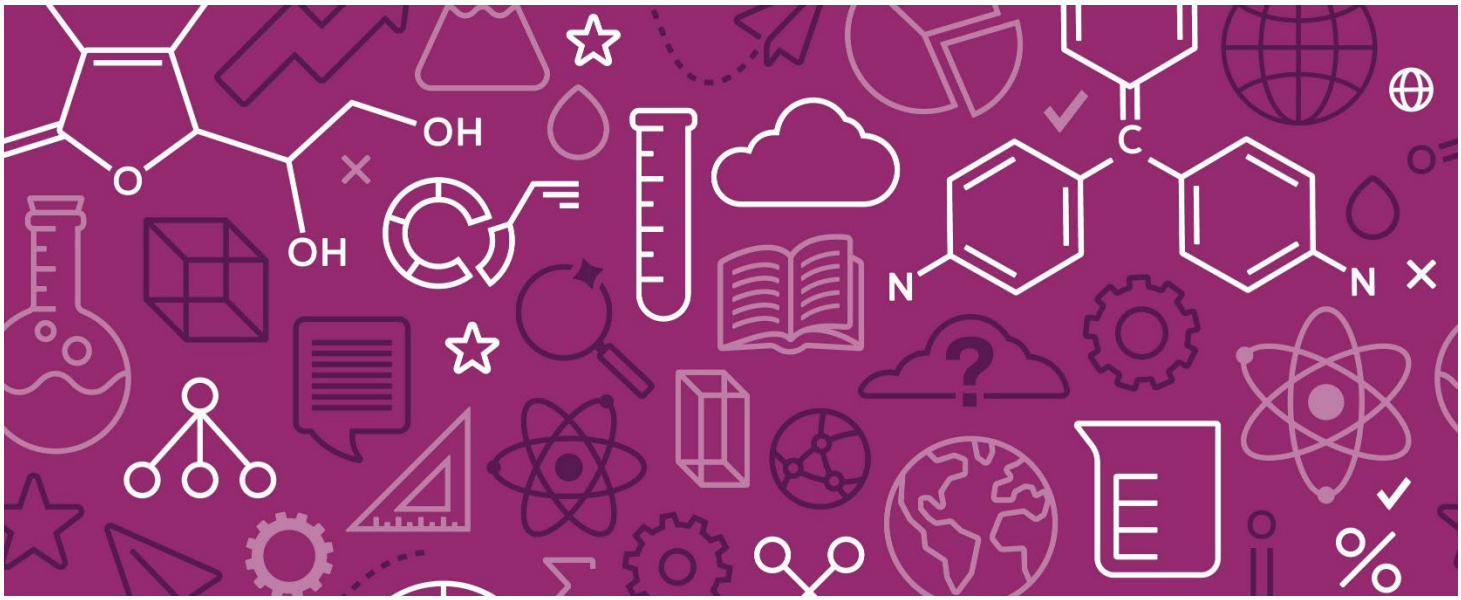

The following practice guidelines have been developed by the Washington Clinical Laboratory Advisory Council. They can be accessed at the Medical Test Site Program website.

- Acute Diarrhea
- Anemia
- ANA
- Bioterrorism Event Management
- Bleeding Disorders
- Chlamydia
- Diabetes
- Group A Strep Pharyngitis
- Group B Streptococcus
- Hepatitis
- HIV
- Infectious Diarrhea
- Intestinal Parasites
- Lipid Screening
- PAP Smear Referral
- Point-of-Care Testing
- PSA
- Rash Illness
- Red Cell Transfusion
- Renal Disease
- STD
- Thyroid
- Tuberculosis
- Urinalysis
- Wellness

No events currently scheduled

The Calendar of Events is a list of upcoming conferences, deadlines, and other dates of interest to the clinical laboratory community. If you have events that you would like to have included, please mail them to chuck.talburt@doh.wa.gov. Information must be received at least one month prior to the scheduled event. The editor reserves the right to make final decisions on inclusion in *ELABORATIONS*.

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