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Collaborative Use of KDOQI Guideline to Improve Chronic Kidney Disease Care

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Problem: Patients at a free nurse managed health center in the southeastern US were not routinely screened for CKD. Subsequently, the disease was going unidentified in a population with known risk factors of high of diabetes, hypertension, and low socioeconomic status.

Approach: An interprofessional team at the nurse managed health center consisting of NPs, social worker, technical support manager, nurses, medical assistants, and community resources director agreed to work collaboratively to initiate a pilot project using the KDOQI guideline to identify and manage patients at risk for or with existing CKD. The team worked to develop a routine clinical order set based on the KDOQI guideline that would trigger the assessment for risk factors and markers of CKD in all patients scheduled for a routine visit.

Purpose: To implement a change in the way patients at risk for CKD were identified and subsequently managed.

Goals: (a) increase the identification of those with CKD, (b) reduce risk and progression, (c) improve the management of those with CKD by modifying treatment plans to improve B/P control and halting the use of NSAIDS.

Patient selection: All patients scheduled for a routine primary care visit during a 2-month interval were evaluated for inclusion in the pilot. Inclusion criterion was clinical evidence of CKD using eGFR, proteinuria, renal US, and high-risk use of NSAIDS. Exclusion criteria was no clinical evidence of disease.

Results: Of the 200 patients screened in two months, 56 were identified with evidence of CKD, of these, 22 enrolled in the pilot. The 22 patients were managed per a KDOQI guided order set for a period of 5 months. Post intervention data showed ICD-9 coding increased from 0% to 80% in the pilot patients and urinary protein checks increased from 59% to 90% on follow-up visits. These were expected results. Uncontrolled blood pressure decreased from 59% to 40% and use of NSAIDS decreased from 32% use to 5% which was also an expected result. The baseline mean eGFR (69.94 ml/min) increased to 76.23 ml/min which was an expected result related to the improvements in blood pressure control and reduced use of NSAIDS.

Conclusion: Use of the KDOQI guideline successfully changed the way this nurse managed health center evaluated for risks and presence of CKD in the pilot population. "Our project has changed the way I practice; I use my GFR calculator everyday now and I think twice before I prescribe an NSAID" (anonymous NP provider).

Solution to ongoing problem: In order to sustain the practice change the order set was imbedded into the electronic medical record and was triggered by the ICD code for CKD. In addition, steps to further ensure the quality of the practice change included periodic review of CKD outcomes, continued review of the literature for best practice enhancements, continuing education of all providers, and development of nephrology referral network.

Implications for nephrology nursing: CKD affects millions of people worldwide. Risk factors for CKD are common problems in found in primary care such as diabetes, hypertension, chronic use of NSAIDS, low socioeconomic status, older age and ethnic minority. The NKF estimates one-half of people with at least one risk factor have the CKD but few even know it. Research shows that early detection and intervention can save lives and costs associated with disease progression. This pilot project demonstrates that awareness and use of the KDOQI guidelines extends beyond nephrology and should be used by nephrology nurses to collaborate with our primary care colleagues to improve kidney health and the incidence of CKD/ ESRD worldwide.

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