

## **EARLY RECOGNITION OF CHRONIC KIDNEY DISEASE: ARE OUTPATIENT DOCTORS MISSING THE BOAT?**

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| NKF guidelines for chronic kidney disease (CKD) recommend early diagnosis so that steps may be taken to prevent further decline in kidney function. For example, clinicians should avoid prescribing nephrotoxic medications when possible. Because non-steroidal anti-inflammatory drugs (NSAIDs) are one of the most commonly used nephrotoxic medications, we hypothesized that lack of early CKD recognition may lead to excessive NSAID use, placing patients at unnecessary risk.

| Therefore, we conducted this study of 510 patients with Stage II and III CKD treated at an inner-city, safety-net outpatient clinic. The presence and stage of CKD was established with the Modified Diet in Renal Disease (MDRD) equation. Physician diagnosis of CKD and prescription (Rx) NSAID use was determined from medical record review. After univariate and bivariate analyses, we used generalized linear latent mixed models to examine the independent predictors of CKD diagnosis and NSAID use, accounting for the clustering of patients within referring physician.

| Of all participants (n = 512), mean age was 55 (range 28-84), 72% were female, 18% were white, 82% were African American, and 93% had an annual income of less than \$25,000. Only 19% were diagnosed with CKD, and 23% were taking prescription NSAIDs. CKD was recognized less in females than males (15%, 30%,  $p < 0.001$ ) and less in Whites than African Americans (7%, 22%  $p = 0.001$ ). NSAID use was greater for those who remained undiagnosed (5%, 23%,  $p < 0.001$ ). Multi-level modeling demonstrated 22% of the total variance in CKD diagnosis was explained by physician-level characteristics.

| Among this population of patients with Stage II and III CKD receiving care at an inner-city, safety-net setting, we found physician diagnosis of CKD to be low. Patients with undiagnosed CKD were more often exposed to Rx NSAIDs. Our findings call for urgent physician and patient education. In addition, our work suggests the need for systems that promote early CKD recognition and safe prescribing.