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News and Issues for Washington's Clinical Laboratories

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Inside This Issue

Laboratory-Driven Population Health to Reduce Cardiovascular and Kidney Disease Risk

Nearly 90% of the estimated 35.5 million U.S. adults with CKD remain undetected in primary care, including 40% of patients with end-stage renal disease (ESRD). The asymptomatic nature of CKD in its early stages and inertia in earlier recognition and management exacerbate CKD as a disease multiplier, often leading to heart failure, coronary artery disease and premature cardiovascular death. In fact, nearly 50% of patients with CKD die from cardiovascular disease before reaching ESRD. In addition to poor clinical outcomes, delays in CKD recognition and management also impose substantial financial consequences on an institution. For example, annualized mean medical costs (inpatient, pharmacy, outpatient, emergency, and dialysis) for those with CKD and cardiovascular disease have been estimated to range from $14,200 in Stage G3a to $67,644 in Stage G5. For those with CKD and heart failure, annualized mean medical costs increase from $19,231 in Stage G3a to $72,858 in Stage G5. Earlier identification and intervention provide opportunities to prevent or slow CKD progression,

improving clinical outcomes and mitigating health care costs associated with cardiovascular disease and events.

How can a clinical laboratory help?

It Begins with Standardization of eGFR Testing

Clinical laboratories play a vital role in providing consistent test methodologies and results reports that inform patient care. This is particularly important in CKD where serum creatinine with estimated glomerular filtration rate (eGFR) a marker of kidney function, and urine albumin-creatinine ratio (uACR), a marker of kidney damage and systemic vascular disease (citation), serve to diagnose the disease and assess its progression and associated transitions of care. Widespread use of several different approaches to calculating eGFR [e.g., Modification of Diet in Renal Disease (MDRD), 2009 Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI), or 2012 Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI)] and inconsistencies in laboratory reporting of uACR test outcomes has contributed to the clinical inertia in CKD recognition and management.

Implementation of the 2021 CKD-EPI eGFR equations support an important step toward standardizing eGFR testing nationally. Since the release of the equation in 2021, over 65% of US laboratories have deployed this approach, advancing much needed standardization to eGFR testing. This unifying approach to eGFR assessment is the foundation for the National Kidney Foundation recommendations to use this new widely available equation in medication-related decision-making, replacing the much less precise Cockcroft-Gault calculations.

We need your help in ensuring that the use of the 2021 CKD-EPI eGFR equations is ubiquitous to reduce variability in medication-related decision-making across the healthcare landscape. If your organization has not yet deployed this approach recommended by the National Kidney Foundation, please see National Kidney Foundation Laboratory Engagement Working Group Recommendations for Implementing the CKD-EPI 2021 Race-Free Equations for Estimated Glomerular Filtration Rate: Practical Guidance for Clinical Laboratories

If staffing or resource challenges have prevented the implementation of the recommended equations in your institution, please email nkf.lab@kidney.org as our team may be able help overcome these barriers.

Update uACR Reporting

Urine albumin-creatinine ratio can detect **early kidney damage** before a decline in estimated glomerular filtration rate (eGFR) occurs. Since kidney dysfunction and CVD often coexist and share common risk factors, UACR serves as a **sensitive early biomarker** for both. Numerous studies have shown that uACR, 30–300 mg/g, is independently associated with an increased risk of **myocardial infarction**, **stroke**, **heart failure**, and **cardiovascular mortality**, even in patients without diabetes or hypertension. The new Predicting Risk of cardiovascular Disease Events (PREVENT) calculator includes uACR reported as mg/g as variable. Laboratories reporting uACR in a format other than mg/g are requested to make a shift in their methodology to streamline use of uACR in kidney and cardiovascular calculators for busy primary care clinicians.

Implement the Kidney Profile to Streamline CKD Testing

Over 80% of patients at highest risk for CKD – those with diabetes and hypertension - do not receive guideline recommended laboratory testing. Both tests are required to diagnose and stage CKD. For convenience the national laboratories and many academic institutions have combined into a single, orderable unit – the Kidney Profile – to help eliminate the possibility of overlooking one of the tests. Please email nkf.lab@kidney.org for additional information.

