Supplementary Figure 1. Cohort Selection

Patients with serum creatinine laboratory measurements between June 1st, 2003 and September 30th, 2010 (n=1,561,753)

Patients excluded:
- Invalid patient identifier, missing date of birth, or missing sex (n=11,465)
- Age < 66 on the date of serum creatinine measurement (n=645,735)
- Death on or before the date of serum creatinine measurement (n=273)
- Dialysis in the 120 days prior to serum creatinine measurement (n=49,081)
- Kidney or liver transplant in the 5 years prior to serum creatinine measurement (n=4,316)

Patients excluded from emergency department setting:
- Inpatient serum creatinine measurements (n=658,268)
- Serum creatinine measurements that did not align with an emergency department registration date* (n=9,837)
- Selected the highest serum creatinine value upon the presence of > 1 serum creatinine measurement per visit (n=15,564)
- Patients without baseline serum creatinine measurement in the 7 to 365 days prior to presentation to the emergency department (n=79,529)
- If a patient had multiple presentations to the emergency department, randomly selected 1 presentation (n=51,636)

Emergency Department Cohort (n=36,049)

Patients excluded from hospital admission setting:
- Emergency department creatinine measurements (n=192,615)
- Serum creatinine measurements that did not align with a hospital admission date†(n=11,338)
- Restriction to a single record per hospital stay (n=531,980)
- Hospitalization > 90 days (n=789)
- No evidence of ≥ 1 serum creatinine measurement in the 2 days prior to the hospital admission (emergency department measurement) or in the first 5 days of hospital admission (inpatient measurement) (n=496)
- No evidence of ≥ 1 serum creatinine measurement in the 2 days prior to the hospital admission (emergency department measurement) or in the first two days of hospital admission (inpatient laboratory values (n=2,619)
- Patients without baseline serum creatinine measurement in the 7 to 365 days prior to hospital admission (n=45,386)
- If a patient had multiple hospital admission, randomly select 1 admission (n=27,094)

Hospitalized Cohort‡ (n=38,566)

*Date of serum creatinine measurement must be on the day of or 1 day after the emergency department registration date.
†Date of serum creatinine measurement must be between a hospital admission date and discharge date, including date of admission and discharge.
‡Patients were included in this cohort irrespective of hospital disposition (i.e. patients may have presented to emergency department prior to their hospital admission or may have been directly admitted to hospital)
Supplementary Figure 2. Absolute and relative changes in serum creatinine concentration among patients who presented to the emergency department who were code positive and code negative for AKI.* Patients who were code positive for AKI had a significantly greater change in serum creatinine concentration from their baseline value than those patients who were code negative. The boxes represent the interquartile range (50% of the values). The line across the box indicates the median. The asterisk indicates the mean. The whiskers extend to the 95th and 5th percentile.

*The ICD-10 N17x coding algorithm considered is all diagnosis
†The baseline measurements for serum creatinine were taken at a median (IQR) of 102 (41-204) days prior to presentation to the emergency department
Supplementary Figure 3. Absolute and relative changes in serum creatinine concentration among hospitalized patients who were code positive and code negative for AKI. Patients who were code positive for AKI had significantly greater change in serum creatinine concentration from their baseline value than those patients who were code negative. The boxes represent the interquartile range (50% of the values). The line across the box indicates the median. The asterisk indicates the mean. The whiskers extend to the 95th and 5th percentile.

*The ICD-10 N17x coding algorithm considered is all diagnosis
†The baseline measurements for serum creatinine were taken at a median (IQR) 39 (16-128) days prior to the hospital admission