

Use of stage-specific codes for chronic kidney disease in administrative data

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Introduction

- Prior to 2002, the disease now defined as chronic kidney disease (CKD) had multiple designations, including chronic renal failure, pre-ESRD, renal failure, renal damage, and kidney disease.
- Since the introduction of the new NKF classification system for CKD in February, 2002, however, the disease has become more clearly defined, and has emerged as a major public health issue.
- In October 2005, the new 585.X ICD-9-CM codes were introduced to indicate CKD stages.
- In this study, we evaluated the use of stage-specific ICD-9-CM CKD codes in three administrative databases in 2006: the Medicare 5% sample, the MarketScan® Research Database (Medstat), and the UnitedHealth Group (Ingenix/i3) data.

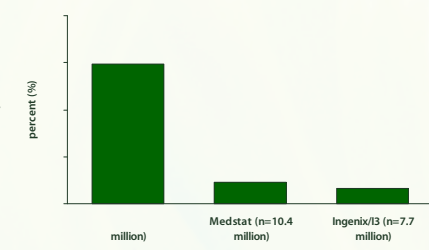
Methods

- Medicare 5% sample:
 - Medicare enrollees survived through 2006, were continuously enrolled with Medicare both Parts A and B, and were not enrolled in an HMO in 2006. Dialysis patients were excluded.
- Medstat & Ingenix/i3 data:
 - Prevalent patients survived through 2006 and were enrolled in a fee-for-service plan. Dialysis patients were excluded.
 - Subjects with evidence of CKD and not on dialysis were identified from claims using ICD-9-CM codes (016.0, 095.4, 189.0, 189.9, 223.0, 236.91, 250.4, 271.4, 274.1, 283.11, 403.X1, 404.X2, 404.X3, 440.1, 442.1, 447.3, 572.4, 580-588, 591, 642.1, 646.2, 753.12-753.17, 753.19, 753.2, and 794.4).
 - We examined the distribution of the number of different stage-specific codes a patient had in 2006.
 - CKD stage was defined according to the stage-specific code on the claim for patients with only one stage-specific claim, or on the last claim for those with ≥2 claims with different stage codes in 2006.
 - The percent of patients with CKD and CKD stage distribution were examined.
 - We identified 1.5 million Medicare Part A and B enrollees, 10.4 million fee-for-service enrollees in Medstat, and 7.7 million in Ingenix/i3.

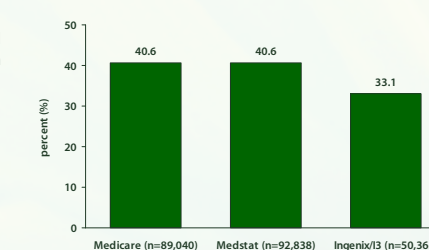
Results

- The proportion of patients with CKD was higher in the Medicare 5% sample (5.94%) and much lower in the Medstat (0.89%) and Ingenix/i3 data (0.65%).
- 40.6% of Medicare CKD patients had at least one stage-specific claim. The proportion was the same in the Medstat data, but a bit lower in Ingenix/i3 data (33.1%).
- Among those with ≥1 stage-specific claim, a majority had one stage code (ranging from 64.3%-69.9%), followed by those with two different stage codes (25.5%-28.1%) and those with 3 different codes (4.7%-7.6%).
- We found a very similar distribution of CKD stages between CKD patients enrolled in Medicare and Medstat, but relatively smaller proportions of CKD patients with stage 3 or higher in the Ingenix/i3 data.

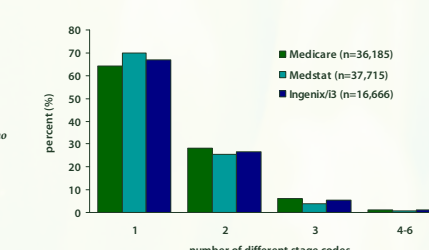
Percent of enrollees with CKD in 2006
 enrollees who met the inclusion criteria in this study



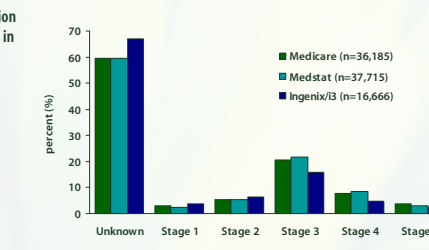
Percent of CKD patients who had at least one claim with 585.X code (585.1-585.6, 585.9) prevalent CKD patients



Distribution of number of different stage codes that patients had in 2006



Stage distribution of CKD patients in 2006



Conclusions

- The results of this study show that stage-specific CKD codes (585.1-585.6) are substantially underutilized by health care professionals.
 - About 60% to 67% of CKD patients did not have claims with stage-specific CKD codes.
- Further studies are needed to evaluate whether increased awareness of CKD is associated with better management and whether coding is accurately performed.