To facilitate implementation please see National Kidney Foundation Laboratory Engagement Working Group Recommendations for Implementing the CKD-EPI 2021 Race-Free Equations for Estimated Glomerular Filtration Rate: Practical Guidance for Clinical Laboratories

Laboratory Data Analytics: A Compass for Care Transformation and Financial Improvement

Transformation from reactive, episodic "sick care" to proactive, interventional population health care (8) calls for the laboratory to expand beyond the role of providing of timely, accurate diagnostics to one that also drives care transformation. Employing data analytics allows the laboratory to identify undiagnosed CKD and its risk factors and to inform intervention and prevention strategies. The NKF Chronic Kidney Disease Data Analysis Strategy provides data mining parameters that are readily available to the laboratory and can illuminate an institution's initial opportunities for change.

A laboratory-driven approach can also pinpoint missed financial opportunities associated with quality measures: the National Committee for Quality Assurance (NCQA) "Kidney Health Evaluation for Patients

with Diabetes" Healthcare Effectiveness Data and Information Set (HEDIS) measure and the Centers for Medicare and Medicaid Services (CMS) Kidney Health Evaluation Measure in the Merit-based Incentive Payment System (MIPS) for patients aged 18-75 years with a diagnosis of diabetes(6,7). Assessment of at-risk populations with eGFR and uACR are central to both and there may be significant implications for quality improvement efforts and value-based care strategies.

Another element of the financial impact of missed CKD diagnosis and intervention is represented by risk score and undocumented risk adjustment factors for institutions participating in value-based payment arrangements wherein the total cost and care of a patient is managed, i.e., chronic condition management is the goal. Chronic conditions like CKD are used as a risk adjustment factor for a reimbursement differential. Failure to identify and manage CKD translates into undocumented risk adjustment factors and missed reimbursement.

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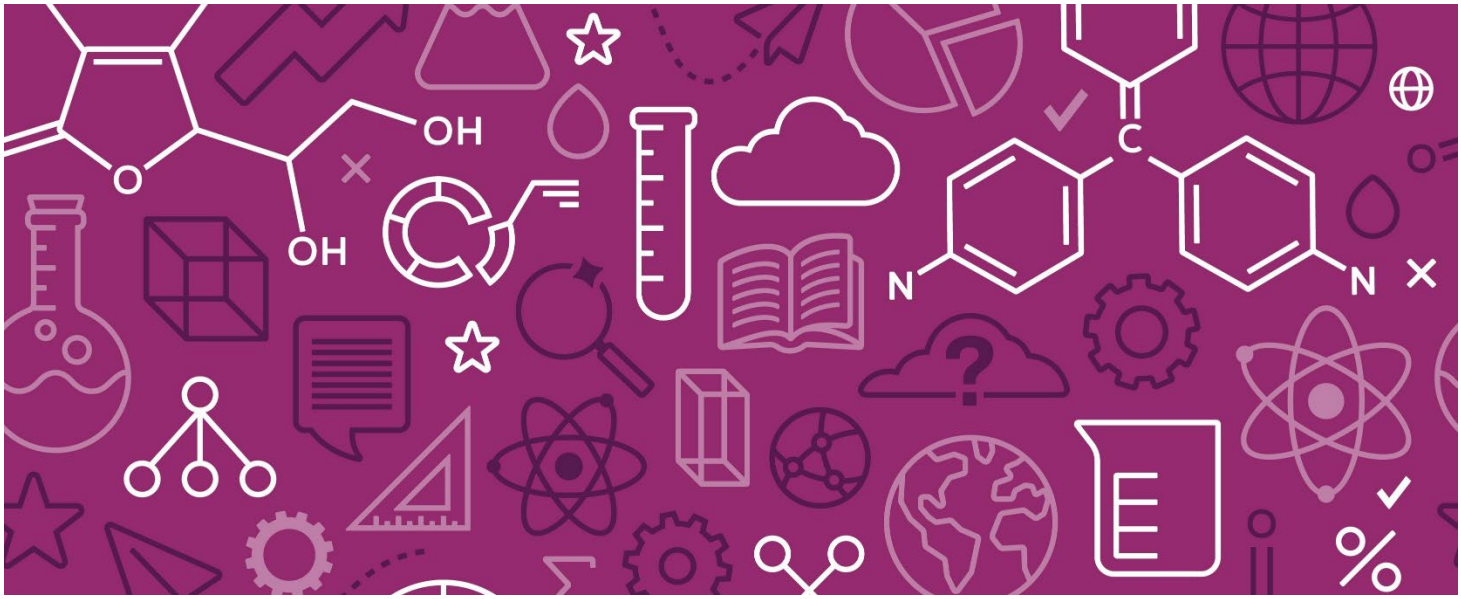

Practice Guidelines

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

2025 Virtual Northwest Medical Laboratory Symposium (NWMLS), October 2-3

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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