Michigan Quality Improvement Consortium
Clinical Practice Guideline Update Alert

Guideline: Diagnosis and Management of Adults with Chronic Kidney Disease

Released: November 2020 updated

This alert provides a summary of only the recommendations which were updated. Refer to the complete guideline for all recommendations and level of evidence.

Updated recommendations include:

All adults at increased risk for CKD

Screening

For patients at increased risk for CKD (e.g., diabetes mellitus, prediabetes, hypertension, family history of kidney disease, older age ≥ 60, history of acute injury, obesity) assess for markers of kidney damage:

- Measure blood pressure at least annually. Serum creatinine (for estimated glomerular filtration rate [eGFR]), and urine albumin-to-creatinine ratio (uACR) or Kidney Profile annually.

Testing for diagnosis and staging

Assess for markers of kidney damage, including the following:

- Spot urine for uACR to detect albuminuria.
- Fasting lipid profile, CBC, glucose, electrolytes, BUN; review prior lab results.

Risk Factor Management and Patient Education

- Educate on therapeutic lifestyle changes: weight management if BMI < 25, weight loss if BMI ≥ 25, exercise and physical activity, moderation of alcohol intake, smoking cessation, nutrition counseling with focus on sodium restriction. For adults with hypertension or prehypertension, adequate sodium intake is <1500 mg/d, but aim for at least 1000 mg/d reduction from baseline.

Core Principles of Treatment

- Review medications for polypharmacy, dose adjustment, drug interactions, adverse effects, and therapeutic levels. Modify dosage for medications excreted by the kidneys, e.g., Metformin, antibiotics. Avoid NSAIDs if CKD Stage 3, 4 or 5, or albuminuria.
- Update vaccines: HBV series, influenza, Tdap, and Pneumococcal Conjugate (Prevnar®) and Pneumococcal Polysaccharide (Pneumovax®), Shingles (Shingrix®)
- Salt restriction for patients with CKD and hypertension or prehypertension (<1500 mg/d or decrease by 1000 mg/d).
- Develop clinical plan based on disease stage. Stage 1 (eGFR ≥ 90): monitor eGFR and albuminuria.
- Cardiovascular risk modification, including statins, ACE or ARB, and aspirin.
- Blood pressure target ≤ 130/80 as tolerated.

Clinical plan based on CKD stage and albuminuria

Stage 1 (GFR ≥ 90): Monitor eGFR and persistent albuminuria at least annually based on risk, smoking status, consider ACE or ARB therapy. Nephrology referral if albuminuria >300 mg/g creatinine on spot uACR ratio (30 mg/dl on dipstick).

Stage 2 (GFR 60-89): Consider nephrology referral if eGFR decline is > 5 mL/min/yr, or if albuminuria.

Stage 3a (GFR 45-59): Nephrology referral if eGFR decline is 5 mL/min/yr, if anemic or abnormal PTH, Vit D, Ca, or phosphorus. Low-dose ASA allowed. Avoid contrast (iodinated and gadolinium-based). Avoid NSAIDs.

Stage 3b (GFR 30-44): Nephrology referral. Avoid contrast. Avoid NSAIDs.

Stage 4 (GFR 15-29): Nephrology co-management; consider case management if available. CKD education and discussion of choices and options, dialysis access, advance care planning. Referral for transplant evaluation. Avoid contrast. Avoid NSAIDs.

Stage 5 (GFR < 15): Nephrology co-management. Renal replacement therapy when needed. Avoid contrast. Avoid NSAIDs.