CHRONIC KIDNEY DISEASE
QUICK REFERENCE GUIDE for the PRIMARY CARE PROVIDER
(Derived from the National Kidney Foundation K-DOQI Clinical Guidelines)

DIAGNOSE CKD:

PATIENTS WITH HYPERTENSION, DM, FAMILY HISTORY OF CKD = HIGH RISK

Does Your High Risk Patient Have CKD?

The two key markers for chronic kidney disease (CKD) are estimated glomerular filtration rate (eGFR) and urine albumin

- Urine albumin/creatinine ratio (proteinuria)
  - Albumin/creatinine ratio >30 mg/g on 2 of 3 measurements over a 2-3 month period = positive finding
- Serum Creatinine test/eGFR
  Some labs report serum creatinine test results as eGFR routinely. If yours does not, ask them to do so. You can also calculate an eGFR yourself by using GFR calculators available at: *http://nkdep.nih.gov/professionals/gfr_calculators/orig_con.htm*
  - eGFR < 60 (lasting more than 3 months) = positive finding
- Anatomic abnormalities of the kidneys on imaging studies may also be an indicator

TAKE 7 ACTION STEPS (If eGFR <60)

1. Refer to Nephrologist if:

- eGFR <30ml/min, early referral improves dialysis survival and allows earlier transplantation.
- Heavy proteinuria with albumin/creatinine ratio>1000 mg/g
- Resistant hypertension: above target on 3 or more meds.
- Recurrent renal calculi
- Refractory Hyperkalemia K>5.5
- Rapid decline in kidney function
- Autoimmune disease
- Onset of kidney disease at young age (<30 years old)

2. Discontinue unsafe meds:

- No NSAIDS and No COX-2 inhibitors
- No METFORMIN
- Reduce Allopurinol dose to 100 mg/day in general; dose adjust for kidney function.
- Use caution with bisphosphanates; avoid if GFR < 30
- No oral phosphate preps like Fleets visicol for colonoscopy
  Be careful with IV contrast and gadolinium

3. Start ACE inhibitor or ARB *(unless contraindicated)*

- These are safe and effective at preventing progression of CKD at least up to a creatinine of 3.5 or eGFR of 20ml/min (At this level, a nephrologist should definitely be involved in care)
- There may be a decrease of 25% in GFR after initiating ACEI/ARB. This is OK provided it stabilizes and actually portends a better prognosis.
- Stop for a GFR decrease exceeding 25%, and consider evaluating renal arteries.
  Stop if hyperkalemia (K>5.5) occurs. (Particular care must be taken for the patient with CKD who is on an ACEI and spironolactone, as both drugs may raise K+)

4. Start ASA

- Acetylsalicylic acid [81mg] daily ***(unless contraindicated)***

5. Blood pressure Control <130/80

6. Obtain lab tests:

- CBC, CMP, Lipid profile
- HbA1C if DM
- Calcium, PO4, PTH and 25-OH Vitamin D.

WHAT TO LOOK FOR IN LAB TESTS

Anemia: Hemoglobin < 12 *(indicates anemia)*
Diabetes: HBA1C > 7.0
Lipid Control: HDL < 40, LDL > 100(CKD is a coronary artery disease CAD equivalent), Triglycerides > 150
Bone Disease: Ca++ < 8.5, PO4 > 4.6, PTH > 100, Vit. D < 30

Special Cases

- Get Iron/TIBC (Ferritin optional)
- If serum iron/TIBC < 20%, patient is iron deficient
- Rule out colon cancer by colonoscopy if iron deficient
- Replace iron until Iron/TIBC >20%
- If Hb is <10 and eGFR is less than 45, but greater than 30, consider treating anemia with ESAs
- If Hb is < 10 and eGFR <30, consult with the patient's nephrologist. **Remember**: Per action #1, patients with eGFRs less than 30 should be referred to a nephrologist.

7. "Save an Arm"

- PICC Lines are discouraged if GFR< 45. If patient requires long-term IV access consider small bore IJ catheter
- Epicardial leads should be strongly considered in CKD patients who need a cardiac rhythm device

Teach Your Patients

- "Fistula first, graft next, catheter last"
- Have all blood draws done from their dominant arm, as distal as possible (preferably the hand)

Adapted with modifications from materials produced by the Upper New York Practice Based Research Network, 6/10. This material has been assembled by the Mid-Atlantic Renal Coalition as part of the Fistula First Breakthrough Initiative Special Project, which is performed under contract HHSM-500-2006-NW005C *with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy.*